Corporate Governance Data and Measures Revisited

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Measuring Corporate Governance

- Interest in the implications of corporate governance spans economics, law, corporate finance and accounting.
- G-Index (Gompers, Ishii, and Metrick [2003]) and E-Index (Bebchuk, Cohen, and Ferrell [2009]) based on totaling indicator variables capturing the existence of anti-takeover provisions.
  - The G-Index considers 28 governance provisions, then converted to 24 0-1 indicator variables.
  - The E-Index further refines this set to the 6 most important provisions.
- Both indices exhibit economically significant associations with abnormal returns and Tobin's Q.

Concerns About Governance Indices

- Industry composition effects (Core, Guay, and Rusticus [2006], Johnson, Moorman, and Sorescu [2009])
- Lack of legal rationale for aggregating over dissimilar forms of shareholder protections (Klausner [2015], Catan and Kahan [2015])
- We focus on examining the source of data underlying the G and E-Indices, the Investor Responsibility Research Center:
  - Originated as a not-for-profit organization, now defunct.
  - Provides volumes of textual summaries of firms' legal documents which are then converted to quantitative measures.

There Are Differences Between IRRC & Commercial Data

We focus on five out of the six E-Index elements covered by Factset's SharkRepllent's starting in 2002.

Table 1: Comparison of IRRC Database with Shark Repellent Database

	2002		2004		2006	
	Prov.=1 in IRRC &Prov.=0 in SR	Prov.=0 in IRRC &Prov.=1 in SR	Prov.=1 in IRRC &Prov.=0 in SR	Prov.=0 in IRRC &Prov.=1 in SR	Prov.=1 in IRRC &Prov.=0 in SR	Prov.=0 in IRRC &Prov.=1 in SR
N	1324		1594		1558	
Staggered Board	6	8	38	1	53	3
Poison Pill	17	55	49	12	139	3
Supermajority to approve mergers	40	198	47	239	45	235
Supermajority to Amend Bylaws	66	343	76	389	53	366
Supermajority to Amend Charter	5	789	6	934	6	898
Opt out of control share acquisition	5	61	6	87	6	92

Differences May Not be Random Noise

Table 2: Comparison of the E Index Computed Using IRRC & SharkRepellent Data

	2002				2004				2006			
	IRRC		SR		IRRC		SR		IRRC		SR	
	EW	VW	EW	VW	EW	VW	EW	VW	EW	VW	EW	VW
Mean E Index	**2.5**	**1.8**	**3.4**	**2.6**	**2.6**	**1.9**	**3.3**	**2.5**	**2.5**	**1.8**	**3.2**	**2.3**
E Index	#	%	#	%	#	%	#	%	#	%	#	%
0	119	22.6	62	12.9	103	21.5	70	10.6	90	20.7	73	16.4
1	249	19.5	135	22.3	254	22.6	186	24.0	290	29.0	217	25.9
2	440	25.4	208	16.5	460	22.0	273	20.7	448	18.0	256	13.4
3	452	18.6	233	12.3	510	19.3	275	12.2	475	18.5	293	16.9
4	303	11.8	294	20.5	333	12.2	345	16.6	321	11.3	348	14.9
5	74	1.8	285	12.2	71	2.1	346	13.3	62	2.3	298	10.2
6	7	0.2	107	3.3	7	0.2	99	2.7	4	0.1	73	[illegible]

Our Collection of Anti-takeover Provisions in the E-Index

- To appropriately measure anti-takeover protection for the 1990-2002 time period, we review primary source documents directly.
- Our sample is based on firms covered by IRRC (large-cap, S&P 1500 firms).
- We rely on proxy statements, charters and bylaws, which are part of SEC filings in electronic, CD, paper or microfiche format.
- Where documents could not be located, the original IRRC data was used.

Our Collection of Anti-takeover Provisions in the E-Index

Golden Parachute

- Golden parachutes refer to compensation arrangements that provide senior executives with special compensation upon an acquisition (effect on entrenchment is unclear).
- Our coding is based on manual and electronic searches in proxy statements and employment contracts.
- We find that the provision is fairly consistent from year-to-year, usually changes with management turnover.
- Yet IRRC data includes numerous instances of “switching” from year-to-year and a large number of omissions.
- 18.5% of firms were incorrectly coded for 1998.

Our Collection of Anti-takeover Provisions in the E-Index

Staggered Boards

- Firms with staggered boards can only turnover 1/3 of directors at once; Entrenched managers can force a raider to defer 2-3 years until the board can be replaced.
- 2.2% of firms were incorrectly coded for 1998.

Our Collection of Anti-takeover Provisions in the E-Index

Poison Pills

- Poison pills trigger the issuance of dilutive shares to existing shareholders that effectively precludes a hostile takeover.
- For firms without poison pills in place, the board is able to implement one at any time to deter raiders.
- Our coding uses the SDC Platinum Database, information in Comment and Schwert (1995) and Higgins (1994). Inconsistencies were validated with hand review of shareholder rights plans.
- 4.3% of firms were incorrectly coded for 1998.

Our Collection of Anti-takeover Provisions in the E-Index

Supermajority Voting Requirements to Approve Mergers

- The provision requires approval from a greater-than-majority of shareholders to enact a merger. There are variations in how the provision is constructed:
  - May only be triggered when raider has gained a toehold.
  - May also require a threshold level of vote from the non-acquiring shareholder (typically majority).
  - May provide an exception when a "fair price" is offered.
- To the extent that the firm does not have this supermajority provision, state-level control share acquisition statutes are considered substitutes in GIM and BCF.
- 5.6% of firms were incorrectly coded for 1998.
- We consider alternative codings to GIM and BCF's approach, resulting in differences in coding for 17.7% of firms:
  - Treat a firm as having this provision irrespective of "fair price" exceptions.
  - Remove the consideration of control share acquisition statutes

Our Collection of Anti-takeover Provisions in the E-Index

Supermajority Voting Requirements to Amend Charters and Bylaws

- The provisions require approval from a greater-than-majority to amend charters and bylaws, appear in two variations:
  - A supermajority vote is required to amend any provision in the charter or bylaw.
  - Lock-ins: A supermajority vote is required to amend select provisions of the charter or bylaw (commonly staggered boards or supermajority thresholds for mergers); majority is sufficient for remaining provisions.
- Board approval is always required to amend charter provisions (in addition to shareholder vote).
- In 1998, 7.6% of firms were incorrectly coded for bylaws, 1.6% for charters.
- After including lock-ins pertaining to staggered boards or supermajority thresholds for mergers, differences in the 1998 coding is 12.4% for bylaws and 29.1% for charters.

Summary of Concerns about the G and E-Index

- Understanding the effect of a provision on entrenchment requires legal expertise.
- Formal definitions, where provided, are ambiguous; different sets of researchers could construct different data for same set of source documents.
- Lack of analysis on the interaction between state law and firm-level provisions.
- Seemingly innocuous changes in measures and measure definitions could result in large changes in the component indicator variables.

IRRC Data Appears to Under-measure Entrenchment

Table 4: Comparison of E index Computed Using IRRC and Reviewed Data

	1990				1993				1995				1998			
	IRRC		OUR REVIEW		IRRC		OUR REVIEW		IRRC		OUR REVIEW		IRRC		OUR REVIEW	
	EW	VW	EW	VW	EW	VW	EW	VW	EW	VW	EW	VW	EW	VW	EW	VW
E Mean	2.2	1.9	2.4	2.2	2.3	1.9	2.5	2.2	2.3	1.8	2.7	2.3	2.3	1.9	2.8	2.5
E Index	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
0	176	21.7	194	21.8	147	22.4	151	18.4	151	23.0	130	16.4	181	23.2	150	16.2
1	246	16.3	234	15.9	233	17.5	232	21.8	243	18.3	231	20.6	320	18.1	286	19.8
2	322	27.1	327	23.1	330	26.0	321	19.8	348	26.1	328	21.1	434	23.9	381	16.8
3	329	20.2	263	16.0	340	20.0	283	17.3	340	19.6	276	17.7	424	20.6	315	15.7
4	196	11.4	133	9.1	219	10.8	142	9.5	228	11.0	159	10.0	265	12.4	236	11.9
5	49	3.0	115	9.8	56	3.2	123	8.1	52	2.1	157	9.4	48	1.6	194	13.5
6	9	0.4	61	4.1	5	0.1	78	5.2	3	0.1	84	5.5	10	0.2	120	6.1

Insights from Replication of Bebchuk, Cohen and Ferrell (2009)

- Excess returns are fragile to the choice of risk models and construction of risk factors.
- The number of firms in the "bad governance"(E≥5) portfolio is quite small (40-50 firms).
- Value-weighted returns are much larger than equal-weighted returns.

Our E-Index Constructions Do Not Predict Excess Returns

Table 7: Mean Risk-Adjusted Monthly Excess Hedge Returns from 9/1990 to 12/1999

Method	Long (E=0)		Short (E=5/6)		Hedge	
	EW	VW	EW	VW	EW	VW
Four Factor Model(Momentum=French)						
Replication of BCF	0.20	0.33	-0.17	-0.55	0.36	0.89
	(0.11)	(0.12)	(0.19)	(0.22)	(0.21)	(0.28)
Correcting Pure Errors	0.20	0.28	0.07	-0.39	0.13	0.67
	(0.12)	(0.11)	(0.17)	(0.23)	(0.18)	(0.25)
Expand Limits to Amend for Lock-ins	0.14	0.28	0.17	-0.07	-0.03	0.35
	(0.13)	(0.11)	(0.11)	(0.10)	(0.13)	(0.17)
Remove CSA from Supermajority	0.14	0.18	0.13	-0.08	0.01	0.27
	(0.12)	(0.10)	(0.12)	(0.11)	(0.15)	(0.16)
Expand Supermajority for Fair Price	0.14	0.16	0.08	0.01	0.05	0.15
	(0.12)	(0.11)	(0.10)	(0.11)	(0.14)	(0.17)

Issues with the Risk Adjustment Model

- Excess returns have been shown to be sensitive to the inclusion of industry risk factors.
- Four factor models can generate significant excess returns for large portfolios of value and growth stocks (Cremers, Petajisto and Zitewitz [2012]).
- Timing of GIM and BCF's sample periods coincides with the technology bubble; follow-up papers show that the governance effect "disappears" over the 2000-2008 period (Bebchuk, Cohen and Wang [2013]).

Technology Firms Earned Excess Firms During the 1990s

Table 8: Risk-Adjusted Excess Monthly Returns from 9/1990 to 12/1999 For Nasdaq and NYSE/AMEX Firms

	Market Model		4 Factor (Mom=Carhart)		4 Factor (Mom=French)	
	EW	VW	EW	VW	EW	VW
Nasdaq						
All	0.15	0.19	0.65	0.55	0.38	0.35
	(0.40)	(0.24)	(0.18)	(0.18)	(0.25)	(0.18)
IRRC firms on Nasdaq	0.24	0.59	0.51	0.96	0.53	0.74
	(0.31)	(0.30)	(0.15)	(0.27)	(0.16)	(0.28)
NYSE/AMEX						
All	-0.08	-0.09	-0.00	-0.16	0.04	-0.10
	(0.24)	(0.07)	(0.09)	(0.05)	(0.10)	(0.04)
IRRC firms on NYSE/AMEX	-0.14	-0.04	-0.19	-0.12	0.00	-0.06
	(0.20)	(0.08)	(0.07)	(0.05)	(0.09)	(0.05)
Nasdaq-NYSE/AMEX Hedge-All	0.23	0.28	0.65	0.72	0.34	0.45
	(0.28)	(0.34)	(0.21)	(0.22)	(0.22)	(0.22)
Nasdaq-NYSE/AMEX Hedge-IRRC	0.37	0.63	0.70	1.08	0.53	0.80
	(0.24)	(0.37)	(0.18)	(0.30)	(0.19)	(0.31)

Hedge returns are not observed during the 2000-2008 period.

Alternative E-Index Constructions and Tobin's Q

- After correcting errors, including lock-in's, supermajority voting requirements for mergers with fair price exceptions and removing state Control Share Acquisition statutes, the E-Index no longer significant in panel regressions with Tobin's Q as outcome variable.
- In specifications with firm fixed-effects, associations with Tobin's Q become positive.

Summary and Conclusions

- In light of volume of empirical work relying on governance indices, an assessment of these measures and their underlying data is in order.
- Challenges researchers face in measuring corporate governance:
  - Precisely identifying provisions buried within source documents, filed in a variety of formats, is not always feasible.
  - Specialized knowledge required to map legal language in source documents to indicator variables reflecting managerial entrenchment.
- Previous findings of the large association between governance indices and firm value are fragile:
  - Removing errors and considering alternative definitions in constructing the E Index substantially reduces the significance of excess returns to a governance-based trading strategy.
  - Risk adjustment models were ineffective for the previously analyzed sample periods.
- Open questions about our ability to measure "corporate governance" and the implications of governance for firm value.