

# Governance and the corporate life-cycle

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## Abstract

**Purpose** – The purpose of this paper is to examine whether corporate governance changes along the corporate life-cycle.

**Design/methodology/approach** – In a sample of 205 firms from 21 emerging market countries and using a life-cycle proxy from the dividends literature, the authors use a governance-prediction model which examines whether corporate governance differs along the corporate life-cycle.

**Findings** – Mature firms tend to practice better overall corporate governance. Discipline and independence improve as firms mature. Firms tend to be most transparent and accountable when they are young. These findings suggest that the resource/strategy and monitoring/control governance functions are relevant but at different life-cycle stages.

**Research limitations/implications** – In the absence of longitudinal governance data with sufficient coverage to track within-firm changes in corporate governance along the corporate life-cycle, the authors analyze differences in corporate governance between-firms at different life-cycle stages.

**Originality/value** – The authors use an alternative, yet new measure from the dividends literature to account for the firm's position along the corporate life-cycle. With this new measure, the findings are in line with the predictions of Filatotchev *et al.* (2006).

**Keywords** Corporate governance, Emerging markets, Corporate life-cycle

**Paper type** Research paper

## 1. Introduction

In the last ten years or so much attention has been devoted to the study of corporate governance. For example, a search of “empirical corporate governance” in SSRN returns 1,377 studies. This work has been made possible by the availability of corporate governance measures, which makes comparisons of governance quality between firms, in and across countries, possible (e.g. Credit Lyonnais Securities Asia (CLSA), 2001), Institutional Shareholder Services (ISS), and the modified Gompers *et al.* (2003) “G-Index” of Bebchuk *et al.* (2009) (i.e. the “E-Index”)[1].

Two lines of inquiry which has attracted much attention are governance-to-value and governance-prediction studies. The former examines whether a causal relationship exists between corporate governance and firm value (e.g. Brown and Caylor, 2006; Gompers *et al.*, 2003; Bebchuk *et al.*, 2009, 2011; Black *et al.*, 2006a). The latter seeks to identify the firm- and country-level factors which shape corporate governance practices in firms (e.g. Klapper and Love, 2004; Durnev and Kim, 2005; Black *et al.*, 2006;



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Doidge *et al.*, 2007). While these studies are unlikely to be completely free from concerns regarding endogeneity, they typically conclude that governance causes value, and a range of country- and firm-level factors determine corporate governance choice (see Black *et al.*, 2012). The collective findings suggest that, large, high growth firms, with a need for external finance are better-governed, but that firms that exhibit these characteristics may not practice better governance in countries where the benefits of adopting better-governance do not outweigh the costs of doing so (see Doidge *et al.*, 2007).

Notwithstanding the voluminous nature of corporate governance research, one aspect that has been largely neglected in the literature is, whether and to what extent, governance evolves along the corporate life-cycle. In fact the scarcity of work in this specific area led Filatotchev *et al.* (2006, pp. 257 and 274) to assert that:

“Much attention has been focussed on the largest mature companies listed on a stock market, concentrating on the static theorising of the principal-agent perspective. Less attention has therefore been paid to the change processes in governance and variations in the principal-agent relationship through the life-cycle of the firm from inception to maturity [...], and that analysis of the post-IPO evolution of the firm’s governance system is a key research issue.”

In defence of researchers, the dearth of work in this area is in large part due to the nature of the data on offer. Consider the type of data required to undertake such an exercise. The researcher requires a measure of the strength of corporate governance from corporate inception through to maturity and beyond[2]. There are a number of issues here. First, much of the governance data on offer is for publicly traded firms only. A second issue relates to the duration of governance data for individual firms post-IPO. To the best of our knowledge, no governance measure exists which offers the scope to track corporate governance quality from the IPO stage (or earlier) through the growth stage to maturity, and beyond (i.e. stagnation and decline). For example, the G-Index covers four years, while the governance-index of Black *et al.* (2006a) dates from 1999 to 2005. The underlying issue here is that while these governance-indices are well-suited to the study of governance in calendar time (e.g. De Nicolo *et al.*, 2008), none are perfectly tailored to the study of corporate governance over the entire corporate life-cycle, since for many firms, the firm life-cycle is much longer than the coverage of most, if not all, of the governance indices on offer (see Miller and Friesen, 1984).

With this in mind, we adopt what we believe to be a next-best approach. We use governance data for a sample of firms from emerging markets, and seek to identify differences in corporate governance practices for firms who, at a particular point in time (2001), are at different life-cycle stages[3]. In this regard, our paper is materially different to others. Others examine the firm- and country-level factors which shape the governance practices of firms at a particular point in time[4]. We examine whether these firms, whom are at different life-cycle stages, have different governance practices. Given the nature of our governance data, we do not, nor cannot, track within-firm changes in governance along the entire corporate life-cycle. Instead, our focus is on identifying differences in governance practices between firms. Filatotchev *et al.* (2006) outline a framework which hypothesizes that as firms’ progress along their life-cycle, so too does their corporate governance function, as the wealth creation and wealth preservation functions of governance are required at different life-cycle stages. The governance data we use is suited to test the predictions of Filatotchev *et al.* (2006), because it covers broad aspects of governance, for example, independence, accountability, and transparency which are cornerstones of the conceptual framework which Filatotchev *et al.* (2006) develop. A governance index with a much

narrower focus (e.g. the G-Index focusses almost exclusively in anti-takeover provisions) would make such an empirical exercise impossible.

To identify firms at different stages of their life-cycle, we use a measure from the dividend literature. DeAngelo *et al.* (2006) test the life-cycle model of dividends using the ratio of earned (retained) to total equity (or total assets) as a proxy for firm maturity. As firms mature, the contribution of earned equity to total equity (earned plus contributed equity) increases, since as firms mature, they become more profitable, have less growth opportunities, and generate greater cashflow from operations, which all results in an increase in earned equity, and a reduced reliance on contributed (external) equity. We examine how corporate governance changes, if at all, as the firm matures, using the DeAngelo *et al.* (2006) measure to account for the firm life-cycle.

Using a governance-prediction model, we show that governance quality improves as firms mature. Transparency, independence and accountability are all prominent at different, but not necessarily the same life-cycle stages. Our findings suggest that a policy which mandates a “one-size-fits-all” governance code will not fit with the needs of all firms, and in some instances, such a policy will expose some firms to the costs of adhering to certain governance provisions whose adoption would not prove to be beneficial at their specific life-cycle stage. Our findings do not necessarily suggest that “across the board” rules are not beneficial (Atanasov *et al.* (2010) say they can be). Rather they suggest that a more flexible approach which grants firms more discretion over their own governance choices, say for example, along the lines of “comply or explain” would seem to make more sense.

The paper proceeds as follows. The next section reviews the literature. Section 3 describes the data, Section 4 the methodology, and Section 5 discusses our findings. Section 6 concludes.

## 2. Related literature

Our paper is positioned within a field of corporate governance commonly referred to as governance-prediction studies. These studies use firm-level governance rankings, performed either using a number of countries (e.g. Klapper and Love (2004)) or using individual country case-studies (e.g. Black *et al.* (2006)) to determine the firm- and country-level factors which predict corporate governance practices in firms.

The firm-level variables typically include size, growth opportunities, external financing need, asset tangibility, and whether a firm is cross-listed abroad (in the US). Some add research and development expenditures, and exports to this list. Doidge *et al.* (2007) also include the cash holdings of firms and the ownership structure of the firm. Black *et al.* (2006) use the richest set of firm-level attributes. They also use firm risk, leverage, profitability, market share, capital expenditures, and advertising. With some exceptions, these studies find that large, growing firms, with an external financing need, large cash positions, and who are riskier, are better-governed. Cross-listing firms are better-governed. Profitability and asset tangibility substitute for governance.

The country-level variables used capture aspects of financial and legal development. Country (rule of law and/or country shareholder rights) and corporate governance complement one another. Doidge *et al.* (2007) demonstrate that financial development matters for corporate governance, since poor financial development prevents firms from practicing better governance because the benefits from doing so (e.g. raising equity capital on liquid equity markets) do not outweigh the costs. Hugill and Siegel (2012) suggest that country-level factors do not dominate firm-level characteristics to the extent to which Doidge *et al.* (2007) say they do.

Individually and collectively, these studies enhance our understanding of what determines the governance practices of firms. However, one drawback is that their focus is narrow and static, and fails to examine how governance changes as firms change, or specifically, how governance changes as firms move along their life-cycle. They do include firm-level variables. However, different firm-level characteristics imply differing relationships between corporate governance and the firm life-cycle. For example, consider the effects of profitability and external financing need on the governance practices of firms. All else equal, governance quality increases (decreases) in a firm's external finance need (profitability). However, when firms are "immature" they are typically unprofitable, with a large external finance need, which tends to reverse when firms mature. This then implies that, all else equal, firms practice better governance when they are "immature" and governance quality deteriorates as they mature. On the other hand, the free cash flow hypothesis of Jensen (1986, 1993) suggests that the agency costs of free cash flow are most severe when firms are mature. Thus, one could argue then, that along the lines of Jensen (1986, 1993), governance quality should be the greatest when agency conflicts are most acute, that is, when firms are mature. Filatotchev *et al.* (2006) also allude to the greater need required of the monitoring role of governance as firms mature. Thus, we tend to agree with the assertion of Filatotchev *et al.* that an analysis of corporate governance across the life-cycle of the firm is an important avenue of research. It appears to us at least, that based on the existing empirical evidence, a question remains regarding the nature of the relationship between a firm's governance practices and its life-cycle.

### 3. Data

We use the corporate governance scores developed by CLSA (2001), which range from a low of 0 to a high of 100. Higher values suggest better governance. All ratings are calculated in 2001. The rating for each individual firm, for which there are 495 in total across 25 countries, is a composite measure of 57 qualitative, binary questions which span seven distinct governance categories, namely management discipline, transparency, independence, accountability, responsibility, fairness (all have a 15 percent weighting), and social awareness (10 percent weight). We use the first six governance provisions to construct the composite governance measure. Filatotchev *et al.* (2006) differentiate between the strategic/resource and monitoring/control functions of governance[5]. Five (excluding transparency) of the six CLSA governance provisions relate to monitoring and control. Two provisions, namely independence and accountability, likely capture both the resource/strategy and monitoring/control functions, since both measures account for different characteristics of the board of directors.

We use a measure from the dividend literature to proxy for a firm's position along their corporate life-cycle (or firm maturity), namely the ratio of earned equity (retained earnings) to total assets (see DeAngelo *et al.*, 2006; Brockman and Unlu, 2011). Mature (immature) firms are characterized with high (low, mostly negative) ratios of earned equity to total assets and earned equity to total equity. Since we use public firms alone, our analysis is restricted to how governance changes between quadrants 2 (post-IPO young firms) and quadrant 3 (mature firms) of the Filatotchev *et al.* (2006) framework[6]. The retained earnings (to total assets) and other unreported variables, namely dividend payout, profitability, external financing dependence, and free cash flow all suggest that there are firms in our sample in both quadrants 2 and 3. For example, consider Table III which divides our sample of firms into quartiles. Quartile 1 firms have negative RE/TA (reported), pay no dividend, have a large external financing need and are unprofitable

(all unreported). As we proceed from quartile 2 to quartile 4, firms mature (i.e. RE/TA increases). They initiate and continue to pay larger dividends, have positive free cash flow, no longer rely as much on external finance, and are profitable (all unreported). Finally, the RE/TE (and RE/TA) measure is consistent with the resource-based view of the firm, which is interrelated to the firms governance function, and is also consistent with the notion of the firm's financial life-cycle (see Filatotchev *et al.* (2006)).

We control for a number of determinants of corporate governance, commonly employed in other studies (see literature review for references). The firm-level controls are firm size, growth, profitability, cash holdings, dependence on external finance, and a cross-listing (in the USA (in 2001)) dummy variable. All information on US cross-listings is sourced from the Bank of New York-Mellon ([www.adrbnymellon.com](http://www.adrbnymellon.com)), and cross-referenced with data from Citibank ([www.citissb.com/adr](http://www.citissb.com/adr)). We group all 66 cross-listing firms together, rather than differentiate by listing type. All firm-level variables are sourced from Worldscope and a description of each is provided in Appendix 1. Based on the existing evidence, size is expected to be positively related to governance. Growing firms with a dependence on external finance invest in governance. In contrast, self-financing, profitable firms have little need to follow suit. Recent evidence suggests that poorly governed firms hold more cash than well-governed firms (see Ammann *et al.*, 2011). Cross-listing firms are expected to be better-governed than non-cross-listing firms, although it is not clear whether better governance is a prerequisite to, or a consequence of cross-listing. The difference in governance quality between firms may be evident prior to cross-listing (see Wojcik *et al.*, 2005), but for firms cross-listing in the USA as Level 2 or Level 3 exchange-traded ADRs, the bonding hypothesis suggests that their governance is likely to improve once they cross-list (see Stulz, 1999; Coffee, 1999, 2002).

We use four country-level determinants of corporate governance, namely stock market development; (country) shareholder rights, culture and economic development (see Appendix 1 for a full description of each variable). Country and corporate governance tend to complement each other (see Klapper and Love, 2004), while firms reap larger benefits from improved governance where stock markets and the economy is highly developed (see Doidge *et al.*, 2007; Aggarwal *et al.*, 2009). Griffin *et al.* (2013) find that culture is positively related to corporate governance.

Our final sample of 205 publicly traded firms is outlined in Table I. Taiwan (31) provides the most firms. Argentina, Hungary, Peru, and Poland provide a single firm each. The median (MED) and standard deviation (SD) retained earnings (to total assets) suggest that firms are most mature (and at much later stages of their life-cycle) in Mexico and Malaysia, and least so in Brazil[7]. The greatest variation in firm maturity tends to occur in Hong Kong. Governance quality is highest in Mexico, but less so in Pakistan. Hong Kong (13) and Taiwan (12) provide the largest number of cross-listing firms. Stock markets tend to be developed in Hong Kong, but less so in Pakistan. Shareholder rights are strong in, among others, Brazil and Chile, and weak in China. Individualism prevails in Hungary, collectivism in Colombia. Hong Kong and Singapore are the most developed economies in our sample.

Table II outlines the country sample median and standard deviation for each individual corporate governance component. Firms tend to be most transparent (TPY) in Chile, and opaque in Pakistan. Discipline (DIS) is high in Turkey, but not so in Poland. The median firm in Singapore scores highly across all aspects of governance. In contrast, the median firm in Pakistan scores poorly across all six governance

**Table I.**  
Sample description

Country	No. Firms Firms	Firm life-cycle (RE/TA)		Corporate governance		CL No. CL	MCAP	Country-level variables		
		MED	SD	MED	SD			SR	CULT	EC DEV
Argentina	1	0.06	–	66.67	–	1	0.672	3	46	7,203
Brazil	3	0.00	0.05	60.48	12.30	1	0.410	5	38	3,130
Chile	7	0.11	0.13	62.40	4.18	3	0.890	5	23	4,636
China	11	0.06	0.07	48.17	11.56	4	0.473	1	20	1,042
Colombia	1	0.03	–	53.18	–	0	0.140	4	13	2,429
Hong Kong	25	0.19	0.81	59.77	14.39	13	3.500	4	25	25,230
Hungary	1	0.01	–	48.45	–	0	0.218	2	80	5,175
India	13	0.10	0.14	53.43	10.42	3	0.272	4	48	460
Indonesia	12	0.23	0.23	36.33	13.59	1	0.153	4	14	742
Korea	13	0.01	0.15	39.68	5.85	3	0.423	4	18	10,655
Malaysia	22	0.31	0.14	60.32	12.82	3	1.354	4	26	3,872
Mexico	4	0.42	0.28	66.99	3.97	2	0.205	2	30	6,139
Pakistan	4	0.02	0.02	33.58	20.25	0	0.081	5	14	490
Peru	1	0.41	–	76.48	–	0	0.192	4	16	2,056
Philippines	12	0.12	0.46	40.58	12.22	5	0.513	4	32	966
Poland	1	0.14	–	37.73	–	0	0.155	2	60	4,979
Singapore	18	0.14	0.30	67.42	6.74	5	1.608	4	20	22,027
South Africa	16	0.15	0.27	64.27	16.09	7	1.259	5	65	2,638
Taiwan	31	0.09	0.17	54.93	9.08	12	0.978	5	17	13,108
Thailand	6	0.18	0.19	54.64	15.34	2	0.286	4	20	1,808
Turkey	3	0.16	0.09	50.65	5.13	1	0.409	4	37	3,037
	205	0.15	0.36	55.82	14.70	66				

**Notes:** This table describes the sample by country. We report the median (MED) and standard deviation (SD) of firm life-cycle and corporate governance, respectively. Firm life-cycle is measured using the ratio of earned equity (retained earnings) to total assets (RE/TA). No. CL is the number of firms cross-listed in the USA. All information on cross-listed firms is sourced from the Bank of New York Mellon and Citibank. In the remaining columns, we report the country-level variables

Country	No. Firms	Discipline (DIS)		Transparency (TPY)		Independence (IND)		Accountability (ACC)		Responsibility (RES)		Fairness (FAIR)	
		MED	SD	MED	SD	MED	SD	MED	SD	MED	SD	MED	SD
Argentina	1	66.70	–	70.00	–	78.60	–	62.50	–	50.00	–	72.20	–
Brazil	3	55.60	23.16	80.00	15.28	42.90	18.88	75.00	19.09	83.30	28.87	33.30	5.55
Chile	7	55.60	5.99	90.00	19.52	64.30	15.67	37.50	6.10	83.30	8.10	83.30	7.68
China	11	33.30	16.48	60.00	12.93	64.30	22.78	12.50	19.73	50.00	13.11	83.30	26.80
Colombia	1	55.60	–	50.00	–	35.70	–	50.00	–	50.00	–	77.80	–
Hong Kong	25	44.40	24.25	70.00	16.10	42.90	28.75	50.00	25.26	83.30	18.18	83.30	17.67
Hungary	1	22.20	–	60.00	–	57.10	–	12.50	–	66.70	–	72.20	–
India	13	66.70	16.90	50.00	14.81	64.30	29.41	50.00	18.40	50.00	16.13	83.30	24.37
Indonesia	12	33.30	18.02	60.00	13.79	14.30	19.83	18.75	8.36	33.30	19.41	66.70	32.95
Korea	13	33.30	9.99	50.00	7.51	35.70	13.87	62.50	17.22	33.30	10.67	33.30	23.30
Malaysia	22	55.60	18.86	65.00	17.66	78.60	21.63	31.25	19.88	50.00	14.23	80.55	22.05
Mexico	4	72.25	10.63	80.00	18.26	67.85	18.80	56.25	11.97	58.35	9.64	77.75	26.59
Pakistan	4	27.75	26.47	31.65	19.66	50.00	26.76	36.10	26.61	27.75	26.47	22.25	8.31
Peru	1	77.80	–	90.00	–	78.60	–	62.50	–	66.70	–	83.30	–
Philippines	12	33.30	17.41	45.00	12.67	53.60	26.26	25.00	13.55	33.30	16.66	33.30	27.84
Poland	1	11.10	–	20.00	–	78.60	78.60	100.0	–	16.70	–	0.00	–
Singapore	18	66.70	19.50	70.00	14.47	85.70	11.75	50.00	17.68	66.70	13.86	88.90	16.46
South Africa	16	55.60	13.76	50.00	18.97	71.40	25.59	75.00	23.48	66.70	21.08	80.55	23.20
Taiwan	31	55.60	17.75	50.00	25.00	85.70	11.75	50.00	25.16	50.00	19.71	50.00	26.11
Thailand	6	27.75	13.44	60.00	13.29	60.75	28.51	62.50	14.61	50.00	23.56	72.20	30.96
Turkey	3	77.80	29.42	40.00	20.82	71.40	24.71	62.50	14.43	66.70	9.64	22.20	5.55
	205	44.40	20.75	60.00	19.53	71.40	27.04	50.00	23.58	50.00	21.32	77.80	27.44

**Notes:** This table reports the country sample median (MED) and standard deviation (SD) of discipline, transparency, independence, accountability, responsibility, and fairness, respectively. Corporate governance data is from CLSA (2001)

components. In some countries, the median firm scores highly in some governance measures, but not so in others (e.g. Hong Kong).

#### 4. Methodology

In this section, we explore the relationship between firm maturity (life-cycle) and corporate governance practices. Consider Table III. Here we divide our sample of firms into four quartiles based on RE/TA. From lowest to highest quartile, the average (median) ratio of retained earnings (to total assets) changes from  $-0.157$  (0.003) to  $0.466$  (0.432) (see top panel of Table III). For the average and median firm, corporate governance improves with RE/TA (see middle and bottom panels of Table III). For the median firm, corporate governance improves from 51.68 in quartile 1 to 61.95 in quartile 4. The improvement in governance over the life-cycle results from improvements in discipline, independence, responsibility, and fairness. Transparency is highest at either ends of the firm-maturity spectrum, while firms are most accountable when they are immature (Quartile 1).

In Tables IV and V, we examine whether these same relationships hold once we control for firm, industry, and country-level determinants of corporate governance. To do so, we estimate a series of ordinary and weighted least squares regressions, which regress corporate governance on our corporate life-cycle measure, and a full set of firm, industry (based on four-digit SIC codes) and country-level controls. All regressions are estimated with heteroscedastic-consistent robust standard errors. In the bottom panels of Tables IV and V, we estimate a series of weighted least squares regressions to alleviate concerns that our findings are driven by differences in the number of firms across countries. In the weighted least squares regressions, the weight of each observation (firm) is the inverse of the number of observations in each country, so that each country receives an equal weighting.

Our governance prediction model is unlikely to be completely free from endogeneity concerns. First, there is the issue of omitted-variable bias. The issue here is that corporate governance is likely to be correlated with a number of firm/country-level variables, which in turn are likely to be correlated with each other. If we exclude a (relevant) variable, which is correlated with both firm life-cycle (RE/TA) and corporate governance, then we may incorrectly infer that the firm life-cycle and governance are related, where in fact, they are only related through their common relationship with the omitted variable. To try and alleviate some of this concern, we include a rich set of control variables. Given the nature of the corporate governance data that we use, and even with the inclusion of a number of (observable) control variables, we are, nevertheless, unable to control for unobserved heterogeneity. Second, and also of concern is the notion of reverse causality. Rather than firm maturity predicting governance, governance may in fact predict firm-maturity. For example, if we allude to the corporate life-cycle stages of Miller and Friesen (1984) (the stages are birth, growth, maturity, revival, and decline phases), better-governance may facilitate the transition from the birth to the growth stage since better governance helps to reduce the cost of capital. Since we lack a suitable instrument for corporate governance and use cross-sectional governance data, we cannot address these concerns in this paper.

#### 5. Results and discussion

Consider Table IV. The coefficient estimates suggest that mature firms practice better corporate governance. In all six regressions the coefficient estimates on the firm



Life-cycle (RE/TA) Quartiles					
	Quartile 1 (lowest)	Quartile 2	Quartile 3	Quartile 4 (highest)	High – Low
No. Firms	53	50	51	51	
Average RE/TA	(0.157)	0.080	0.211	0.466	0.623***
Median RE/TA	(0.003)	0.082	0.204	0.432	0.435***
SD RE/TA	0.052	0.031	0.047	0.144	0.092***
Life-cycle quartiles and corporate governance					
Average governance	51.71	55.00	54.14	59.25	7.54***
Median governance	51.68	52.05	55.42	61.95	10.27***
SD governance	16.56	13.74	12.45	14.82	(1.74)
Life-cycle Quartiles and (average) individual corporate governance provisions					
Discipline	43.39	49.55	50.54	53.82	10.43***
Transparency	61.49	55.47	51.57	62.16	0.67
Independence	55.05	60.53	61.49	62.89	7.84***
Accountability	49.53	46.94	40.20	42.89	(6.64)***
Responsibility	47.48	50.11	53.92	61.44	13.96***
Fairness	53.03	67.44	67.10	72.32	19.29***

**Notes:** This table displays summary statistics by (RE/TA) quartile. The top panel displays the average, median, and standard deviation ratio of retained earnings to total assets, by quartile. The second panel displays the average, median, and standard deviation of corporate governance by ratio of earned equity (retained earnings) to total assets quartile. The third panel displays the average discipline, transparency, independence, accountability, responsibility, and fairness, also by ratio of retained earnings to total assets quartile. Corporate governance is from CLSA (2001). \*\*\*Significant at the 1 percent level

**Table III.**  
Life-cycle quartiles,  
corporate  
governance and firm  
characteristics

**Table IV.**  
Corporate  
governance and the  
corporate life-cycle

	Dependent variable is corporate governance						Ec. Sig
	(1)	(2)	(3)	(4)	(5)	(6)	
Life-cycle	4.259* (1.88)	2.971 (1.36)	4.630** (2.31)	3.724* (1.88)	4.785** (2.35)	5.686*** (2.97)	3.08
Size	-2.617*** (3.20)	-3.818*** (4.63)	-2.464*** (3.07)	-3.594*** (4.54)	-4.558*** (5.59)	-4.242*** (5.35)	10.53
Growth	7.926 (1.36)	6.352 (1.08)			7.001 (1.22)		2.40
Profitability	-4.514 (0.49)	3.673 (0.45)			5.113 (0.65)		1.01
Cash	12.424* (1.77)	2.278 (0.32)	17.763*** (2.31)	5.597 (0.70)	-0.594 (0.09)	3.345 (0.43)	1.88
Dependence on external finance						0.197 (0.89)	3.22
US Cross-listing	6.814*** (2.81)	5.350*** (2.62)	6.258*** (2.64)	4.947** (2.40)	6.807*** (3.14)	6.251*** (2.81)	6.07
Stock market capitalization to GDP					-0.496 (0.31)	-0.472 (0.29)	0.97
Shareholder rights					-1.459 (1.21)	-1.242 (1.04)	2.56
Culture					0.342*** (4.03)	0.337*** (3.94)	9.89
Economic development					6.443*** (4.95)	6.027*** (4.58)	16.46
Industry dummies	Included	Included	Included	Included	Included	Included	
Country dummies	Excluded	Excluded	Excluded	Excluded	Excluded	Excluded	
No. Firms	205	205	205	205	205	205	
R <sup>2</sup>	0.218	0.546	0.242	0.544	0.412	0.408	

(continued)

	Weighted least squares						Ec. Sig
	(1)	(2)	(3)	(4)	(5)	(6)	4.79
Life-cycle	7.504** (2.04)	3.391 (1.48)	8.033*** (2.59)	4.242** (2.14)	7.665** (2.44)	9.606*** (3.18)	
Controls	Included	Included	Included	Included	Included	Included	
Industry dummies	Included	Included	Included	Included	Included	Included	
Country dummies	Excluded	Included	Excluded	Included	Excluded	Excluded	
No. Firms	205	205	205	205	205	205	
R <sup>2</sup>	0.306	0.659	0.351	0.669	0.421	0.426	

**Notes:** This table reports coefficient estimates from ordinary and weighted least squares regressions with heteroscedastic consistent *t*-stats (absolute value) presented underneath in parenthesis. The sample period is for the year 2001. The dependent variable is corporate governance. All other variables are defined in Appendix 1. An intercept, and a full set of industry and country dummies are included (where indicated) but not reported. Ec. Sig refers to the change in corporate governance resulting from a two standard deviation change in each independent variable, holding all else equal. The economic significance is calculated based on the average absolute coefficient estimate of each variable. Bold refers to variables which are statistically significant in at least one of the six regressions. \*\*\*, \*\*, and \* significant at 1, 5, and 10 percent level, respectively

**Table V.**  
Individual corporate  
governance  
provisions and the  
corporate life-cycle

	Dependent variable is					
	DIS	TPY	IND	ACC	RES	FAIR
Life-cycle	20.707*** (3.75)	1.301 (0.31)	13.894*** (1.98)	1.544 (0.24)	5.903 (1.58)	14.583*** (1.98)
Size	-4.224* (1.98)	-3.759*** (2.30)	-6.296*** (3.90)	-1.263 (0.61)	-4.372*** (3.13)	-4.092* (1.78)
Cash	-6.059 (2.58)	-2.698 (2.32)	16.355 (1.26)	6.677 (0.62)	14.921 (1.31)	10.147 (0.59)
Dependence on external finance	1.021** (2.58)	0.664** (2.32)	0.620 (1.26)	0.247 (0.62)	0.501 (1.31)	0.482 (1.36)
US cross-listing	11.003* (1.81)	12.027** (2.35)	4.281 (0.91)	2.207 (0.38)	8.788** (2.08)	16.411** (2.26)
Stock market capitalization to GDP	1.950 (0.58)	-3.354 (1.11)	-3.056 (0.92)	-10.219*** (2.71)	0.885 (0.33)	9.951** (2.51)
Shareholder rights	3.304 (1.35)	-0.171 (0.07)	-1.877 (0.94)	1.341 (0.51)	2.463 (1.31)	-3.499 (1.17)
Culture	-0.060 (0.35)	-0.172 (1.15)	0.327*** (2.66)	0.461** (1.97)	0.127 (0.90)	-0.145 (0.63)
Economic development	1.884 (0.72)	5.756*** (2.65)	9.127*** (4.10)	7.735*** (2.77)	5.132*** (2.62)	-0.107 (0.03)
Ec. Sig. (life-cycle)	20.71	0.92	9.86	1.10	4.19	10.35
Industry dummies	Included	Included	Included	Included	Included	Included
Country dummies	Excluded	Excluded	Excluded	Excluded	Excluded	Excluded
No. firms	205	205	205	205	205	205
R <sup>2</sup>	0.269	0.355	0.368	0.323	0.387	0.397
Life-cycle	13.001***	-6.323	3.872	-2.606	7.143**	10.601
Size	(3.21)	(1.00)	(0.67)	(0.34)	(2.05)	(1.62)
Cash	-2.403	-2.957**	-4.622***	-1.862	-4.183***	-2.694
	(1.46)	(2.24)	(2.73)	(1.21)	(3.21)	(1.33)
	-0.686	8.447	23.301	13.845	19.930	26.062
	(0.06)	(0.69)	(1.28)	(1.01)	(1.46)	(1.62)

(continued)

	DIS	TPY	IND	ACC	RES	FAIR
Dependence on external finance	0.553* (1.72)	0.686** (2.54)	0.403 (0.87)	0.802** (2.08)	0.309 (0.72)	0.360 (1.14)
US cross-listing	2.016 (0.51)	5.304 (1.61)	0.897 (0.18)	3.294 (1.09)	4.364 (1.38)	7.985** (1.99)
Ec. Sig. (life-cycle)	9.23	(4.49)	2.75	(1.85)	5.07	7.53
Industry dummies	Included	Included	Included	Included	Included	Included
Country dummies	Included	Included	Included	Included	Included	Included
No. firms	205	205	205	205	205	205
R <sup>2</sup>	0.643	0.648	0.552	0.691	0.619	0.663

**Notes:** This table reports coefficient estimates from weighted least squares regressions with heteroscedastic consistent t-stats presented underneath in parenthesis. In the weighted least squares regressions, the weight of each observation (firm) is the inverse of the number of observations (firms) in each country. The sample period is for the year 2001. The dependent variable is discipline (DIS), transparency (TPY), independence (IND), accountability (ACC), responsibility (RES), and fairness (FAIR), as indicated. Corporate governance measures are from CLSA (2001). All other variables are defined in appendix 1. An intercept, and a full set of industry and country dummies are included (where indicated) but not reported. Ec. Sig refers to the change in corporate governance resulting from a two standard deviation change in retained earnings, holding all else equal. The economic significance is calculated based on the average absolute coefficient estimate of retained earnings. Bold refers to variables which are statistically significant in at least one of the six regressions. \*\*\*, \*\*, and \* Significant at the 1, 5, and 10 percent level, respectively

life-cycle variable is positive, and is statistically significant in five of the six cases. The last column of Table VI calculates the effect that a two standard deviation change in each independent variable has on corporate governance (see column labeled Ec. Sig). Economic significance is calculated based on the average absolute coefficient estimate for each variable. For firm maturity (life-cycle), the change in governance is 3.08, which implies a 5.52 percent change in governance practices for the median firm (i.e.  $(3.08/55.82) \times 100$ )[8]. These findings are at odds with Black *et al.* (2006) who find that the governance practices of Korean firms are unaffected by the number of years listed on the stock exchange.

In contrast to both Klapper and Love (2004) and Black *et al.* (2006), we find that smaller firms are better-governed. Interestingly, neither profitability nor growth is significantly related to corporate governance. With one exception, both are of the correct sign, but remain statistically insignificant. Better-governed firms hold more cash than their not so well-governed counterparts. As expected, dependence on external finance is positively related to corporate governance, although it is only statistically significant in one of three regressions. External financing need is also statistically insignificant in the regressions of Durnev and Kim (2005) and Black *et al.* (2006). Cross-listing firms are better governed than non-cross-listing firms, on average by 6.07, which represents a governance premium of 11.05 percent over the median non-cross-listed firm (i.e.  $(6.07/54.93) \times 100$ ). Where all four country-level variables are included simultaneously, only culture and economic development are statistically significant. The positive coefficient estimate on culture confirms the findings of Griffin *et al.* (2013). Governance is not necessarily better in more individualistic countries. Rather, the positive coefficient suggests that governance ratings do a better job at capturing the governance attributes of firms in countries with a culture of individualism. Finally, the weighted least squares regressions confirm our earlier predictions that mature firms practice better governance. Filatotchev *et al.* (2006) show that as firms mature from quadrant 2 to 3, the resource/strategy role of governance becomes less relevant, while the monitoring/control function becomes more important. Our findings suggest that the declining relevance of resource/strategy function is more than offset by the prominence of monitoring/control as firms mature, resulting in higher overall governance. In the next section, we examine this issue in much greater detail (see Tables V and VI).

Table V presents a series of weighted least squares regressions. The dependent variable is one of the six individual corporate governance provisions described previously. Since growth and profitability are unrelated to governance, we exclude them from Table V. We present estimates with and without country fixed-effects. The coefficient estimates suggest that discipline, independence, responsibility, and fairness are positively and statistically related to the corporate life-cycle. These findings are all consistent with Filatotchev *et al.* (2006). Unexpectedly, the coefficient estimates on the transparency and accountability measures are statistically significant. From an economic significance viewpoint, changes in discipline (20.71) matter the most, followed by fairness (10.35) and independence (9.86). Interestingly, the control variables affect the individual governance provisions differently. For example, firms with a need for external finance score highly in terms of discipline and transparency. Cross-listing firms score higher than their non-cross-listing counterparts in terms of discipline, transparency, responsibility and fairness.

In Table VI we examine how corporate governance and its individual components change along the corporate life-cycle, but now using the same life-cycle (retained earnings) quartiles created in Table II. This analysis potentially provides a much richer

	Corporate governance		DIS	TPY	IND	ACC	RES	FAIR
Life-cycle Q2	0.448 (0.14)	-0.231 (0.04)	-6.700* (1.85)	6.956 (1.23)	-8.102* (1.91)	-3.389 (0.64)	14.364*** (3.04)	
Life-cycle Q3	0.770 (0.29)	7.993 (1.32)	-14.102*** (3.42)	4.964 (0.93)	-9.733** (2.39)	5.640 (1.24)	10.036* (1.87)	
Life-cycle Q4	2.016* (1.69)	8.850* (1.65)	-11.808*** (2.64)	10.566* (1.85)	-10.469** (2.57)	4.453 (0.95)	10.519 (1.57)	
Size	-3.069*** (3.45)	-2.328 (1.51)	-2.100* (1.70)	-5.133*** (3.03)	-1.003 (0.62)	-3.966*** (3.07)	-3.837* (1.95)	
Cash	16.021* (1.79)	-0.722 (0.06)	15.037 (1.18)	17.668 (0.95)	20.884 (1.52)	20.094 (1.47)	22.837 (1.44)	
Dep. on Ext. Finance	0.525* (1.72)	0.547 (1.53)	0.841*** (2.73)	0.342 (0.74)	0.939** (2.39)	0.324 (0.71)	0.148 (0.45)	
US cross-listing	3.921* (1.84)	1.226 (0.32)	5.977* (1.94)	0.616 (0.12)	3.632 (1.22)	3.556 (1.19)	8.556** (2.25)	
Industry dummies	Included	Included	Included	Included	Included	Included	Included	
Country dummies	Included	Included	Included	Included	Included	Included	Included	
No. firms	205	205	205	205	205	205	205	
R <sup>2</sup>	0.666	0.643	0.679	0.564	0.707	0.628	0.677	

**Notes:** This table reports coefficient estimates from weighted least squares regressions with heteroscedastic consistent t-stats presented underneath in parenthesis. In the weighted least squares regressions, the weight of each observation (firm) is the inverse of the number of observations (firms) in each country. The sample period is for the year 2001. The dependent variable is corporate governance, or either of its components, as indicated. The reference group is Retained Earnings 1 (Quartile 1, the lowest quartile). All firm-level data is sourced from Worldscope. Corporate governance measures are from CLSA (2001). All other variables are defined in Appendix 1. An intercept, and a full set of industry and country dummies are included (where indicated) but not reported. \*\*\*, \*\*, and \*Significant at the 1, 5, and 10 percent level, respectively

picture of how corporate governance evolves along the corporate life-cycle, since it does not impose the same linear constraint as in Tables IV and V. It also facilitates a more direct comparison with Filatotchev *et al.* (2006).

In all regressions, the reference group is Quartile 1 (from Table III). The coefficient estimates reveal the following. First, the improvement in governance that we observe in Table IV only comes about for the most mature firms (Q4 firms). For Q4 firms, the coefficient is positive (2.016) and statistically significant. On inspection of the components of governance, it is evident that this improvement in overall governance comes about through improvements in corporate discipline and independence, both of which capture aspects of monitoring and control. In both instances, governance is at its highest for Q4 firms. For example, in the case of discipline, the coefficient estimate for Q4 firms is 8.850. Given that average discipline for Q1 firms is 43.39, this implies that discipline is 20.40 percent, i.e.  $(8.850/43.39) \times 100$ , higher for Q4 when compared to Q1 firms. Using independence, the coefficient estimate for Q4 firms is 10.566. This implies that independence is 19.19 percent i.e.  $(10.566/55.05) \times 100$  higher for Q4 than for Q1 firms. We find that firms tend to be most transparent and accountable at early stages of their (public) life-cycle, i.e. Q1 firms, and both transparency and accountability deteriorates as firms mature. The coefficient estimates suggest that Q1 firms are more transparent and independent when compared to Q4 firms in the region of 19.20 percent (i.e.  $(11.808/61.488) \times 100$ ) and 21.14 percent (i.e.  $(10.469/49.528) \times 100$ ), respectively.

To put our findings in perspective, we need to elaborate on the predictions of Filatotchev *et al.* (2006). They differentiate between the resource/strategy and monitoring/control functions of governance. In our paper, five of our six individual CLSA governance provisions (All except transparency) likely capture aspects of monitoring/control, while accountability and independence likely capture both the resource/strategy and monitoring/control functions. Since, we only observe publicly traded firms (i.e. quadrants 2 and 3), then, a priori, and according to Filatotchev *et al.* (2006), we should observe lower transparency, greater monitoring (all individual governance components excluding transparency), and a reduced role for the resource/strategy aspect of governance as firms evolve from quadrants 2 to 3. Since accountability and independence likely capture both the resource/strategy and monitoring/control functions, how they change as the firm evolves is ambiguous.

Our findings are in line with Filatotchev *et al.* (2006). First, they suggest that as firms mature the monitoring role of governance increases as enhanced monitoring “widens the firm’s access to the financial resource base as it matures and exploits strategic opportunities” (see Filatotchev *et al.* (2006, p. 260)). Discipline, independence, and fairness all improve along the life-cycle, which are important aspects of the monitoring/control functions of governance. Second, we also observe the deterioration in corporate transparency that Filatotchev *et al.* (2006) predict will occur from quadrants 2 to 3. Reduced transparency manifests as “managerial rent-seeking opportunities increase, rendering the governance system less transparent” (see Filatotchev *et al.* (2006, p. 260)). Third, corporate independence (of the board) increases as the firm matures, which is in line with the predictions of Filatotchev *et al.* (2006). Since board independence captures aspects of both resource/strategy and monitoring/control, our finding that boards become more independent as firms mature suggest that the reduced resource/strategic role played by the board of directors is more than offset by the greater monitoring that they now provide. Finally, we observe that accountability deteriorates as the firm matures. Since, like the independence measure, accountability captures both aspects of resource/strategy and monitoring/control, what we are most-likely capturing



here is the decreased importance in the resource/strategy role of governance. In summary, our findings do appear to highlight that the monitoring, and to a lesser extent, the resource/strategy functions of governance change as the firm evolves along its life-cycle. The net result is that overall governance is greatest for mature firms.

Our findings contribute to the debate on how governance rules should be implemented. In some instances, governance standards are implemented across the board, and thus assume that these rules suit and benefit all firms equally. Examples include the Sarbanes-Oxley Act in the USA, the listing rules on the New York Stock Exchange, and the OECD principles on corporate governance. While there is evidence which says that the implementation of “across the board” rules can work (see Atanasov *et al.*, 2010)), there also exists some evidence that suggests that they may not. For example, “across the board” stock exchange listing requirements do not equally-benefit all firms. Specifically, the fact that many firms cross-delisted from the US post Sarbanes-Oxley (see Marosi and Massoud, 2008), and that many cross-listing firms, particularly from emerging markets, choose to list in the US, but not on the New York Stock Exchange (see Boubakri *et al.*, 2010), suggests that the costs of adhering to these additional legal rules may prove not to be beneficial for all. Furthermore, as illustrated by Hope *et al.* (2013), many firms that choose to cross-list in the USA as Level 1 and Rule 144a issues, voluntarily disclose more after they cross-list. This line of reasoning points to a more flexible approach to governance adoption. Other examples include “comply-or-explain” as adopted in Australia and the UK for example, or permitting firms to list on different segments of the stock exchange, which is common place in Brazil (see Braga-Alves and Shastri (2011)). Our findings suggest that a policy which mandates a “one-size-fits-all” governance code for all firms in a country will not fit with the needs of all firms in that country. While the adoption of “across the board” rules have proven to be beneficial in some countries, a more flexible approach which grants firms more discretion over their own governance choices, say for example, along the lines of “comply or explain” would seem to make more sense, a policy prescription which has important implications for the regulatory function in a country.

## 6. Conclusion

Much of the discussion in the corporate governance literature in recent years concerns the debate about whether a “one-size-fits-all” approach is appropriate or whether governance practices, which are dictated by a number of firm and country factors, and their interaction, should be tailored to the specific needs of individual firms. While the debate is ongoing, Black *et al.* (2012) present some compelling evidence in support of the latter, and in doing so, propose a flexible governance model, which permits each firm to choose what they believe to their own “optimal” level of governance.

One of the reasons that firms are likely to have very different governance needs at any one point in time is because these firms are likely to be at very different stages in their life-cycle. In turn, firms at different stages of their life-cycle are likely to have very different governance needs, since the wealth creation and protection functions of corporate governance change as the firm matures (see Filatotchev *et al.* (2006)).

In this paper we explore the relationship between corporate governance practices and the corporate life-cycle. Since we are restricted to the use of cross-sectional governance measures, our focus is on identifying differences in corporate governance quality between firms who are at different stages of their life-cycle. We proxy for a firm’s position along their life-cycle using the life-cycle proxy proposed by DeAngelo *et al.* (2006), and show that, in line with the conceptual framework of Filatotchev *et al.* (2006), governance does

indeed change along the corporate life-cycle. We show that individual governance provisions (e.g. independence, accountability, transparency) are more relevant at different stages of the corporate life-cycle, but not necessarily the same stage. Since we show that overall governance, and more importantly the relevance of individual governance provisions vary along the corporate life-cycle, our results point to a flexible governance model which ensures that firms have sufficient freedom to adopt what they believe is the correct governance model for them. Previous literature finds that young, fast-growing firms are likely to establish good corporate governance practices in order to attract external finance, increase profitability, and therefore create value for the firm. Our findings suggest that since governance quality is greatest when firms are mature, greater resources are devoted to value preservation rather than value creation.

Finally, given the nature of the governance data that we use, we are cognizant of the fact that the paper has limitations. These limitations are discussed in the introduction and elsewhere, and as such we do not deem it necessary to discuss them in great detail here again. While we cannot address the limitations in this paper, they do, nonetheless, provide a number of important insights and avenues for future research. It would be interesting to extend the sample coverage to a larger number of emerging and even developed market firms. We believe that it is important to extend the sample to include developed market firms since what we do know from the extant literature is that optimal governance is likely to be different between developed and emerging market firms (see Bebchuk and Hamdani, 2009). To address some of the endogeneity issues, researchers should consider using governance data with a time-series dimension.

### Notes

1. Others that construct their own corporate governance indices include Black *et al.* (2006, 2006a, 2012), and Aggarwal *et al.* (2009). Aggarwal *et al.* (2009) use 44 of the 64 ISS (2005) governance attributes to compare the governance practices of US and non-US firms.
2. Helwege *et al.* (2007) examine the evolution of one aspect of internal-governance, namely insider ownership from the IPO and beyond.
3. We do so since we do not have access to other governance data sources.
4. An exception is Braga-Alves and Morey (2011) who examine whether changes in firm and country-level characteristics lead changes in governance.
5. Of course, resource and strategy are not the same. However, we group them together here as they should be prominent at the same life-cycle stages (see Filatotchev *et al.* (2006)).
6. In quadrants 1 and 4, firms are privately-held.
7. To conserve space, we do not report the summary retained earnings to total equity statistics.
8. Our findings are qualitatively the same we use RE/TE and dividend payout (dividends to total assets) in place of RE/TA. This analysis is available from the corresponding author upon request.

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### Further reading

- La Porta, R., Lopez-de-Silanes, F., Shleifer, A. and Vishny, R. (1998), "Law and finance", *Journal of Political Economy*, Vol. 106 No. 6, pp. 1113-1155.

## Appendix

Variable	Description	Source
Corporate governance	Equally-weighted composite measure of six distinct governance categories, namely management discipline, transparency, independence, accountability, responsibility, and fairness	All CLSA (2001)
Discipline (DIS)	Reflects public commitment to CG and financial discipline	All Worldscope
Transparency (TPY)	Reflects the ability of outsiders to assess the true position of a company	
Independence (IND)	Reflects whether the board is independent of controlling shareholders and is separate from senior management	
Accountability (ACC)	Designed to capture the proper accountability of management to the board	
Responsibility (RES)	Record of taking measures in case of mismanagement	
Fairness (FAIR)	Records treatment of minorities	
Life-cycle	Earned equity (Retained Earnings) to total assets	
Size	Log of book assets in US\$	
Growth	Logarithmic one-year asset growth	
Profitability	Earnings before interest and taxation (EBIT) to book assets	
Cash	Cash scaled by book assets	Bank of New York, Citibank, Spamann (2010) and Djankov <i>et al.</i> (2008)
Dep. on external finance	Capital expenditure less cashflow from operation scaled by capital expenditure	
Dividend payout	Dividends to total assets	
Cross-listing	1 if the firm is cross-listed in the USA	
Shareholder rights	From Spamann (2010) and Djankov <i>et al.</i> (DLS) (2008) (for China, Hungary, and Poland where Spamann (2010) is unavailable). The index of DLS (2008) ranges from 1 (weak shareholder rights) to 5 (strong shareholder rights). The Spamann (2010) index ranges from 2 to 5 (using 1997 values)	
Stock market capitalization	Stock market capitalization to GDP (in 2001)	
Culture	"Individualism" from Hofstede (2001)	
Economic development	GDP per capita in US\$	
Industry dummies	Industry dummies based on four-digit SIC codes	
Country dummies	Country dummies. Argentina is the reference country	
		Updated version of Beck <i>et al.</i> (2000) Hofstede (2001) World Bank and IMF Worldscope
		Author calculations

**Table AI.**  
Variable descriptions

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