Board Composition and Firm Performance: The Case of the Dey Report and Publicly Listed Canadian Firms

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Premise

- Separation of ownership and control results in agency problems in publicly traded firms.
- Can a "properly" designed Board help mitigate agency problems?
- The link between the monitoring role of the board and firm performance
- Can regulators play a constructive role in designing appropriate "check and balance" mechanisms?

Boards and management

- Since boards ratify most major decisions made by management, properly designed boards can minimize agency costs because the management and control functions are separated.
- Ability of boards to mitigate agency problems is dependent on how beholden the boards are to management.
- Stronger the management, the lower the ability of the board in controlling management.

Board characteristics

- Board Size
  – total number of directors on the board

- Board Composition
  – number of independent and inside directors on the board.

  Who is an independent director?

  A director whose only link to the firm is serving on the board. (S)he is not related to any member of the management team.

- CEO/Chairperson Duality
  - Is the Chairperson of the board and the CEO the same individual?

Extant work

Two Streams of research

- Direct tests of the relationship between board characteristics and performance
- Relationship between board composition and events that affect shareholder wealth

Direct tests

- Lack of conclusive evidence; relationship has been found to be positive, negative or insignificant
- Positive association
  - Baysinger and Butler (1985)
  - Schellenger, Wood and Tashakori (1989)
- Negative association
  - Agrawal and Knoeber (1996)
- No association
  - Hermalin and Weisbach (1991)
  - Bhagat and Black (2000)
  - Lawrence and Stapledon (1999) – Australian data

Indirect evidence

- Outsider dominated boards provide better monitoring by disciplining poorly performing CEOs

  - Weisbach (1988)

- Less negative returns to shareholders of bidding firms in outsider dominated boards

  - Byrd and Hickman (1992)

- Higher abnormal returns in management buyout situations with outsider dominated boards

  - Lee, Rosenstein, Rangan and Davidson (1992)

The Dey Report

- TSE nominated a committee under the leadership of Peter Dey, Chairman of OSC to review corporate governance practices of Canadian firms
- The committee submitted its report in 1993 with 14 specific guidelines
- TSE adopted the guidelines as a listing requirement in April 1995 but compliance was voluntary
- Companies had to specify either in their annual report or proxy statement the status of their compliance
- Our research focuses on Guideline 2.

  Guideline 2: *"[t]he board of directors of every corporation should be constituted with a majority of individuals who qualify as independent outside directors."*

Evidence from other countries

- Cadbury Report for UK firms was issued in 1992.
  - Effects studied in Dahya, McConnell and Travlos (2002) who examine CEO turnover of poorly performing firms.
- Bosch Report in Australia
- Cardon Report in Belgium
- Vienot Principles I and II in France
- Peters Code in The Netherlands
- NYSE/NASDAQ Listing requirements (becomes effective Nov 2004)
- Sarbanes-Oxley Act

Any skeptics?

- A determined management can frustrate a board very easily. Management should be charged with the responsibility of looking after the shareholders' interests because they are the people who can do it and they will do a better job than the board will do.

  - Doug Everett

  Senator and director

- Corporate governance is, for the most part, just a load of guacamole. The governance of a board of directors is a concept which could only be found in some form of bureaucracy. It may work in Alice in Wonderland, but it will not work in the real world.

  - J.P. Bryan

  President and CEO, Gulf Resources Canada Ltd

Research questions

Did compliance with the Dey Committee recommendations on board independence, specifically Guideline 2 relating to a majority of independent directors, lead to improved firm performance?

If so, was this effect uniform or are the guidelines better suited for some firms compared to others?

Data

- Based on the 300 firms that were a part of the TSE 300 at the end of 1995 (balanced panel dataset)
- Same set is tracked from 1993 to 1997
- Represents 45% of Canadian market capitalization in 1995
- Data on board characteristics and ownership collected from proxy statements
- Accounting data from COMPUSTAT
- Final sample consists of 195 firms (975 firm-years).

Empirical methods

- Univariate and multivariate tests
- Firm performance measured by Tobin's Q where

  Q = Approximate *q* = (MVE + PS + DEBT)/TA
- For univariate tests, sample is divided into firms that have Q < 1 and Q > 1
- To test the impact of compliance:

  - Firms that never complied (*NONCOMPLY*)

  - Firms that complied (or were influenced by Dey) – Alternative measures of compliance:

COMPLY Def 1: A firm is classified as Dey-compliant if the average proportion of directors increased from 1993-1994 to 1995-1997, and if UNREL is at least 50 percent for at least one year in the latter time period

***COMPLY* Def 2**: A firm is classified as Dey-compliant if the 1994 proportion of outside directors is less than 50 percent, and at least one year of the post-Dey 1995-1997 period has 50 percent or greater outsiders.

Empirical methods

- One-Way Fixed effects model used to control for unobservable characteristics.

$$q\text{-ratio} = a_0 + a_1 UNREL + a_2 COMPLY + a_3 NONCOMPLY + a_4 BSIZE + a_5 DIROWN + a_6 OWN + a_7 DUAL + a_8 SIZE + a_9 DEBT + a_{10} CAPEX + a_{11} INTAN + a_{12} ROA + e$$

UNREL : proportion of independent directors
DEY: dummy =1 for COMPLIANT post-Dey firms (Def 1 / Def 2)
BSIZE: board size
DIROWN: proportion equity ownership of directors
OWN: proportion equity ownership of management
SIZE: log value of firm size (scaled by TA)
DEBT: proportion of long-term debt (scaled by TA)
CAPEX: capital expenditure (scaled by TA)
INTAN: proportion of intangible assets (scaled by TA)
ROA: return on assets (net income / TA)

Empirical results

Table 1: Summary statistics

- Typical firm has 61.5 % outsiders
- The size of the board around 10 members (median)
- 41.3% of firms have dual CEO – Board Chair positions
- Average Q approximately 1.1
- The average firm had total assets of C$6.28B, long-term debt of 22.5%, capital expenditures of 10.2%, intangible assets of 4.6% and return on assets of 2.6%.

Variable	Mean	Standard Deviation	Min	Median	Max
Q	1.184	1.201	-0.588	0.933	13.727
UNREL	0.603	0.164	0.000	0.615	0.933
BSIZE	10.861	4.376	2.000	10.00	37.000
DUAL	0.413	0.493	0.000	0.000	1.000
DIROWN	0.148	0.239	0.000	0.025	0.976
OWN	0.342	0.311	0.000	0.291	1.000
SIZE ($CAN mill.)	6280.114	25205.742	13.000	976.0	244744.000
DEBT	0.225	0.173	0.000	0.216	0.978
CAPEX	0.102	0.119	0.000	0.065	0.978
INTAN	0.046	0.106	0.000	0.000	0.706
ROA	0.026	0.122	-2.542	0.034	0.312
No. Obs.	975				

Empirical results (Table 2)

Variable	Panel A: Full Dataset				Panel B: NONCOMPLY Subset			
	Pre-Dey		Post-Dey		Pre-Dey		Post-Dey	
Q	1.247		1.142		1.492		1.232	
	(0.933)		(0.937)		(0.791)		(0.769)	
UNREL	0.570		0.624***		0.368		0.380	
	(0.583)		(0.636)***		(0.369)		(0.400)	
BSIZE	10.913		10.827		10.114		9.909	
	(11.000)		(10.000)		(10.000)		(9.000)	
DUAL	0.428		0.403		0.477		0.439	
	(0.000)		(0.000)		(0.000)		(0.000)	
DIROWN	0.157		0.142		0.255		0.250	
	(0.027)		(0.023)		(0.189)		(0.130)	
OWN	0.358		0.331		0.404		0.385	
	(0.341)		(0.255)		(0.410)		(0.439)	
No. Obs.	390		585		44		66	
	Q<1		**Q>1**		**Q<1**		**Q>1**	
	Pre-Dey	Post-Dey	Pre-Dey	Post-Dey	Pre-Dey	Post-Dey	Pre-Dey	Post-Dey
Q	0.602	0.725**	1.969	1.609*	0.484	0.617	2.947	2.119
	(0.664)	(0.663)	(1.448)	(1.228)***	(0.502)	(0.414)	(1.692)	(1.670)
UNREL	0.598	0.646***	0.538	0.601***	0.414	0.413	0.301	0.331
	(0.615)	(0.667)***	(0.571)	(0.615)***	(0.400)	(0.400)	(0.300)	(0.333)
BSIZE	12.563	12.269	9.065	9.214	11.577	11.076	8.000	8.222
	(11.000)	(12.000)	(9.000)	(9.000)	(11.000)	(11.000)	(7.000)	(6.000)
DUAL	0.413	0.382**	0.446	0.427	0.423	0.358	0.556	0.556
	(0.000)	(0.000)*	(0.000)	(0.000)	(0.000)	(0.000)	(1.000)	(1.000)
DIROWN	0.179	0.170	0.133	0.111	0.281	0.284	0.216	0.199
	(0.008)	(0.011)	(0.048)	(0.039)	(0.254)	(0.187)	(0.175)	(0.129)
OWN	0.405	0.383	0.306	0.272	0.499	0.488	0.266	0.237
	(0.438)	(0.413)	(0.202)	(0.153)	(0.457)	(0.464)	(0.197)	(0.188)
No. Obs.	206	309	184	276	26	39	18	27

Empirical Results (Table 2 cont'd)

Variable	Panel C: COMPLY Subset, Definition 1				Panel D: COMPLY Subset, Definition 2			
	Pre-Dey		Post-Dey		Pre-Dey		Post-Dey	
Q	1.157		1.077		1.513		1.339	
	(0.911)		(0.913)		(1.025)		(0.994)	
UNREL	0.557		0.660***		0.399		0.528***	
	(0.571)		(0.667)***		(0.408)		(0.500)***	
BSIZE	10.897		10.844		9.000		9.245	
	(10.000)		(10.000)		(9.000)		(9.000)	
DUAL	0.431		0.405		0.515		0.441	
	(0.000)		(0.000)		(1.000)		(0.000)	
DIROWN	0.149		0.126		0.248		0.204	
	(0.016)		(0.015)		(0.134)		(0.097)	
OWN	0.360		0.312*		0.426		0.393	
	(0.305)		(0.195)*		(0.453)		(0.304)	
No. Obs.	232		348		68		102	
	Q<1		**Q>1**		**Q<1**		**Q>1**	
	Pre-Dey	Post-Dey	Pre-Dey	Post-Dey	Pre-Dey	Post-Dey	Pre-Dey	Post-Dey
Q	0.621	0.738**	1.841	1.509**	0.648	0.886**	2.282	1.741
	(0.687)	(0.709)	(1.468)	(1.210)***	(0.602)	(0.736)	(1.586)	(1.263)**
UNREL	0.585	0.675***	0.522	0.640***	0.417	0.535***	0.383	0.521***
	(0.600)	(0.700)***	(0.545)	(0.667)***	(0.429)	(0.500)***	(0.400)	(0.500)***
BSIZE	12.823	12.646	8.441	8.549	11.500	11.771	6.778	7.000
	(12.000)	(12.000)	(8.000)	(9.000)	(11.000)	(11.000)	(7.000)	(7.000)
DUAL	0.385	0.379	0.490	0.438	0.562	0.437	0.472	0.424
	(0.000)	(0.000)	(0.000)	(0.000)	(1.000)	(0.000)	(0.000)	(0.000)
DIROWN	0.180	0.162	0.108	0.080	0.370	0.330	0.128	0.093
	(0.003)	(0.007)	(0.042)	(0.035)	(0.299)	(0.195)	(0.111)	(0.083)
OWN	0.423	0.391	0.279	0.211*	0.680	0.653	0.200	0.163
	(0.471)	(0.360)	(0.166)	(0.105)**	(0.704)	(0.696)	(0.109)	(0.000)
No. Obs.	130	195	102	153	32	48	36	54

Table 3	***COMPLY* Def 1**		
Independent Variable	**Full Sample**	**Q < 1**	**Q > 1**
Intercept	3.755***	1.298**	4.020***
	(4.86)	(2.30)	(4.45)
UNREL	0.125	0.245	0.294
	(0.41)	(1.07)	(1.51)
COMPLY	0.097	0.093*	0.217
	(1.28)	(1.77)	(1.30)
NONCOMPLY	-0.008	0.127	-0.300
	(-0.05)	(1.23)	(-1.00)
BSIZE	0.014	-0.004	0.075
	(0.73)	(-0.35)	(1.51)
DUAL	0.071	0.104	-0.035
	(0.80)	(1.64)	(-0.20)
DIROWNL1	16.368	16.814	46.864
	(0.81)	(1.20)	(1.08)
DIROWN15	-2.061	1.375	-8.331
	(-0.40)	(0.39)	(-0.73)
DIROWN520	3.968**	0.800	5.569*
	(2.26)	(0.56)	(1.75)
DIROWNG20	-0.883	-0.232	-1.694
	(-1.46)	(-0.58)	(-0.90)
OWNL40	-0.876*	-1.057***	-0.739
	(-1.82)	(-2.88)	(-0.83)
OWN4060	0.847	0.799	0.261
	(0.80)	(1.18)	(0.10)
OWN6080	0.976	0.325	2.223
	(0.71)	(0.34)	(0.75)
OWNG80	0.005	-0.052	0.982
	(0.00)	(-0.06)	(0.30)
SIZE	-0.491***	-0.098	-0.786***
	(-6.04)	(-1.52)	(-4.99)
DEBT	-0.114	0.518**	-0.232
	(-0.32)	(1.98)	(-0.32)
INTAN	0.373	0.467	-1.625
	(0.47)	(0.97)	(-0.72)
CAPEX	-0.035	0.451	-0.343
	(-0.08)	(0.74)	(-0.57)
ROA	0.877***	0.149	2.009***
	(3.80)	(0.97)	(3.76)
Mean Square Error	0.518	0.143	0.884
R-square	0.719	0.619	0.682
No. Obs.	975	515	460

Table 4	**(*Comply* Def 2)**		
Independent Variable	**Full Sample**	**Q < 1**	**Q > 1**
Intercept	3.864***	1.381**	4.065***
	(5.00)	(2.07)	(4.48)
UNREL	-0.009	0.135	0.191
	(-0.03)	(0.56)	(0.31)
COMPLY	0.145*	0.128**	0.233
	(1.84)	(2.29)	(1.37)
NONCOMPLY	-0.002	0.129	-0.306
	(-0.01)	(1.25)	(-1.02)
BSIZE	0.015	-0.003	0.070
	(0.76)	(-0.26)	(1.41)
DUAL	0.070	0.098	-0.029
	(0.78)	(1.55)	(-0.16)
DIROWNL1	16.021	16.613	45.795
	(0.79)	(1.19)	(1.06)
DIROWN15	-1.186	1.485	-7.573
	(-0.36)	(0.42)	(-0.66)
DIROWN520	3.934**	-0.728	5.464*
	(2.24)	(0.51)	(1.71)
DIROWNG20	-0.850	-0.193	-1.675
	(-1.41)	(-0.48)	(-0.89)
OWNL40	-0.881*	-1.032***	-0.834
	(-1.84)	(-2.82)	(-0.94)
OWN4060	0.872	0.771	0.438
	(0.83)	(1.14)	(0.17)
OWN6080	0.992	0.396	2.090
	(0.72)	(0.42)	(0.71)
OWNG80	0.013	-0.226	1.202
	(0.01)	(-0.16)	(0.37)
SIZE	-0.503***	-0.106*	-0.774***
	(-6.27)	(-1.66)	(-5.08)
DEBT	-0.083	0.547**	-0.227
	(-0.23)	(2.09)	(-0.31)
INTAN	0.327	0.421	-1.633
	(0.42)	(0.88)	(-0.73)
CAPEX	-0.026	0.416	-0.312
	(-0.06)	(0.69)	(-0.52)
ROA	0.878***	1.145	2.011***
	(3.81)	(0.95)	(3.77)
Mean Square Error	0.517	0.143	0.883
R-square	0.719	0.621	0.683
No. Obs.	975	515	460

Event Study Analysis

- Univariate comparisons show that Q increases for low-Q compliant firms, but also falls for high Q firms (mean reversion?)
- Multivariate models show that compliance is positively related to Q in post-Dey period, and noncompliance is insignificant
  - Effect is stronger for firms that became compliant (Def 2), compared to all firms that increased outsiders (Def 1)
- Announcement effects of outside director additions for compliant firms add to robustness of results

Table 5
Event Period Abnormal Returns Around Announcements of Outside Director Appointments, COMPLY Definition 1

Window	Mean CAR (%)	Median CAR (%)	z-statistic	Positive: Negative	Generalized Sign Z	N
Panel A: Full Sample						
[-20,+1]	1.53	1.55	1.439	40:33	1.500	73
[-10,+1]	0.78	0.35	1.399	40:33	1.500	73
[-5,+1]	0.66	0.05	1.074	37:36	0.796	73
[-1,+1]	0.87	0.73	2.455**	44:28	2.565**	72
[-1,+5]	0.85	0.69	1.513	39:34	1.265	73
[-1,+10]	1.42	0.38	1.576	41:32	1.735*	73
[-1,+20]	1.65	0.12	1.228	37:36	0.796	73
Panel B: Q<1 Subsample						
[-20,+1]	1.75	2.10	1.421	28:23	1.402	51
[-10,+1]	1.42	0.55	2.147**	31:20	2.246**	51
[-5,+1]	0.41	0.05	0.390	26:25	0.839	51
[-1,+1]	0.78	0.61	1.686*	29:21	1.828*	50
[-1,+5]	0.95	0.92	1.169	29:22	1.683*	51
[-1,+10]	0.94	0.61	0.958	28:23	1.402	51
[-1,+20]	0.94	0.16	0.543	27:24	1.120	51
Panel C: Q>1 Subsample						
[-20,+1]	1.03	0.72	0.315	12:10	0.600	22
[-10,+1]	-0.70	-1.27	-0.491	9:13	-0.680	22
[-5,+1]	1.25	-0.13	1.176	11:11	0.174	22
[-1,+1]	1.06	0.87	1.820*	15:7	1.880*	22
[-1,+5]	0.60	-0.51	0.517	10:12	-0.253	22
[-1,+10]	2.54	0.35	1.210	13:9	1.027	22
[-1,+20]	3.30	-0.83	0.921	10:12	-0.253	22

Table 6
Event Period Abnormal Returns Around Announcements of Outside Director Appointments, COMPLY Definition 2

Window	Mean CAR (%)	Median CAR (%)	z-statistic	Positive: Negative	Generalized Sign Z	N
Panel A: Full Sample						
[-20,+1]	1.38	-0.41	0.606	8:12	-0.480	20
[-10,+1]	1.21	0.47	1.476	11:9	0.867	20
[-5,+1]	-0.46	-0.62	-0.116	7:13	-0.929	20
[-1,+1]	0.61	0.61	1.211	12:8	1.317	20
[-1,+5]	0.66	0.34	0.968	10:10	0.418	20
[-1,+10]	3.39	1.07	1.525	14:6	2.215**	20
[-1,+20]	3.80	2.57	1.365	11:9	0.867	20
Panel B: Q<1 Subsample						
[-20,+1]	1.30	-0.41	0.546	5:9	-0.643	14
[-10,+1]	3.37	1.53	2.001**	10:4	2.048**	14
[-5,+1]	0.51	-0.77	0.071	5:9	-0.643	14
[-1,+1]	0.93	0.32	1.182	8:6	0.971	14
[-1,+5]	2.70	1.12	1.718*	8:6	0.971	14
[-1,+10]	2.90	1.07	1.188	10:4	2.048**	14
[-1,+20]	3.47	2.57	1.035	8:6	0.971	14
Panel C: Q>1 Subsample						
[-20,+1]	1.59	0.79	0.237	3:3	0.103	6
[-10,+1]	-3.84	-3.08	-1.097	1:5	-1.532	6
[-5,+1]	-2.73	-0.44	-0.356	2:4	-0.714	6
[-1,+1]	-0.13	1.10	0.295	4:2	0.920	6
[-1,+5]	-4.10	-2.83	-1.328	2:4	-0.714	6
[-1,+10]	4.55	1.14	0.906	4:2	0.920	6
[-1,+20]	4.58	4.72	0.875	3:3	0.103	6

Conclusions

- Canadian publicly traded firms increased the representation of outside directors following the Dey Committee recommendations
- Adoption of the recommendations had a positive impact on firm performance for firms that were Dey-compliant, compared to those that remained noncompliant
- Firms with average Q < 1 (those most likely to suffer from agency problems) benefited the most in a multivariate setting, particularly firms that *became* compliant (Def 2)
- Event study analysis shows that there is a stronger announcement effect for firms that *became* compliant (Def 2), compared to all firms that increased their proportion of outsiders (Def 1), particularly for pre-Dey Q<1 firms
- Stock exchanges can design and implement self regulatory changes that can mitigate agency problems and enhance shareholder wealth.

Thank you

Questions and comments?