

**MEASURING CORPORATE GOVERNANCE: LESSONS FROM THE  
'BUNDLES APPROACH'**

Centre for Business Research, University of Cambridge  
Working Paper No. 438

by

Gerhard Schnyder  
King's College  
London  
Email: [gerhard.schnyder@kcl.ac.uk](mailto:gerhard.schnyder@kcl.ac.uk)

December 2012

This working paper forms part of the CBR research programme on Corporate  
Governance

## **Abstract**

This paper reviews recent studies that analyse and criticise existing academic and commercial corporate governance (CG) indices. Most of these ‘rating the ratings’ papers reach the conclusion that encompassing composite measures of CG are ineffective and suggest therefore to return to simpler measures. This paper draws on the ‘configurational-‘ or ‘bundles approach’ to CG and argues that, while the criticisms made by the ‘rating the ratings’ papers are justified, their recommendations are misguided. Based on four central insights derived from the ‘bundles approach’, the paper shows that reverting to simpler measures of firm-level CG practices is a step in the wrong direction, in that it eliminates information about interactions between different corporate governance mechanisms. This is particularly consequential for comparative CG research that aims to identify differences in country-specific CG systems. Alternative solutions are developed to improve corporate governance measures, which take into account insights from the ‘bundles approach’.

**Keywords:** corporate governance; bundles; corporate governance ratings

**JEL Codes:** G32, G34, P51

**Acknowledgements:** I am grateful to Howard Gospel, and participants at London Centre for Corporate Governance and Ethics (LCCGE) monthly seminar and the SOAS, University of London, Department of Finance and Management seminar for most helpful comments on a previous version of this paper. The research leading to these results has received funding from the Economic and Social Research Council (ESRC) under grant agreement number RES-061-25-0518 (Law & Agency project).

Further information about the Centre for Business Research can be found at the following address: [www.cbr.cam.ac.uk](http://www.cbr.cam.ac.uk)

## 1. Introduction

One of the major challenges of corporate governance (CG) research since its inception has been the definition of measures of ‘good corporate governance’, i.e. of corporate governance mechanisms that lead to financial efficiency, social legitimacy or more generally goal attainment (cf. Judge 2010 for the two former, Aguilera *et al.* 2008 for the latter).<sup>1</sup> In order to analyse the impact that CG has on different measures of corporate performance, academics and commercial providers have either used individual variables (such as board independence and ownership structure) or have attempted to construct composite measures of corporate governance practices. Despite considerable efforts and despite considerable sophistication of measures and methods, the results so far are surprisingly ambiguous and contradictory (Bhaghat *et al.* 2008). In particular, it has proven very difficult to show that even sophisticated professional measures of the quality of a company’s corporate governance system produced by different commercial providers are indeed able to predict future performance.

This situation has led to a series of studies that review the existing rating schemes and corporate governance indices (Bebchuk *et al.* 2009, Bhagat *et al.* 2008, Brown & Caylor 2006, Daines, Gow and Larcker 2010, Renders *et al.* 2010). The main finding of these ‘rating the ratings’ papers is that composite measures of CG practices are ineffective in so far as they do not predict performance outcomes better than single measures. More worryingly, different measures from different providers that purport to measure the same underlying phenomenon (i.e. the quality of corporate governance) are only weakly correlated with each other.

Some authors explain the weak evidence for a link between CG and performance as a limitation of the methods used (cf. Renders *et al.* 2010). Others, however, focus on a more fundamental problem regarding measurement errors and index construction. Two criticisms can be distinguished within the latter group: firstly, there is a lack of theoretical justifications for the composition of these indicators (what to include and what not); secondly, a convincing method or a theory to determine the weighting of different variables included in the index is lacking.

This paper reviews the existing ‘rating the ratings’ and related papers and argues that while methodological efforts and innovations are laudable, they will remain pointless as long as these new methodological approaches are applied to fundamentally flawed measurements.<sup>2</sup> Indeed, the weak correlation among different ratings indicates that the problem is a fundamental one of defining and measuring ‘good’ governance, rather than a problem that can be solved

‘downstream’, i.e. at the stage of data analysis (cf. Larcker *et al.* 2007). Rather than further seeking to improve statistical methods, the focus should shift towards the ‘upstream’ problem of how we conceptualise and measure CG in the first place (cf. Daines *et al.* 2010: 441).

One common suggestion derived from the observed limitations of composite CG indices is to return to simpler measures of corporate governance in order to avoid the problems associated with measurement errors and index construction (Bhagat *et al.* 2008; Bebchuk *et al.* 2009).

Yet, this suggestion seems problematic in view of recent developments in the CG literature. Different recent contributions (Aguilera *et al.* 2012 and 2008, Ward *et al.* 2009) show that different CG mechanisms may appear ineffective if investigated individually, but may have an important impact on outcomes in combination with other CG mechanisms. Also, certain firm-level CG mechanisms may have an impact on outcomes only in a given environment, i.e. in combination with certain institutional factors (Kogut 2012, Aguilera *et al.* 2008, Filatotchev 2008). This has led to an increased attention to combinations-, or ‘bundles’ of corporate governance practices at the firm level and how they may relate to different organisation-level and contextual contingencies. Based on these insights, the claim that simpler measure of corporate governance at firm level should be used appears like a step in the wrong direction. Even if a single variable may strengthen the predictive power of a model, it seems likely that using such a simple measure for the complex construct of corporate governance will lead us to miss potentially important interactions between CG mechanisms. This shortcoming is particularly important in comparative research, because it leads us to neglect important functionally equivalent CG mechanisms across countries and to overlook contextual contingencies.

Therefore, rather than reverting to simpler or even univariate measures of CG, this paper constitutes an attempt to integrate insights from the ‘bundles approach’ to the question of index construction for comparative CG research. Based on this discussion, an alternative approach to index construction is developed.

The paper is structured as follows. Section 2 reviews the recent literature criticising widely-used CG ratings and indices. Next I present recent insights from the ‘bundles approach’ to corporate governance. Section four provides suggestions regarding the development of more meaningful comparative measures of firm-level CG. Conclusions are drawn in the final section.

## 2. The ‘Rating the Ratings’ Literature

It has become increasingly common in financial economics research to use commercially provided corporate governance ratings to measure the ‘quality’ of a given companies’ CG (Bebchuk & Hamdani 2009). The great appeal of such commercial ratings is that they are provided by professionals who have better access to firms and more resources than the average academic researcher. Yet, the different commercial indices do not generate consistent or robust results when used in studies investigating the link between the quality of CG and firm performance or valuation. Indeed, most of these ratings do a rather poor job in predicting future performance (Daines *et al.* 2010). This has raised increasing scepticism among scholars and brought the ratings under scrutiny. There is an emergent literature assess the quality of these methodologies – or as one paper fittingly puts it – that ‘rates the ratings’ (Daines *et al.* 2010).

Different ‘rating the ratings’ papers tackle the problem in different ways, look at different ‘ratings’ and reach different conclusions. However, two common points can be distinguished. Firstly, existing ratings are criticised for using too many variables rather than focusing on the variables that ‘really matter’ (what Bebchuk *et al.* 2009 have called the ‘kitchen-sink-approach’ to index construction). Secondly, all recent reviews draw attention to the difficulty of deciding which variables to include and how to weigh them. The critics find that most existing ratings either arbitrarily sum up many dimensions into one measure (cf. e.g. Daines *et al.* 2010: 441 who speak of ‘check-and-sum measures’ used by most academics) or use sophisticated but completely opaque algorithms. Indeed, there is a lack of theoretical justification of the composition of indicators and the weighting of different variables.

In this section, after briefly presenting the most important findings of several ‘rating the ratings’ papers, I discuss both problems in some detail.

### *What’s wrong with the ratings?*

The most extensive and detailed review of existing CG ratings by Daines *et al.* (2010) compares four different methodologies measuring the quality of firm-level CG arrangements; namely, the Corporate Governance Quotient (CGQ) developed by RiskMetrics/ISS, the GMI metric produced by GovernanceMetrics International, the rating used by The Corporate Library (TCL), and the Accounting & Governance Risk (AGR) score developed by Audit Integrity (Daines *et al.* 2010: 440).<sup>3</sup>

Their statistical analyses show that these widely-used commercial governance ratings do not predict different measures of corporate performance in any

reliable way. For all dependent variables (DVs) that they use (accounting restatements, shareholder litigation, operating performance, stock returns and cost of debt) the predictive power of the four CG metrics are weak with some of them even showing negative correlations, i.e. ‘worse’ corporate governance leads to better performance.<sup>4</sup> The most reliable measure appears to be the AGR, which – tellingly – is different from the other ratings in that it is exclusively based on accounting practices. It measures the quality of a firm’s accounting practices, which is in some respects an output of its corporate governance system, not a direct measure of it (Daines *et al.* 2010: 443).

Bhagat *et al.* (2008: 1853ff), in another ‘rating the ratings’ paper, compare the quality of different common CG measures by testing whether poor performance leads to more CEO turnover in ‘well governed’ firms. They find support for this idea if CG is measured as the percentage of non-executive directors (NEDs) or as the median dollar value of independent directors’ stockholdings. They also investigate two widely-used academic measures, i.e. the G-Index developed by Gompers *et al.* (2003) and Bebchuk *et al.*’s (2009) E-Index (discussed in detail below) and find support for the relationship between poor performance and CEO turnover in ‘well-governed’ firms. The most sophisticated measure they use – The Corporate Library measure –, on the other hand, does not produce any significant relationship. This leads them to conclude that simpler measure outperform more complex ones.

These findings regarding the weak link between CG ratings and firm performance is confirmed by the fact that a large number of studies, using various measures and DVs, produce contradictory results. It goes beyond the scope of this paper to review the financial economics literature that uses these indicators to investigate the link between CG and performance (see Renders *et al.* 2010 in particular for an overview of some). In this paper, I focus only on studies which have explicitly *the quality of CG rating methodologies* as their main topic, which I label the ‘rating the ratings’ literature.

Different explanations exist for the absence of a robust empirical link between corporate governance ratings and (future) performance. Thus, it might be that different combinations of mechanisms are optimal for different firms and firms chose what is optimal in their case. Alternatively, it is suggested that the statistical methods used are not sophisticated enough (Daines *et al.* 2010: 440; Renders *et al.* 2010: 87).

Contrary to what some authors suggest – sometimes implicitly – the absence of predictive power of CG ratings regarding future performance does not automatically imply that there is something wrong with the ratings. Indeed, it might be that the theory that there is a link between CG and firm performance is

incorrect. However, Daines *et al.* (2010) provide evidence that there is indeed something wrong with the ratings. They show that all but two ratings are very weakly correlated, i.e. they assess the quality of the same firms' corporate governance system very differently. Thus, GMI and CGQ have a Pearson correlation of .484 and a Spearman correlation of .480, but all other pairs are nearly uncorrelated (Daines *et al.* 2010: 444). Similarly, Brown and Caylor (2006: footnote (FN) 3) find that their own governance measure (Gov-Score), which is based on ISS's CGQ, only weakly correlates with Gompers *et al.*'s (2003) G-Index (Pearson correlation -.09 and Spearman -.10).<sup>5</sup> In other words, different methodologies seem to measure rather different things. This is a surprising finding given that all four ratings claim to measure the same underlying phenomenon, i.e. the quality of corporate governance.

Here, Daines *et al.* (2010: 46) suggest that the most likely explanation is simply that corporate governance metrics are subject to serious measurement errors. Two important sources of such errors, which are identified by virtually all 'reviewing the reviews' papers, are the kitchen-sink problem, whereby any potentially relevant CG item is 'thrown into' the index, and the 'tick-and-sum' problem, whereby the weighting (or absence thereof) of different variables of the index are not theoretically justified. I now turn to discuss both problems in turn.

### ***The 'kitchen-sink problem'***

The weaknesses of CG indices are often attributed to their complexity and unselective nature. Among academics, Gompers, Ishii & Metrick (GIM) (2003) were among the first ones to suggest a measure for the quality of CG governance based on a composite index. Their 'management entrenchment index' (the G-Index) used the Investor Responsibility Research Centre (IRRC) data on anti-takeover provisions in companies' charters (17 items in total) as well as several other shareholder-relevant provisions. The indicator contains a total of 24 items with higher scores indicating stronger 'management entrenchment'. It is hence hypothesised to correlate with worse performance. They find support for this hypothesis in so far as the G-Index is significantly related to stock returns and Tobin's Q (but not to accounting performance). Yet, Bebchuk, Cohen & Ferrel (BCF) (2009: 823) have criticised GIM and cautioned against the 'kitchen sink' approach of building ever-larger indexes of governance measures'. On the same grounds, they criticise the Institutional Shareholder Service's (ISS) 'Corporate Governance Quotient' (CGQ), which uses 61 variables and the Governance Metric International (GMI) measure that uses more than 600 items.

BCF's re-analysis the G-index shows that only six of the 24 variables 'really matter' for firm valuation (measured as Tobin's Q) and stockholder returns. They group these variables in a new index called 'entrenchment index' or E-index.<sup>6</sup> Their assessment of which ones of GIM's 24 variables matter is based on a mix of criteria. Indeed, BCF (2009: 784) state that they have selected those variables that are most strongly contested by institutional investors, because of their negative impact on takeovers. The assessment of the contested nature of these variables was confirmed by six expert interviews. Moreover, four of the six are theoretically justified, because they constitute limitations on shareholders' voting power, which is according to BCF the shareholders' primary power. The E-index makes hence an important step in the right direction by justifying at least a part of the variables included based on a theoretical argument, i.e. an assumed 'hierarchy' of shareholder rights, with voting rights being considered more important than other rights (such as – presumably – informational rights). Other than the reference to the importance of voting rights there is no theoretical justification of the selection. At least one of the six variables may have an ambiguous effect on shareholders' wealth and on entrenchment: 'Golden parachutes' may facilitate takeovers rather than prevent them (Bhagat *et al.* 2008:1821). The theoretical foundation for the choices seems hence partial (what justifies the inclusion of two variables that are not related to voting rights?) and one is hard pressed to avoid the conclusion that the choice is ultimately based on what explains best the expected outcome. The authors acknowledge that '[t]o confirm that focusing on these provisions is plausible, we also performed our own analysis of their consequences' (Bebchuk *et al.* 2009: 784). Indeed, the ultimate justification of the E-index is that it produces unambiguous results, while the remaining G-index variables (compiled in what they term the O-index) do not (Bebchuk *et al.* 2009: 822). The six variables retained for the E-index are the ones - and indeed the only ones of the 24 items of the G-index – that are statistically significant when regressed on Tobin's Q and shareholder returns (cf. Bhagat *et al.* 2008: 1822).

Cremers and Nair (2005) were the first to explicitly criticise the composition of the G- and E-Indices based on theoretical, rather than empirical grounds. They observed that both the E- and the G-indices are almost exclusively composed of variables pertaining to the ease with which a company can be taken over. They suggest that any measure of CG needs to include – besides this 'external' dimension of CG – measures of the internal governance structure. Striving for parsimony, Cremers and Nair (2005) reduce the E-index further and use only 3 anti-takeover variables (namely, 'staggered boards', 'restrictions of shareholders' ability to call a special meeting or to act by written consent' and 'blank check preferred stock'). However, they add one variable – shareholder activism – as a proxy for internal corporate governance mechanisms. Cremers



and Nair (2005) show that these four variables drive the association between CG and performance.

Similarly, Brown and Caylor (2006) construct an indicator based on the idea that indices should be as small as possible, but that they should still include more than takeover defences.<sup>7</sup> Contrary to GIM, BCF and Cremers and Nair who all use IRRC data, Brown and Caylor (2006) use ISS data which contains more than 60 items that relate not only to a company's external, but also to its internal governance (board structure, compensation schemes etc.). They find that compensation provisions and BoD characteristics matter more than anti-takeover provisions. This observation is based on different statistical procedures – one of which is used by BCF as well – that allow it to distinguish the variables from the ISS data that actually drive the link with performance. They find that seven variables matter and group them together in the so-called Gov-7 index.

Bhagat *et al.* (2008) too use an empiricist approach to investigate what CG variables really matter. However, Bhagat *et al.* (2008) go a step further than the studies reviewed so far. Based on simultaneous equations systems, they find three significant determinants of operating performance (Bhagat 2008: 1848-1850): the separation of the CEO and Board Chairman role; the level of independence of the BoD<sup>8</sup>; the strongest relationship they find relates to the dollar value of the independent directors' median shareholdings.

They too criticise existing approaches and CG indices, notably on grounds of what they call two 'factually incorrect assumptions' on which such indices are based (Bhagat *et al.* 2008: 1808): firstly, that good governance components do not vary across firms; secondly, that they are always complements and never substitutes. They acknowledge hence the contextuality of CG bundles. However, based on this analysis, they reach the rather radical conclusion that composite measures are useless and that the enterprise of constructing reliable composite measure should be abandoned. Instead of using an index, a single variable should be used (Bhagat *et al.* 2008: 1827).<sup>9</sup> They see three distinct advantages of such an approach (Bhagat *et al.* 2008: 1833). First, using just one variable reduces the probability of measurement errors (see *a contrario* Larcker *et al.* 2007). Second, it constitutes a way around the critical problem of weighting different items. Third, it avoids the thorny question of interaction effects between different CG mechanisms (are they substitutes or complements?). Avoiding the two latter problems is crucial according to them, because we lack a theoretical model that would allow us to understand the interaction between CG mechanisms (Bhagat *et al.* 2008: 1834-5).

Besides striving for parsimony, these studies have in common that they rely on a empirics-driven approach to the question of what should be included in an index. In other words, while these are certainly positive theories in that they are

fully grounded in empirical evidence and fulfil criteria of scientific rigor (such as falsifiability) (Donaldson 2012), their value as *causal* theories is limited. Reducing the number of variables included in an indicator may increase predictive power and avoid certain difficult choices that the construction of more complex measures would force us to make. However, the pragmatic approach is hardly satisfying from a theoretical standpoint. In particular, oftentimes the reason *why* a given variable matters for a given outcome remains obscure and theoretically unfounded. For instance, Bhagat *et al.*'s (2008) favourite measure seems plausible in that directors who have considerable personal wealth tied to the company's fortunes will have incentives to monitor managers closely. However, stating that directors *want* to monitor managers does not explain why we should expect these directors to be able to achieve efficient monitoring. Certain factors may indeed run counter their incentive and/or ability to monitor managers effectively: they might not be truly independent from the CEO, the CEO may also hold the positions of chairman of the board and hence dominate the board, despite the BoD members inherent interest in monitoring the CEO etc. Therefore, it would seem that focusing on one single aspect of CG to predict outcomes may work in practice, but clearly many important questions – such as what corporate governance mechanisms need to be present for directors to be able effectively to monitor CEOs? – remain unanswered and unanswerable.

In the worst case, such a pragmatic and empiricist approach leads to tautological reasoning. Because CG is not theoretically conceptualised, but measured as an empirically constructed set of practices that is defined by their positive impact on performance, using such measures to answer the research question 'does CG matter for firm performance?' becomes tautological.<sup>10</sup> To be sure, if the only goal is to predict future performance, then such a procedure may still be helpful. Since Friedman's (1966[1953]) famous essay, the predictive power of a theory has indeed oftentimes been taken as a reflection of its causal power without the causal link between variables actually being explained. Consequently, all too often, scholars use empirics merely to circumvent a theoretical void, failing thus to contribute to the advancement of causal corporate governance theory.

Moreover, while the more 'parsimonious' indicators may be empirically well founded – in that they drive performance – they are statistically problematic due to the pragmatic approach to index construction. Thus, the six variables of BCF's (2005) E-index have only relatively low correlations (between 0.1 and 0.31). They argue however that this shows that each variable contributes potentially a new aspect of corporate governance to the index. Similarly, Bhagat *et al.* (2008) observe that their privileged individual predictor of performance (median outside director ownership) is only weakly correlated with the Gompers *et al.* (2003) G-index. They suggest that a combined measure may

be the most powerful predictor of performance, because the two do not measure the same dimensions (Bhaghat *et al.* 2008: 1851). This suggestion reflects the dominant Friedmanian idea of the primacy of the predictive power of a model over identifying, explaining and understanding causal links between different CG mechanisms. However, methodologically, the combination of uncorrelated variables into a single construct is highly questionable. Indeed, from a methodological standpoint a main condition for a valid index is that the variables included measure the same underlying factor and index construction has been suggested in cases where the corporate governance variables present high levels of multicollinearity (Rediker & Seth 1995: 98). One general guideline is to include only variables with a Cronbach's alpha of at least 70% (Cortina 1993).<sup>11</sup>

Besides the methodological problems with this approach, combining two uncorrelated measures of CG (the G-index and director stock ownership), as suggested by Bhagat *et al.* 2008, makes it virtually impossible to give the construct any meaningful interpretation. If the G-index and the director ownership variable are not correlated, how can we take them to measure the same underlying construct, which is corporate governance?

Hence, attempts to reduce the number of variables by identifying which ones matter most, have an important shortcoming, i.e. they do not provide any theoretical insights into why certain variables matter for performance and others not.

### ***The check-and-sum problem***

The problem of a lack of theory that could guide us in our choices regarding what to include in an index and what not, is even more important regarding the weighting of different variables once they are included. The above mentioned papers by Bebchuk *et al.* (2009) and Brown and Caylor (2006) attempt to solve the 'kitchen-sink problem' by constructing indicators of the quality of corporate governance that only contain 'relevant' variables. However, they do not address the second problem according to which corporate governance indices are problematic (some say indeed 'naïve', cf. Larcker *et al.* 2007: 964), because they simply sum up different dimensions of corporate governance without any theoretical justification of the equal weighting of each variable. Bhaghat *et al.*'s (2008) more radical solution, on the other hand, avoids the problem altogether by suggesting the use of a single variable. Yet, this solution avoids the problem rather than solving it.

There are few references to explicit weightings of different CG mechanisms based on any conceptual or theoretical arguments. As mentioned above,

Bebchuk *et al.* (2009) consider voting rights to be more important CG mechanism than other mechanisms, because they are conceptualised as the most fundamental shareholder rights. Bhaghat *et al.* (2008: 1833), on the other hand, argue that the board of directors is the most important CG mechanism, because '[c]orporate law provides the board of directors with the authority to make, or at least ratify, all important firm decisions [...]'. Brown and Caylor (2006), based on empirical analysis, suggest that BoD and compensation provisions – what they call 'internal mechanisms' – matter more than anti-takeover provisions. Indeed, five of the seven variables they identify to drive the link between CG and performance are internal mechanisms, only two are anti-takeover provisions. There is hence no agreement in the literature on which mechanisms matter more than others (and should hence be weighted more).

Weighting is still taking place, but it is often implicit. Indeed even if all variables included in the indicator are given similar weight, weighting may still occur, because different dimensions of CG, such as anti-takeover mechanisms, board structure, or disclosure, are measured through unequal numbers of variables. Thus, an indicator may contain more items measuring anti-takeover provisions than variables measuring the structure and nature of the board of directors. This would imply that anti-takeover provisions are given more weight. Indeed, Bhaghat *et al.* (2008) observe that academic indicators tend to weight takeover defences more strongly than do the commercial datasets. This is particularly the case of the widely-used G-Index, which is practically an anti-takeover index (Brown & Caylor 2006). Oftentimes, these weightings are not explicit or consciously chosen, but the result of data availability.

It has been argued that the reasons for this situation are 1) academics lack the necessary expertise 2) weighting may raise suspicions regarding arbitrary weighting to improve results (Bhaghat *et al.* 2008: 1826; cf. Daines *et al.* 2010). A more fundamental reason however, is that there is no formal theory available that would allow researchers to define weightings on theoretical grounds (Larcker *et al.* 2007: 965).<sup>12</sup>

Commercial providers such as ISS and GMI, on the other hand, apply sophisticated quantitative algorithms or 'expert' judgement in order to determine the right weighting of CG items (cf. Bhagat *et al.* 2008: 1825). These algorithms are considered professional secrets by the index providers. One obvious drawback for academic research is therefore that the weightings are not replicable for academics. Moreover, despite these sophisticated algorithms, which for instance in the case of ISS aim explicitly at increasing the weight of variables that matter most for performance, they still do not correlate with performance (Daines *et al.* 2010). Hence, the weighting of variables included in

CG measures constitutes an important unsolved issue in the literature and among practitioners.

The next section presents the ‘bundles approach’ as a theory that may allow us to develop a theoretically informed definition of what CG mechanisms matter *theoretically* in different context.

### **3. The Bundles Approach to CG**

From the literature review above, it emerges that using simpler measures of CG has become the main solution to the problems associated with measuring firm-level CG. However, according to Larcker *et al.* (2007: 964), such an approach is problematic for two reasons. Firstly, single measures create a risk of substantial measurement errors. Secondly, the focus on one single or a limited number of measures to capture the complex construct of CG creates very substantial risks of correlated omitted variables bias. In this section, I argue that beyond these methodological reasons, the use of simpler measures is not desirable for theoretical reasons either. Indeed, using a limited number of measures for corporate governance will lead researchers to eliminate by design any possible interaction effects among CG mechanisms. Yet, recent research, adopting a ‘configurational’ or ‘bundles’ perspective, has precisely evolved in the direction of taking such interaction effects seriously (Aguilera *et al.* 2012; Fiss 2007). The problem will be aggravated in comparative CG research, because different institutional contexts may make certain mechanisms irrelevant and privilege other, functionally equivalent ones. Therefore, rather than reverting to simpler measures, the insights of recent scholarship in CG should inform the development of more sophisticated composite measures of firm-level corporate governance.

Schematically, the bundles approach can be summarised in four central ‘claims’ or ‘insights’: the ‘configurational claim’, the ‘equifinality claim’, the ‘contingency claim’, and the ‘degrees of implementation claim’. I will discuss these four claims in turn.

The most fundamental idea of the bundles approach is that firm-level corporate governance mechanisms may not matter individually, but develop their effects in combination with other mechanisms (Aguilera *et al.* 2012 and 2008, Ward *et al.* 2009, Rediker & Seth 1995, Westphal & Zajac 1994). As an example, while it may have proven difficult in empirical studies to show that the number of independent board members has an impact on financial performance (Hermalin & Weisbach 1991; Bhagat & Black 2002), this may be due to the fact that board independence is an effective CG mechanism only in combination with other CG

dimensions. Thus, independent boards may work effectively only in the presence of a large blockholder or in combination with the use of incentive pay for managers. The realisation that interactions between CG mechanisms are crucial arguably constitutes one of the most important insights in corporate governance research in recent years (cf. Aguilera *et al.* 2012). This fundamental insight could be termed the ‘*configurational claim*’ of the bundles approach.

The idea that bundles of CG practices may be more relevant units of analysis than individual practices is partly based on empirical observation. However, early on different scholars have discussed in theoretical terms the question of ‘complementarities’ – narrowly defined as the presence of one mechanism/practice increasing the marginal return of the other (cf. Milgrom & Roberts 1990, 1995, Aoki 2001).<sup>13</sup> Different empirical studies find evidence for such complementarities among different CG mechanisms. Thus, Rutherford and Buchholtz (2007) and Rutherford, Buchholtz and Brown (2007) find that monitoring by BoDs and incentive structures are complementary: when boards are strong and independent, incentive systems are more effective. Cremers and Nair (2005) find that the absence of takeover defences leads to abnormal returns only in cases where at the same time there is an active blockholder. This indicates that ‘good’ external governance (exposure to hostile takeover threat) leads to ‘good outcomes’ only if a *complementary* internal element of good governance (shareholder activism) is present at the same time.

Other scholars find relationships of *substitutability*. One of the first analyses of ‘CG bundles’ by Rediker and Seth (1995) – who coined the term ‘bundles of CG mechanisms’ – investigated three practices: monitoring by the board of directors, monitoring by external shareholders, and managerial share ownership. They found ‘[...] strong substitution effects between monitoring by outside directors vs. monitoring by large shareholders, incentive effects of managerial share ownership, and mutual monitoring by inside directors’ (Rediker & Seth 1995: 97-8). For instance, companies with a large external blockholder use fewer incentives for managers than companies with dispersed ownership (similarly Zajac and Westphal 1994; Tosi *et al.* 1997). Gillan *et al.* (2006) find that US companies with more independent boards have more anti-takeover provisions, while companies with fewer independent directors tend to have fewer anti-takeover provisions, suggesting a substitution effect between board monitoring and the market for corporate control.

The finding of substitution effects hints at the second claim of the bundles approach, which is that different ‘bundles’ may be functionally equivalent in that they lead to similar outcomes (*equifinality claim*). Indeed, scholars working from a bundles perspective have observed that different combinations of CG mechanisms may prove equally effective (cf. Aguilera *et al.* 2012). To give a simple example: effective monitoring of management may be achieved through

independent boards, the threat of hostile takeovers, and incentive pay, in combination with high levels of disclosure and a dispersed ownership structure (the Anglo-Saxon system) or through monitoring by large shareholders in a context of low levels of transparency and without the threat of hostile takeover (the insider- or blockholder-system).

A third insight from the bundles approach is that the nature of the interaction between CG mechanisms and the type of bundles we observe may be contingent on context, both firm-level (Ward *et al.* 2009) and environmental (Filatochev 2008). Indeed, different configurations of CG mechanisms may lead to similarly effective outcomes, because a given environment or different organisational reality requires specific solutions to specific problems (cf. Filatochev 2008, Aguilera *et al.* 2008). This could be termed the ‘*contingency claim*’ of the bundles approach.

In comparative corporate governance, it is widely accepted that national CG systems differ according to factors pertaining to the company’s external environment (Aguilera & Jackson 2010). The nature of the national regulatory framework is an often-quoted explanation for the difference between outsider- and insider-CG systems (La Porta *et al.* 1998). Other explanations include culture, politics (Gourevitch & Shinn 2005), and history (Roe 1994). Hence, such theories rely – implicitly – on the environmental contingency of corporate governance arrangements.

Beyond external determinants of CG bundles, recent studies have suggested that CG choices may be endogenous to individual firms (Larcker *et al.* 2007; Renders *et al.* 2010). Such organization-level contingencies imply that the effectiveness of combinations of corporate governance mechanisms may depend on specific characteristics of a firm. Thus, the type of CG bundles that characterise a given firm may depend on its industry (Bhagat *et al.* 2007: 60), the stage in its life-cycle (start up firms may require different bundles than mature companies Filatochev & Wright 2008), its profitability (Ward *et al.* 2009), its ownership structure (Bebchuk & Hamdani 2009), or more generally ‘efficiency’ and ‘risk’ (Westphal & Zajac 1994).

To give but one example, Ward *et al.* (2009) find that the nature of the relationship between board monitoring and incentive pay may depend on firm-level factors. They argue that in well-performing firms the two are substitutes: the BoD can choose to monitor less by granting more incentive pay to executives. Yet, in poorly performing firms, the two may be complements, in particular if there is an external institutional shareholder putting pressure on the firm (Ward *et al.* 2009: 653). Finally, in companies with extremely poor performance, i.e. those that are on the verge of bankruptcy, the two mechanisms

may be completely ‘decoupled’ as the BoDs monitoring capacity declines, among other factors, because non-executive directors leave and are not replaced and CEOs tend to entrench themselves. In other words, in such extreme situations the bundles may unbundle (Ward *et al.* 2009: 655).

Also, Bebchuk and Hamdani (2009) argue that a company’s ownership structure is an important source of organisational contingency of CG (also Hoi and Robin 2010). They analyse differences in the effect of CG mechanisms in firms with and without a controlling shareholder and show that the functioning of different CG mechanisms is indeed contingent on ownership structures. For instance, supermajority requirements for changes to the corporate charter or for the approval of mergers and acquisitions have a fundamentally different effect on minorities in the presence or absence of a controlling shareholder. RiskMetrics code the presence of a supermajority requirement negatively, i.e. as reducing shareholder rights. However, Bebchuk and Hamdani (2009: 1297) argue that this is the case only in companies with dispersed ownership, where supermajority requirements can isolate managers from shareholder influence. In companies with a large blockholder, supermajority requirements may be an important protection of minorities against the blockholder. In this case, they should hence be coded positively as protecting minority rights. As a result of this and other contingencies of CG mechanisms on ownership structure, they conclude that it is impossible to create an index applying to both types of firms. To these two important contingencies – environmental and organisational – a third one can be added, i.e. *temporal contingencies*. Indeed, in longitudinal studies, an important factor is that the nature of bundles and interactions between CG mechanisms may change over time. Partly this effect may work through environmental contingencies (laws change over time). Partly, however, this change may be due to changing behaviours of actors without any measureable environmental change. Thus, while board oversight and incentive pay may have been substitutes during the 1980s and 1990s (e.g. Rediker & Seth 1995), the way in which incentive pay (in particular stock options) are used has dramatically change since then. As CEOs and other top managers have learned how to use incentive schemes in their own interest, stock options have changed from being an instrument of governance to becoming a source of agency costs (cf. Boyer 2005). This temporal contingency may explain why recent studies – contrary to earlier ones – find complementary relationships between board independence and activity and the effective use of incentive schemes (Rutherford & Buchholtz 2007). In a situation where incentive pay schemes are considered as a potential source of agency costs, boards will be wary to not use them as a substitute for oversight, but rather monitor their use closely. More generally, governance-related problems evolve over time and standards and expectations change. What was considered ‘good’ corporate governance in the mid-1990s may be considered mediocre CG at best in 2012.



A fourth claim derived from the bundles perspective is that, CG practices vary not only in terms of specific combinations that exist, but also in terms of the *intensity* of these practices. This could be termed the ‘degrees of implementation claim’. Thus, companies may choose only to partially enforce a given CG mechanism, to comply only symbolically, or even to ‘resist’ the adoption of a legally/regulatory required practice (Aguilera *et al.* 2012). Thus, two companies may have the same number of independent board members, but the definition of independence may vary considerably between the two.<sup>14</sup> This claim is not directly related to the idea of bundles, but derives from insights in organisation studies regarding partial implementation of organisational practices. However, it holds important lessons for the bundles approach as well, because the actual effects of a given bundle may depend not just on organisational and environmental contingencies, but also on the strength of the different CG mechanisms that form a bundle themselves.

These four ‘claims’ of the ‘bundles’ approach, have far-reaching implications for the notion of ‘best practice’ in corporate governance. Indeed, whether a given practice can be considered best practice may depend on the presence, absence, or strength of another practice. The next section turns to explore what implications this has for corporate governance indices and the definition of ‘good CG’.

#### **4. Applying the bundles approach to CG index construction**

Few previous attempts to create meaningful measures of firm-level CG have taken into account insights from the bundles perspective. Different authors acknowledge the importance of interaction effects between CG practices (Bhagat *et al.* 2008; Larcker *et al.* 2007), but they either seek to avoid the problem by using simpler measure or by choosing ‘downstream’ methodological solutions to deal with it. One notable exception is Bebchuk and Hamdani (2009). As mentioned above, they argue that two different CG indices are required to measure the quality of CG of widely-held companies and in companies with controlling shareholders.

However, while the contingency of CG mechanisms on ownership structures is certainly a very important one. Indeed, the distinction between the principal-agent problem in widely-held firms and the principal-principal problem in firms with blockholders is increasingly acknowledged and well understood in the literature, notably in emerging markets where blockholding is dominant (cf. e.g. Peng & Jiang 2009). Yet, the scholarly attention to the difference between closely-held companies and widely-held ones does not provide a sufficient justification why this particular contingency should be more important than other contingencies. Thus, it could be argued that industry differences or

differences in size may affect the effect of CG mechanisms in quite similar ways than ownership, even though they are currently less well-researched than ownership-related contingencies (cf. Aguilera *et al.* 2012). To give but one example, Bebchuk and Hamdani (2009: 1304) argue that CG mechanisms that aim at controlling the power of CEOs (such as the separation of CEO and BoD chairman) are less relevant for companies with controlling shareholder, because in such cases the CEO may be monitored directly by the controlling shareholder. However, other systems may achieve the same goal of keeping in check the CEO through other means than blockholder monitoring. Thus, in Germany, dual board structure and other features of the corporate structure aiming at diluting the CEO's power, create certain counter powers to the CEO (e.g. employee representation on the supervisory board), which reduce CEO power independently of the existence of a blockholder. In this respect, dual board structure and co-determination could hence be seen as a functional equivalent to blockholding, which a measure of CG should take into account. More fundamentally, Bebchuk and Hamdani's (2009) conclusion, that it is impossible to construct a single composite measure of CG, is based on the confusion of two different aspects of CG research, the 'normative' one and the 'analytical' one (cf. Donaldson 2012). It seems indeed likely that, due to the existence of contingencies and interaction effects between CG mechanisms, there is more than one best way of governing a widely-held and closely-held firm. From a *prescriptive* standpoint it may hence be impossible to define a single set of 'best practices', as Bebchuk and Hamdani (2009) acknowledge. Yet, this does not imply that it is impossible to develop a single *analytical* measure of CG that can account for such differences. Indeed, rather than creating indices for each specific contingency, a more general approach is needed that allows us to create indicators that can handle contingency effects, functional equivalence, equifinality, interaction effects, and the problem of degrees of implementation. The next paragraphs attempt to start providing ways in which this task could be achieved.

### ***Dealing with bundles: Capturing interaction effects, functional equivalence, and equifinality***

Two ways to deal with the main claims of the bundles approach regarding interaction effects and functional equivalence can be identified. One is empirical, the other is theoretical.

Firstly, the empirical solution is to choose the research design in a way that minimises the risk of missing interactions between corporate governance mechanisms. In configurational research, different methods have been used to account for interaction effects. For instance, researchers have simply added two-ways or three-ways interaction terms to linear regression models or used a theoretically informed 'ideal typical' configuration to calculate 'deviation

scores' (cf. Fiss 2007). Also inductive research approaches, such as cluster- or principal component analysis, can be used to identifying CG bundles (see Jackson & Miyajima 2007b; Larcker *et al.* 2007). Finally, explicitly configurational methods such as crisp set or fuzzy set qualitative comparative analysis (QCA) constitute promising approaches to identify configurations of CG mechanisms (Fiss 2007). All these methods of dealing with interaction effects have advantages and shortcomings (cf. Fiss 2007 for a discussion). Nevertheless, using any of these methods implies at the stage of data collection and definition that the net should be cast wider rather than narrower when measuring firm-level CG. In other words, we need to define measures that err – at least in a first step – on the side of including too many items rather than too few. This is in contradiction with the above-mentioned 'kitchen-sink' criticism.

Secondly, a more theoretically grounded way of accounting for bundles is to rely on different comparative- and country case studies that investigate CG arrangements in detail. Indeed, studies on national corporate governance systems have developed quite precise understandings of how different parts of a corporate governance system relate to each other. While we may indeed lack a universal, formal theory of how CG mechanisms relate to each other at the firm level, there are studies about how different types of national CG systems work and how their different dimensions (e.g. employee participation and finance) relate to each other (cf. Weimar & Pappé 1999; Aoki & Jackson 2008; Gospel & Pendelton 2003). Such studies can be used as mid-range theories or heuristics, which allow us to identify important CG mechanisms *a priori*.

This will in turn allow researchers not only to decide which variables should be included in a measure of CG practices, but also to hypothesise what interactions may exist.

Such interactions are particularly well-researched for the Anglo-Saxon shareholder model of CG. It is generally accepted that the Anglo-Saxon model relies on interactions between managerial incentive pay, oversight by independent boards, the market for corporate control, high levels of transparency in accounting and external auditing (Aoki & Jackson 2008, Hart 1995). Theoretically, this system is explained with reference to agency theory (cf. Ward *et al.* 2009; Heinrich 2002, Harris & Raviv 2006, Hermalin & Weisbach 1999). However, in other countries the precepts of agency theory may be inaccurate for characterising actors' behaviour (Lubatkin *et al.* 2005). Nevertheless, the agency perspective has become the dominant approach, so that the very definition of relevant corporate governance variables is usually based on this perspective. The focus on the presence or absence of a market for corporate control and anti-takeover measures for instance reflects this. Indeed, these dimensions may be meaningless in other countries where the market for corporate control is absent or plays a very different role than in the US (cf.

Jackson & Miyajima 2007a). Implicitly – or indeed explicitly (cf. Aggarwal *et al.* 2008) – benchmarking firm-level corporate governance standards against a shareholder-orientated model may lead researchers to neglect CG mechanisms that are functionally equivalent to board oversight or hostile takeovers, but not important in the Anglo-Saxon system.<sup>15</sup>

For other countries and national models, the interactions between different mechanisms are not yet as well understood. Nevertheless, it is possible to identify certain interactions based on existing studies. Thus, it is well-established that the ideal typical insider system of the Germanic model, combines different forms of insider control – e.g. through blockholding or voting right distortions – with opaque and sometimes inexistent accounting rules. This situation granted insiders large autonomy over the use of the profits generated (Höpner 2003). Yet, other countries that are usually associated with insider corporate governance, such as Sweden and the Netherlands, traditionally combined strong insider control and the absence of markets for corporate control with relatively transparent accounting standards (cf. Schnyder 2012). These countries seem hence to have a different type of complementarity between accounting rules and insider control than the Germanic countries.

This has different implications for index construction. For one, country studies need to be used to identify what functional equivalent mechanisms may exist to the typical Anglo-Saxon ‘takeover-incentives- board oversight’ triangle (if the Anglo-Saxon model were indeed to be used as the benchmark). Also, one might argue that a comparative CG index will have to weight different mechanisms according to their importance in a given country’s CG model. Thus, given that transparency was traditionally relatively high in the Netherlands (at least compared to other continental European countries), but shareholders still had few rights, the adoption of international accounting standards by firms in such countries is less costly than for, say, German, Swiss or Austrian firms. Conversely, anti-takeover mechanisms were for a long time the most important instruments of insider control in Dutch firms notably because ownership is relatively dispersed (de Jong *et al.* 2005). In other European countries, such as Switzerland, on the other hand, the abolishing of anti-takeover provisions is less consequential, because insiders hold relatively large stakes, which implies that abolishing takeover protections does not automatically lead to a loss of control (Schnyder 2012). Abolishing such mechanisms is hence highly significant of a strong pro-shareholder orientation in the Dutch case, but much less so in Switzerland. Indeed, Bebchuk and Hamdani (2009: 1288) consider that in the case of firms with controlling shareholders the absence of anti-takeover provisions ‘is neither good nor bad, but simply irrelevant’. The corresponding variables of a CG index should be weighted accordingly.

These examples show that the ‘equifinality claim’ constitutes a particularly important problem for comparative corporate governance research whose importance is increasingly acknowledged (Judge 2011, Zattoni & van Ees 2012). Basing the choice of CG variables to be included in an index on ‘mid-range theories’ may not live up to the ideals of a positivist theory. However, it is a major step forward in terms of identifying functional equivalents and contingencies. In particular compared to current approaches that make such choices mainly based on what drives performance (Bebchuk *et al.* 2009; Brown & Caylor 2006; Cremers & Mayer 2005) or data availability (Aggarwal *et al.* 2008).

### ***Dealing with contingency***

Taking seriously insights from the ‘bundles approach’ implies that the question of contingencies needs to be tackled too. As mentioned above, three different types can be distinguished: organisational, environmental, and temporal contingencies.

Dealing with ‘organisational contingencies’ does not necessarily have to be done through the measurement of CG. Rather, the research design could be chosen in order to allow for the identification of bundles depending for instance on industry-level contingencies. Thus, the sample of firms analysed could be split according to these possible contingencies and results from either regression analysis or inductive techniques could then be compared across groups (cf. Porter & Siggelkow 2008 for an example from strategy research).

The second type of contingencies concerns how the firm’s external environment shapes the nature and/or effectiveness of specific corporate governance mechanisms (see Zattoni & van Ees 2012; Aguilera *et al.* 2008; Filatotchev 2008). Laws and regulations play an important role in determining what bundles may (or may not) emerge at the firm level. In order to account for this type of contingencies, composite measures that distinguish legally required CG mechanism from others constitute one possible solution. The inclusion of both legally-required and voluntary dimensions of CG in a composite measure would capture important information regarding the determinants of firm-level CG bundles. It would become possible to analyse whether a given ‘bundle’ is mainly the result of legal requirements or whether companies complement legally required practices with voluntary ones. In longitudinal studies, this would also permit a more fine-grained analysis of the patterns of change, e.g. by distinguishing firms which simply ‘comply’ with CG practices as they become legally required, from firms that adopt ‘best practices’ that go beyond the legally required minimum. Finally, from a methodological point of view, Renders *et al.* (2010) have shown that distinguishing voluntary from regulatory

required practices makes it possible to define appropriate external instrumental variables, solving thus endogeneity problems in regression analysis based on CG data.

Different studies already use indicators that contain some legally-induced variables and others which do not. Yet, this distinction is rarely explicitly acknowledged, which can lead to flawed conclusions. Thus, one of Aggarwal *et al.*'s (2008: 3167) main findings is that 'good' CG laws and 'good' CG practices are complements not substitutes; that is, where laws guarantee high-levels of minority shareholder protection, companies also tend to have more shareholder-friendly CG practices. However, this finding is based on a measure of firm-level corporate governance that contains a variable on 'cumulative voting' (variable 15) and one on 'calling an extraordinary AGM' (variable 32), which are also part of the La Porta *et al.*'s (1998) Anti-Director Rights Index (ADRI). Since they use the ADRI to measure the quality of law, it can be hardly surprising that there is quite a strong correlation between practices and legal rules given that two of the six ADRI variables have a direct correspondent in the measure of firm-level CG practices. The choice of including in a measure of firm-level CG legally-required items should be made explicit and the conclusions drawn need to be adapted accordingly. In this case, what the correlation between legal quality and corporate practices shows, may be largely compliance with legal rules: in countries where the two variables in the ADRI take positive values most companies will follow the laws and in countries where they are not legally compulsory most firms do not adopt them. This is obviously not evidence of a functionally complementary relationship between legal rules and corporate practices, but at least a measure of compliance. This illustrates the importance of using more carefully constructed indices.

The third type of contingencies, *temporal contingency*, implies that corporate governance needs to be considered as a 'moving target' and that 'best practices' change over time. Thus, in the 1980s or early 1990s, hardly any corporate governance activist demanded that individual remuneration figures for every member of the top management team of a firm be disclosed, let alone that 'claw-back clauses' were introduced in the company's charter. At the time, problems with 'excessive manager' pay were simply not on the radar of shareholder activists in most countries. In Europe, the early corporate governance activists in the 1980s and especially the 1990s focused on more fundamental issues such as adopting international accounting standards (IAS, or what is now called IFRS), which prohibited the wide-spread practice of creating hidden reserves. By 2005 the EU had adopted a compulsory IFRS reporting standard for listed firms. The use of IFRS (or US-GAAP) accounting rules is hence hardly a meaningful indicator of 'good' corporate governance practices anymore even though it was a strong indicator of pro-active pro-shareholder

practices during the 1990s. Also, a historically informed approach to index construction based on in-depth knowledge of a given country's CG system will allow it to account for such changes over time.<sup>16</sup>

### ***Dealing with the 'degrees of implementation' claim***

The main implication of the 'degrees of implementation' claim is that corporate governance mechanisms cannot be captured simply by recording the presence or absence of a given mechanism. Indeed, Aguilera *et al.* (2012: 380) note that a practice can be either fully endorsed or the firm can merely comply with minimum requirements. It is even possible that a firm only comply symbolically with a given practice or refuses to comply at all. This suggests that CG mechanisms cannot in all cases be treated purely as a dichotomous variable (either presence or absence of a given mechanism), but 'degrees of presence' may be distinguished. One way in which this issue can be addressed is by coding variables as categorical or continuous ones rather than using simple dummy variables. Höpner (2003) for instance distinguishes investor relations (IR) departments that are part of Public Relations from IR departments that directly report to the CFO, leading to a metric with three levels (0=no IR department; 1 = IR department as part of public relations; 2 = IR department as part of finance). Another possibility is, staying with the example of IR, to look into the number of employees the IR department has as a proxy for how seriously a given company takes investor relations. This would offer a way of measuring commitment to IR as a continuous variable, which has the advantage of overcoming limitations of dichotomous variables also in terms of 'temporal contingencies'. Indeed, while the variable 'presence or absence' of IR department produced a great deal of variation in the case of Germany in 1990 (Höpner 2003), by 2000 literally every large German corporation had such a department. Measuring the size of such departments or using other proxies for the resources committed to IR, constitutes a way of refining the measurement so that it remains relevant in a changed context. The problem that remains is how such continuous variables can then be integrated in a composite measure with variables that use different scales. Configurational approaches such as fuzzy sets QCA may provide some solutions for this problem (Fiss 2007).

Each variable of a CG index should hence be examined in view of identifying ways in which different levels of implementation could be distinguished and coded.

### ***Limitations and Ways Forward***

Put simply, the insights from the bundles approach suggest that we need more sophisticated measures rather than simpler ones in order to be able to quantify firm-level CG practices in meaningful ways. Yet, clearly, developing more

sophisticated measures also raise new issues – or indeed aggravates existing ones – that may make some of the suggestions problematic or impracticable. Partly, this is inevitable and simply due to the complexity of the task at hand. Kogut and Ragin (2006:47) state that ‘[t]he logic of complementarities and configurational analysis is confronted with an irreducible problem of causal complexity’. This extends to metrics to be used in configurational analysis. However, different ways forward exist to address at least some of the problems related to complexity. Two promising approaches are ‘modular indices’ and ‘contingent indicies’, which I briefly review here.

As I argued above one of the problems of existing indicators is that they include non-correlated variables in a single index. This problem, is possibly further increased with the approach suggested in this paper. Indeed, ‘casting the net wider’ is likely to lead to a situation where many variables do not strongly correlate. How to deal with this problem? Certain precautions would have to be taken to make the index statistically sound. As an example, Myajima (2007) constructs a measure of CG for Japanese firms, which is the sum of three sub-indicators measuring shareholder protection practices, separation of the management and monitoring roles of the board, and transparency.<sup>17</sup> Myajima (2007: 338) finds that while the shareholder protection sub-index and the disclosure index are relatively strongly correlated (.41), the two other pairwise correlations are relatively weak (CGSds x CGSbr = .26; CGSsh x CGSbr = .18). Myajima (2007) interprets this as a sign that the different aspects of corporate governance were implemented by Japanese firms quite independently of each other. This raises important issues regarding the validity of the overall composite measure that is simply the average of the three sub-indicators. Moreover, neither the equal weighting of items in each sub-index, nor the equal contribution of each sub-index to the final CGS are theoretically justified. One could argue that minority shareholder protection through increasing shareholder rights during the AGM (sub-index 1) may be more consequential than the third sub-index (transparency) and should hence be weighted accordingly (cf. Bebchuk *et al.* 2009). While Myajima does not discuss these important issues, the merit of his approach is clearly to distinguish different sub-indicators which are theoretically and conceptually plausible and allow it to have a coherence of variables within sub-indicators, even if the sub-indicators are not correlated. Such a ‘modular’ approach, distinguishing different sub-indicators based on our knowledge of CG is an important step in the direction of creating more reliable measures. It also has the advantage of allowing it to use only those sub-indicators that are most relevant for a given research question.

Another recent attempt to develop more reliable CG measures is a study by Ferreira *et al.* (2012), which proposes an indicator for bank governance in the US that accounts both for ‘contingencies’ and the problem of ‘equifinality’. The



paper constructs a ‘contingent index’ of management insulation (MII), which ‘aims at measuring [...] the degree of managers’ exposure to potential strategic intervention by activist shareholders’ (Ferreira *et al.* 2012: 5). They acknowledge explicitly the existence of interaction effects, whereby the functioning/effectiveness of a given shareholder right may depend on the presence or absence of others rights. The outcome of interest to their research question is the ease with which shareholders can take control over the bank board. Different corporate governance mechanisms are relevant to this question: Whether the board is staggered or not, whether shareholders have the right to call an extraordinary general meeting or to act by written consent, what rules for the nomination and removal of directors apply and whether shareholders have the right to declassify the board and/or increase its size.

Depending on the combination of these various rights, shareholders can take control of the board almost immediately, or it can take up to two years to do so. Depending on the length of time that it takes to gain control and how costly this process is, Ferreira *et al.* (2012) attribute scores from 1 to 6 with higher scores indicating stronger insulation of managers from shareholder activism.

This approach remedies major shortcomings of existing indicators notably in terms of equifinality and functional equivalence. Thus, they show that there are different ‘paths’ for a bank to reach low scores on the MII, which indicates the possibility of almost immediate removal of directors. This outcome is most easily achieved in companies without staggered boards. However, even in companies with staggered boards, there are various ways around the classification and removal can hence be quick. Shareholders may have the right to call an extraordinary shareholder meeting (EGM), to remove directors ‘without cause’, to declassify the board, or they may have the possibility to increase the board size and thus add new directors in order to outnumber the insiders. The ease with which these ways around staggered boards can be used depends among other factors on the source of these rules, i.e. whether they are legal rules, rules specified in the charter (which can only be amended with BoD approval), or in the bylaws (which may in many cases be changed by a shareholder vote without BoD approval). The rules for changing these different types of rules vary considerably and can make it more or less costly for shareholders to gain control of the board. The MI index takes into account all these contingencies.

To be sure, this index also has limitations, notably that it is – deliberately – a measure of management entrenchment not a general shareholder rights index (Ferreira *et al.* 2012: 6). However, the way in which equifinal paths to manager entrenchment are measured constitutes a promising first step that could be applied to other aspects of corporate governance such as disclosure, pay, and ownership structures.

## 5. Conclusion: New Venues for Research Based on New Measures

This paper reviewed different recent attempts in the literature to assess the quality of commercial and academic firm-level corporate governance measures. I showed that the most common solution to improve existing measures is to create simpler indices that are composed of variables which strongly correlate with the outcome of interest or indeed use just the variable which most strongly correlates with these outcomes. Based on four main claims from the ‘bundles approach’, I argued that this solution has severe shortcomings in particular for comparative corporate governance research. The paper sought to discuss the major implications of the bundles approach for the way in which we measure CG at the firm level and across countries.

The main argument was that it seems unlikely that ever simpler measures for firm-level corporate governance are able to account for the complex and multiple interactions that exist between corporate governance mechanisms and between these and environmental factors. Indeed, for comparative corporate governance research, simplistic measures of corporate governance practices are likely to fail to contain sufficient information in order to capture functional equivalents and equifinal ‘paths’ to effective governance.

Bebchuk *et al.* (2009: 823-4) are certainly right to caution against a tendency to construct ever larger indices. However, in this paper I argue that the optimal size of a corporate governance index should be theoretically informed and will depend on the research question at hand. For instance, if we are interested in explaining the impact of institutional factors on changes in corporate governance practices across a certain number of countries, the CG measure we might require may be substantially more encompassing than a 6-variable index. Indeed, given that some corporate governance characteristics seem to matter only in combination with others, limiting the number of included variables too quickly may indeed lead us to lose important information. Therefore, while striving for parsimony is obviously a crucial concern, we should make a balanced and careful judgement of how much variety is required. In other words, we should not forget that things should be kept as simple as possible, but not simpler.

The task at hand is complex and poses different challenges. However, besides creating theoretically sounder measures, composite corporate governance measures based on insights from the ‘bundles approach’, taking into account contingencies, functional equivalents and degrees of implementation, will also constitute an important step towards linking the firm- and the national, institutional level, thus contributing to closing the macro-micro gap in CG

research between national institutional environments and organisation-level characteristics (cf. Minichilli *et al.* 2012).

## Notes

<sup>1</sup> To be sure, the definition of ‘*good* corporate governance’ is subject to debate and indeed ultimately a moral question (see Donaldson 2012). Nevertheless, the aim of CG indices is to measure the quality of CG in relation to some metric of organisational performance. While Donaldson (2012) considers that CG theories are by definition normative/prescriptive rather than positive theories, it is conceivable to develop a positive theory of CG, which focuses on description and prediction rather than prescription.

<sup>2</sup> See Larcker *et al.* 2007 for a critique of some of the methodological solutions that are suggested in the literature, notably the use of instrumental variables.

<sup>3</sup> Following continuous consolidation in the industry, several of the rating providers included in Daines and colleagues’ study have since merged and combined their methodologies. Thus, in 2007 RiskMetrics has taken over ISS which led to changes to the CGQ methodology. In June 2010, the RiskMetrics/ISS CGQ methodology has been discontinued and replaced by a new methodology called Governance Risk Indicators™ (GRId). Partly, this was a reaction to continuous criticisms notably regarding conflicts of interests due to cross-selling of rating and consultancy services and the transparency of the method. In 2010 RiskMetrics was acquired by MSCI Group. That same year, The Corporate Library, GovernanceMetrics International and Audit Integrity merged into GMI Ratings. Some of the existing methodologies were kept after the merger (notably Audit Integrity’s AGR) others were integrated into a new ESG rating system called GMI Analyst. While this has led to some changes to the methodologies used, these changes do not constitute a radically new approach. Regarding the new GRId rating system for instance, one leading law firm using these data considered that ‘[t]hese are for the most part changes in packaging and presentation rather than in substance’ (cf. <http://www.davispolk.com/files/publication/a90817ff-5d77-4153-9121/>).

Therefore, the criticisms and analyses made in the review papers included in this literature review still apply.

<sup>4</sup> Theoretically, most of the existing literature expects good CG will increase performance related to a firm's 'valuation', i.e. stock returns, shareholder value, Tobin's Q or share price, because investors are ready to pay a premium for stocks of companies that credibly commit to respecting shareholders' rights. The theoretical impact that 'good CG' has on operational performance – most commonly measured as return on assets (RoA) –, on the other hand, is more difficult to establish. Here it is usually assumed that 'good CG' leads to better performance due to the choice of shareholder-orientated strategies, which are assumed to be the most efficient ones, because they minimise capital costs and increase profitability (Rappaport 1986). A third type of DVs in CG research are measures of managerial misbehaviour and its punishment by shareholders, e.g. earnings restatements, litigation against the company, or non-routine CEO turnover. Here good CG is expected to impact the DV by increasing the shareholders' power effectively to monitor managers and hence punish misbehaviours.

<sup>5</sup> Both correlations are significant. The coefficient is negative because Brown and Caylor's (2006) index measures 'good' CG, whereas the G-Index (like the E-Index) measures managerial entrenchment.

<sup>6</sup> The six variables of the E-index are: i) staggered boards, ii) limits to shareholder bylaw amendments, iii) poison pills, iv) golden parachutes, v) supermajority requirements for mergers, vi) supermajority requirements for charter amendments.

<sup>7</sup> A similar point is made by Kogut (2012: 11) who criticises the existing CG literature for equating 'good governance' with "ease by which the practices permit the company to be taken over", which may partly explain why the link between CG and firm value is elusive: "[D]uring acquisition waves, the premium goes up, and during market turndowns, the premium goes down".

<sup>8</sup> It should be noted, however, that this variable shows a significant *negative* relationships with operating performance, which goes against their theoretical expectation.

<sup>9</sup> Their privileged variable is the dollar value of the independent directors' median shareholdings.

<sup>10</sup> One striking example of such tautological reasoning comes from Aggarwal *et al.* (2008: 3132) who set out to investigate ‘whether differences in firm-level governance between foreign firms and comparable U.S. firms have implications for the valuation of foreign firms’ using their own GOV Index based on ISS data. They extract from the ISS dataset those variables that are available for both US and non-US firms and state that ‘one can reasonably disagree both with the governance attributes ISS focuses on and with the index we compute. [...] However, if the index were to convey no information, we would simply find that the index we use is not related to firm value.’ This implies that the link between corporate governance measure and firm performance is proof that the CG measure includes the right mechanisms. In other words, the link between corporate governance and firm value is both the research question and the main criteria defining the composition of the corporate governance measure.

<sup>11</sup> Some scholars, such as Höpner (2003), do take such methodologically considerations seriously and apply a more rigorous stance by including only variables, which strongly correlated.

<sup>12</sup> Among the few attempts to formalize CG theory are Harris & Raviv 2008, Hermalin & Weisbach 1998 and Heinrich 2002.

<sup>13</sup> The idea of complementarities and ‘bundles’ of practices has developed much earlier in human resource management research– and partly in strategy – and has become widely accepted in these domains (see Guest 1997).

<sup>14</sup> This is true also for the definition of ‘independence’ in CG ratings. For instance, the NYSE’s definition of independence – which is also used by RiskMetrics – is criticised by some shareholder activists such as the UK pension fund consulting firm PIRC who have developed their own – stricter – definition of independence (personal communication with Adam Rose, PIRC).

<sup>15</sup> A similar problem exists regarding measures of corporate governance at the level of legal rules. The most commonly used methodology (LLSV 1998) has been criticised for neglecting context-specific functional equivalent rules that achieve similar goals of minority shareholder protection in different contexts (see Armour *et al.* 2009; Lele & Siems 2007).

<sup>16</sup> Commercial providers generally do change the composition of their indicators to take into account changes over time.

<sup>17</sup> Two of Myajima's (2007) sub-indices (MS and transparency) summarise 10 survey items, one 6 items. For each sub-index the variables are summed up. The sub-index scores are then divided by the number of variables in each index (missing variables are excluded) and multiplied by 100/3 in order to equalize the weighting of each sub-index. The sum of these three sub-indices constitute the final Corporate Governance Scores (CGS), which takes values between 0 and 100 (Myajima 2007: 336).

## References

- Aggarwal, R., I. Erel, *et al.* (2008). 'Differences in Governance Practices between U.S. and Foreign Firms: Measurement, Causes, and Consequences.' *The Review of Financial Studies* **22**(9): 3131-3169.
- Aguilera, R. V., K. A. Desender, *et al.* (2012). A Bundle Perspective to Comparative Corporate Governance. *The Sage Handbook of Corporate Governance*. T. Clarke. London, Sage Publications: 380-405.
- Aguilera, R. V., I. Filatotchev, *et al.* (2008). 'An Organizational Approach to Comparative Corporate Governance: Costs, Contingencies and Complementarities.' *Organization Science* **19**(3): 475-492.
- Aguilera, R. V. and G. Jackson (2010). 'Comparative and International Corporate Governance.' *Academy of Management Annals* **4**: 485-556.
- Aoki, M. (2001). *Toward a Comparative Institutional Analysis*. Cambridge MA, MIT Press.
- Aoki, M. and G. Jackson (2008). 'Understanding an Emerging Diversity of Corporate Governance and Organizational Architecture: An Essentially-Based Analysis.' *Industrial and Corporate Change* **17**(1): 1-27.
- Armour, J., S. Deakin, *et al.* (2009). 'Shareholder protection and stock market development: An empirical test of the legal origins hypothesis.' *Journal of Empirical Legal Studies* **6**: 343-380.
- Bebchuk, L. A., A. Cohen, *et al.* (2009). 'What Matters in Corporate Governance?' *Review of Financial Studies* **22**(2).
- Bebchuk, L. A. and A. Hamdani (2009). 'The Elusive Quest for Global Governance Standards.' *University of Pennsylvania Law Review* **157**(5): 1263-1317.



- Bhagat, S., B. Bolton, *et al.* (2008). 'The Promise and Peril of Corporate Governance Indices.' *Columbia Law Review* **108**(8): 1803 - 1882.
- Bhagat, S., B. Bolton, *et al.* (2008). 'The Promise and Peril of Corporate Governance Indices.' Working Paper:1- 85.
- Boyer, R. (2005). 'From Shareholder Value to CEO Power: the Paradox of the 1990s.' *Competition & Change* **9**(1): 7-47.
- Brown, L. D. and M. L. Caylor (2006). 'Corporate Governance and Firm Valuation.' *Journal of Accounting and Public Policy* **25**(4): 409-434.
- Cortina, J. M. (1993). 'What is coefficient alpha? An examination of theory and applications.' *Journal of Applied Psychology* **78**: 98-104.
- Cremers, K. J. M. and V. B. Nair (2005). 'Governance Mechanisms and Equity Prices.' *Journal of Finance* **60**(6): 2859-2894.
- Daines, R. M., I. D. Gow, *et al.* (2010). 'Rating the ratings: How good are commercial governance ratings?' *Journal of Financial Economics* **98**: 439-461.
- de Jong, A. and A. Röell (2005). Financing and Control in The Netherlands. A *History of Corporate Governance around the World*. R. K. Morck. Chicago, London, The University of Chicago Press: 467-506.
- Donaldson, T. (2012). 'The Epistemic Fault Line in Corporate Governance.' *Academy of Management Review* **37**(2): 256-271.
- Ferreira, D., D. Kershaw, *et al.* (2012). 'Shareholder Empowerment and Bank Bailouts.' *AXA Working Paper Series* **11**: 1-47.

- Filatotchev, I. (2008). 'Developing an organizational theory of corporate governance: Comments on Henry L. Tosi, Jr. (2008) 'Quo Vadis? Suggestions for future corporate governance research'.' *Journal of Management and Governance* **12**: 171-178.
- Filatotchev, I. and M. Wright (2005). *The Life Cycle of Corporate Governance*. Cheltenham, Edward Elgar.
- Fiss, P. C. (2007). 'A Set-Theoretic Approach to Organizational Configurations.' *Academy of Management Review* **32**(4): 1180-1198.
- Friedman, M. (1966[1953]). *The Methodology of Positive Economics. Essays in Positive Economics*. M. Friedman. Chicago, University of Chicago Press: 3-43.
- Gillan, S. L., J. C. Hartzell, *et al.* (2011). 'Tradeoffs in Corporate Governance: Evidence from Board Structures and Charter Provisions.' *Quarterly Journal of Finance* **1**(4): 667-705.
- Gompers, P., J. Ishii, *et al.* (2003). 'Corporate Governance and Equity Prices.' *Quarterly Journal of Economics* **118**(1): 107-155.
- Gospel, H. and A. Pendleton (2003). 'Finance, Corporate Governance and the Management of Labour: A Conceptual and Comparative Analysis.' *British Journal of Industrial Relations* **41**(3): 557-582.
- Gourevitch, P. A. and J. Shinn (2005). *Political Power & Corporate Control. The New Global Politics of Corporate Governance*. Princeton, Princeton University Press.
- Guest, D. E. (1997). 'Human resource management and performance: A review and research agenda.' *International Journal of Human Resource Management* **8**(3): 263-276.
- Harris, M. and A. Raviv (2008). 'A Theory of Board Control and Size.' *Review of Financial Studies* **21**(4): 1797-1832.

- Hart, O. (1995). *Firms, Contracts, and Financial Structure*. Oxford, Clarendon Press.
- Heinrich, R. P. (2002). *Complementarities in Corporate Governance*. Berlin, Springer.
- Hermalin, B. and M. Weisbach (1998). 'Endogenously chosen boards of directors and their monitoring the CEO.' *American Economic Review* **88**: 96-118.
- Hoi, C.-K. and A. Robin (2010). 'Agency Conflicts, Controlling Owner Proximity, and Firm Value: An Analysis of Dual-Class Firms in the US.' *Corporate Governance: An International Review* **18** (2): 124-135.
- Höpner, M. (2003). *Wer beherrscht die Unternehmen? Shareholder Value, Managerherrschaft und Mitbestimmung in Deutschland*. Frankfurt / New York, Campus.
- Jackson, G. and H. Miyajima (2007a). 'Varieties of Capitalism, Varieties of Markets: Mergers and Acquisitions in Japan, Germany, France, the UK and USA.' RIETI Discussion Paper(07-E-054).
- Jackson, G. and Miyajima (2007b). Introduction: The Diversity and Change of Corporate Governance in Japan. *Corporate Governance in Japan: Institutional Change and Organizational Diversity*. M. Aoki, G. Jackson and H. Miyajima. Oxford, Oxford University Press: 1-47.
- Judge, W. (2011). 'What Level of Analysis is Most Salient for a Global Theory of Corporate Governance?' *Corporate Governance: An International Review* **19**(2): 97-98.
- Judge, W. (2010). 'Ruminations on financial efficiency and social legitimacy.' *Corporate Governance: An International Review* **18**: 1-2.

- Khanna, T. and K. G. Palepu (2004). 'Globalization and Convergence in Corporate Governance: Evidence from Infosys and the Indian Software Industry.' *Journal of International Business Studies* **35**(6): 484-507.
- Kogut, B. (2012). *The Small World of Corporate Governance: An Introduction. The Small Worlds of Corporate Governance*. B. Kogut. Cambridge, MA, MIT Press: 1-51.
- Kogut, B. and C. C. Ragin (2006). 'Exploring complexity when diversity is limited: institutional complementarity in theories of rule of law and national systems revisited.' *European Management Review* (3): 44-59.
- La Porta, R., F. Lopez-de-Silanes, *et al.* (1998). 'Law and Finance.' *Journal of Political Economy* **106**(6): 1113-1155.
- Larcker, D. F., B. J. Richardson, *et al.* (2007). 'Corporate Governance, Accounting Outcomes, and Organization Performance.' *Accounting Review* **82**(4): 963-1008.
- Lele, P. and M. Siems (2007). 'Shareholder Protection: A Leximetric Approach.' *Journal of Corporate Law Studies* **7**(I): 17-50.
- Lubatkin, M. H., P. J. Lane, *et al.* (2005). 'Origins of Corporate Governance in the USA, Sweden and France.' *Organization Studies* **26**(6): 867-888.
- Milgrom, P. and J. Roberts (1995). 'Complementarities and fit. Strategy, structure and organizational change in manufacturing.' *Journal of Accounting & Economics* **19**(2-3): 179-208.
- Milgrom, P. and J. Roberts (1990). 'The economics of modern manufacturing: Technology, strategy and organization.' *American Economic Review* **80**(3): 511-528.
- Minichilli, A., A. Zattoni, *et al.* (2012). 'Board task performance: An exploration of micro- and macro-level determinants of board effectiveness.' *Journal of Organizational Behaviour* **33**: 193-215.

- Miyajima, H. (2007). The Performance Effects and Determinants of Corporate Governance Reform. *Corporate Governance in Japan: Institutional Change and Organizational Diversity*. M. Aoki, G. Jackson and H. Miyajima. Oxford, Oxford University Press: 330-369.
- Peng, M. W. and Y. Jiang (2009). 'Institutions Behind Family Ownership and Control in Large Firms.' *Journal of Management Studies* **47**(2): 253-273.
- Porter, M. and N. Siggelkow (2008). 'Contextuality Within Activity Systems and Sustainability of Competitive Advantage.' *Academy of Management Perspectives* **22**(2): 34-56.
- Rappaport, A. (1986). *Creating Shareholder Value. The New Standard for Business Performance*. New York, The Free Press.
- Rediker, K. J. and A. Seth (1995). 'Boards of Directors and Substitution Effects of Alternative Governance Mechanisms.' *Strategic Management Journal* **16**(2): 85-99.
- Renders, A., A. Gaeremynck, *et al.* (2010). 'Corporate-Governance Ratings and Company Performance: A Cross-European Study.' *Corporate Governance: An International Review* **18**(2): 87-106.
- Roe, M. J. (1994). *Strong Managers, Weak Owners*. Princeton, Princeton University Press.
- Rutherford, M. A. and A. K. Buchholtz (2007). 'Investigating the Relationship Between Board Characteristics and Board Information.' *Corporate Governance: An International Review* **15**(4): 576-584.
- Rutherford, M. A., A. K. Buchholtz, *et al.* (2007). 'Examining the Relationships Between Monitoring and Incentives in Corporate Governance.' *Journal of Management Studies* **44**(3): 414-430.

- Schnyder, G. (2012). 'Varieties of Insider Corporate Governance: the determinants of business preferences and governance reform in the Netherlands, Sweden and Switzerland.' *Journal of European Public Policy* **19**(9): 1434-1451.
- Tosi, H. L., J. P. Katz, *et al.* (1997). 'Disaggregating the agency contract: The effects of monitoring, incentive alignment, and term in office on agent decision making.' *Academy of Management Journal* **40**: 584-602.
- Ward, A. J., J. A. Brown, *et al.* (2009). 'Governance Bundles, Firm Performance, and the Substitutability and Complementarity of Governance Mechanisms.' *Corporate Governance: An International Review* **17**(5): 646-660.
- Weimar, J. and J. Pappé (1999). 'A Taxonomy of Systems of Corporate Governance.' *Corporate Governance. An International Review* **7**(2): 152-165.
- Westphal, J. D. and E. J. Zajac (1994). 'Substance and Symbolism in CEOs' Long-term Incentive Plans.' *Administrative Science Quarterly* **39**: 367-390.
- Zattoni, A. and H. Van Ees (2012). 'How to Contribute to the Development of a Global Understanding of Corporate Governance? Reflections from Submitted and Published Articles in CGIR.' *Corporate Governance: An International Review* **20**(1): 106-118.

---