Internal Governance of Firms by Promotion-Based Incentives: Empirical Evidence from Mergers and Acquisitions

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Motivation: internal and external governance

- Corporate governance: usually external mechanisms (Board of Directors, market for corporate control)
- Most of the external governance is discrete by definition

- Internal governance will be continuous.
- Who can perform the internal governance?
- Potential CEO's successor
- What are the incentives?
- The importance of specific human capital

- According to The Conference Board's CEO Succession Practices: 2019 edition from the Havard Law School Forum on Corporate Governance, "**in 2018, nearly nine out of 10 CEO transitions resulted in an internal candidate taking over the CEO reigns**. This finding is in contrast to less than six out of 10 internal CEO appointments in 2017, even though it appears consistent with the data captured for earlier years in the decade". Moreover, "**all of the youngest incoming CEOs in the S&P 500 are internal placements**".
- *CEO Succession Practices: 2019 Edition,* https://www.conference-board.org/topics/ceo-succession-practices

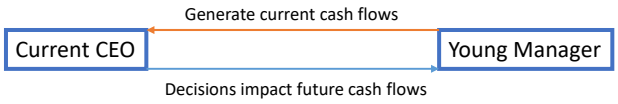
The paper in a nutshell

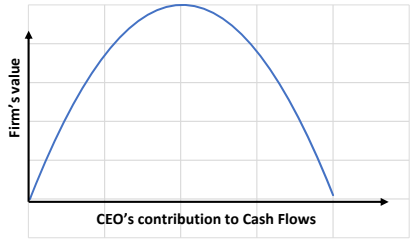
- We use M&A context to study the impact of internal governance on value creation.
- We find evidences that internal governance is correlated to value creation.
- A balanced distribution of power between the CEO and the potential successor maximizes firm's value.
- Our results are stronger when the external governance is weaker.

The relation of CARs of acquirer stocks and the Herfindahl index of business segments' sales in the case of internal succession firms is hump-shaped.

A model of internal governance

Two players:
The Current CEO
The Young Manager (successor)





- **Acharya, Myers, and Rajan (2011) model for internal governance**

- The CEO's contribution to firm's cash-flows is hump shaped.
- If the CEO is responsible for all the cash-flows the YM has no incentive to invest in specific human capital to increase cash-flows Prendergast (1993).
- If the YM is responsible for all the cash-flows he/she will anticipate that the next young manager will produce all the cash.
- The YM wants a valuable firm when she/he becomes the next CEO.

⇒ We need a balance between the CEO contribution and the young manager contribution.
⇒ A balanced contribution maximizes CEO's incentives and the monitoring by the YM

Translation into an empirical design

- Firm's capital stock:
  - Our measure: CARs at M&A announcement
  - Alternatives: Capital expenditures, R&D

  ⇒Market based VS E.M sensitive and difficulty to identify pet projects

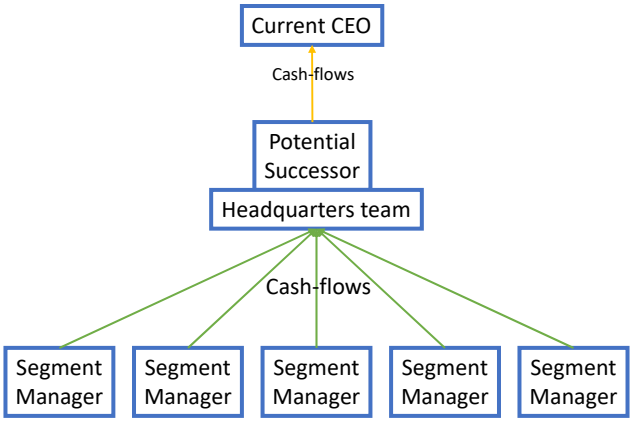
- CEO's contribution to firm's cash-flows:
  - Our measure: Herfindahl Index of segment sales (squared) (Lang and Stulz, 1994; Schmid and Walter, 2009)
  - Alternatives:
    - CEO's titles relative to the top 5 managers(Aggarwal et al, 2013)
    - Number of Top Managers appointed by the incumbent CEO (Landier et al, 2012)

  ⇒ Diversification of segment sales are proxies for monitoring abilities. (DeMarzo and Duffie, 1995)

- Internal succession plan:
  - Our measure: Current CEO has been an insider.
  - Alternative: industry level measure

  => preliminary results qualitatively similar

The large firm



1. Each segment generates some cash-flows: individual performance + exogenous shock
2. The headquarters aggregate the cash-flows
3. The potential successor reports to the CEO
4. The CEO decides the firm's capital formation

Segment sales and diversification

- The more segment sales, the more diversification.
- The more diversification of cash-flows the better the CEO can monitor the cash-flow generation from the potential successor.
- The CEO ability to monitor captures the CEO contribution to cash flows

⇒This doesn't matter if there is no hope of succession.

⇒This variable needs an interaction with an internal succession plan.

The internal governance needs two ingredients:

1. **The existence of a succession plan**
2. **The balance of power between the CEO and the successor**

The sample

- Year 2007 to 2015
- 652 deal announcements made by 304 acquirers (Capital IQ database) US listed acquirers
- The target firm is either a public or a private US firm: no cross-border deals
- Deal value > 1 Million USD
- No CEO turnover in the previous event fiscal year

- acquirers' CEO and top managers' characteristics such as CEO age, tenure, equity alignment incentives, duality, the firm's board size, and percentage of independent directors on the board from the ***S&P ExecuComp database, Investor Responsibility Research Center (IRRC) governance database, and the SEC EDGAR database***

Regression results (table 2)

	Dependent Variables			
	Acq CARs [-1;+1]	Acq CARs [-1;+1]	Acq CARs [-1;+1]	Acq CARs [-3;+3]
Independent Variables	(1)	(2)	(3)	(4)
Internal Succession	-0.002	-0.002	-0.067***	-0.085***
	(0.007)	(0.007)	(0.021)	(0.030)
Internal Succession x Segment Sales Herfindahl²			-0.201***	-0.258***
			(0.074)	(0.093)
Internal Succession x Segment Sales Herfindahl			0.258***	0.324***
			(0.094)	(0.121)

Regression results (table 3)

	Dependent Variables			
	Acq CARs [-1;+1]		Acq CARs [-3;+3]	
Independent Variables	(5)	(6)	(7)	(8)
	Target is public	Target is private	Target is public	Target is private
Internal Succession	-0.213***	-0.052	-0.238**	-0.058
	(0.059)	(0.031)	(0.092)	(0.035)
Internal Succession x Segment Sales Herfindahl²	-0.737***	-0.151	-0.833***	-0.182*
	(0.203)	(0.091)	(0.291)	(0.103)
Internal Succession x Segment Sales Herfindahl	0.901***	0.198	1.022***	0.233*

Regression results (table 4)

	Dependent Variables			
	Acq CARs $_{[-1;+1]}$		Acq CARs $_{[-3;+3]}$	
Independent Variables	(5)	(6)	(7)	(8)
	BoD size is high	BoD size is low	BoD size is high	BoD size is low
Internal Succession	-0.044	-0.052	-0.038	-0.101
	(0.064)	(0.042)	(0.070)	(0.062)
Internal Succession x Segment Sales Herfindahl²	-0.146	-0.294**	-0.117	-0.538***
	(0.157)	(0.126)	(0.191)	(0.183)
Internal Succession x Segment Sales Herfindahl	0.180	0.312*	0.146	0.388**
	(0.218)	(0.160)	(0.254)	(0.231)

Table 5 => nb of independent directors
~~Table 6 => busy directors~~
Table 7 => Insiders
Table 8 => Tech firms

A new version is under progress

- New sample: using Thomson SDC and until 2019 more observations
- Chow test for the subsample analysis
- Internal succession measure: industry average static and dynamic

A new version is under progress

- New sample using Thomson SDC and until 2019 more observations (>1700)
- Internal succession measure based on industry average (static now and dynamic soon)

	Acq CARs [-1;+1]
Internal Succession Industry x Segment Sales Herfindahl²	-0.201***
	(0.074)
Internal Succession Industry x Segment Sales Herfindahl	0.258***
	(0.094)

- Chow test for the subsample analysis shows stronger effect if acquirer is faced with
  - Low competition (lower product market induced governance or more likely internal succession due to lack of candidates)
  - Current outsider CEO (lower CEO's ability to monitor internal successor)
  - No staggered board (CEO less powerful to change succession plan against deflecting internal successor)
  - Large board size (CEO less powerful to change succession plan against deflecting internal successor)
  - Low institutional ownership (weaker external corporate governance)

To conclude

- We find evidence using a US M&A sample that internal governance matters.
- The conclusions of Acharya et al (2011) model are relevant.
- We observe a hump shaped relation between the CARs and the internal governance measure.
- We contribute to the literature by
  - proposing a new proxy for the internal governance: the interaction term between the CEO's contribution to CF and the internal succession plan.
  - Finding that internal governance can be relevant when external mechanisms are weaker.
  - Internal governance should increase investment in specific human capital as predicted by Prendergast (1993) model of promotion.

Thank you to your attention

comments and questions?

Table 2

Table 2 presents the results of linear fixed effects panel regressions of acquirer cumulative abnormal announcement returns on the variables of interest, the interaction terms Internal Succession x Segment Sales Herfindahl x Segment Sales Herfindahl and Internal Succession x Segment Sales Herfindahl as defined in Section 3. We control for deal features as well as acquirer and target characteristics as defined in Section 3. All regressions contain acquirer industry-year and target industry fixed effects. Fixed effects are unreported. All standard errors (in parentheses) are adjusted for heteroskedasticity and within-cluster correlation. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

Acq Industry x Year FE	**Yes**	**Yes**	**Yes**	**Yes**
Tgt Industry FE	Yes	Yes	Yes	Yes
N	512	512	512	512
Adjusted R^2	0.061	0.062	0.069	0.051

Model by Acharya et al. (2001) (1/3)

- Acharya et al. (2011) assume a **two-level hierarchy** with a **CEO at the top** and a **young manager** who succeeds him in the next period as CEO. The firm is entirely employee-financed.
- At the **beginning of the first period *t0*** the **CEO commits to invest a certain fraction of cash flows** he obtains from the young manager at the end of the period denoted as end-of period capital stock k_t.
- Subsequently, the young manager decides on how much **effort he exerts to learn about the firm** represented by s_t. Then, cash flows are generated the higher s_t and the higher CEO's learning effort s^{CEO} *was* in period *t-1* when he was the young manager.
- At the **end of period *t***, **investments are made and the CEO gets the residual of all generated cash flows** that remain after investing some fraction of them in the capital stock. In the next **period *t+1*** the **CEO leaves the firm** and the young manager gets promoted to the CEO position.

Model by Acharya et al. (2001) (2/3)

- Acharya et al. (2011) differentiate three cases for which they infer the optimal capital stock at the end of period *t*. First, in the **first best case (FB),** the CEO has a long-term horizon regarding the firm and the manager internalizes his learning effort meaning that he acknowledges that current learning also increases current cash flows, not only future cash flows when he is CEO.
- Second, in the **constrained efficient case (CE),** they also assume a far-sighted CEO, but the young manager does not internalize his learning effort so that the CEO must incentivize him to exert learning effort by investing in end-of-period capital stock. Otherwise, the manager would wait with learning because he ignores current impact of his learning on cash flow generation.
- Third, in the **myopic CEO case (MC),** the CEO is myopic and the manager does not internalize his current learning effort. Then, the CEO is only interested in the cash flows he can misappropriate at the end of the first period and does not care about firm value after leaving the firm. Since the young manager is only interested in the capital stock he will inherit in the next period as CEO, he is only willing to exert effort if the CEO invests in that capital stock. Hence, that mechanism induces the CEO to invest and not to misappropriate cash flows.

Model by Acharya et al. (2001) (3/3)

- Subsequently, Acharya et al. (2011) introduce the **CEO's contribution to firm's cash flow relative to the young manager's contribution**. They describe such CEO's contribution as fraction of tasks the CEO undertakes to generate cash flows relative to the fraction of the young manager's tasks.
- Analytically, they predict the following relation of CEO's cash flow contribution and the steady state capital stock *k* at the end of the first period:

$$k^{MC} = \left[\gamma * (1-\delta)\delta^{b-1} \frac{\theta^b}{(1+r)^{b-1}} \right]^{\frac{1}{1-\gamma b}}$$

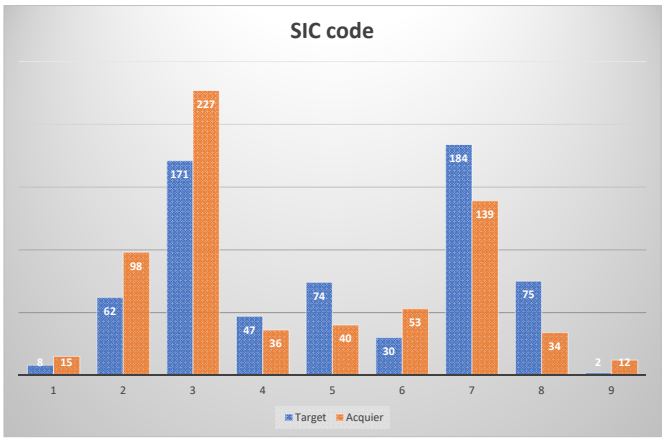
- Thus, they predict:

  The relation of firm's long-term investments and CEO's contribution to firm's cash flows is hump-shaped.

TABLE 1

Table 1 reports summary statistics of our sample consisting of 893 transactions announced between January 2004 and May 2017. Indices display the point in time (i.e., trading day) relative to the offer announcement date where the variable was measured. Cumulative abnormal returns (cars) have been measured from one trading day before until one trading day after offer announcement and from three trading days before until three trading days after offer announcement, respectively, applying a Carhart (1997) four-factor-model to model normal returns.

	Descriptives				
Variables	Observations	Mean	Standard Deviation	Min	Max
Acq CARs [-1;+1]	598	0.004	0.044	-0.207	0.239
Acq CARs [-3;+3]	598	0.003	0.056	-0.269	0.228
Internal Succession	652	0.715	0.452	0	1
Internal Succession (at least one year in firm)	652	0.655	0.476	0	1
Internal Succession x Segment Sales Herfindahl x Segment Sales Herfindahl	652	0.353	0.386	0	1
Internal Succession x Segment Sales Herfindahl	652	0.460	0.376	0	1
Segment Sales Herfindahl x Segment Sales Herfindahl	652	0.518	0.380	0.025	1
Segment Sales Herfindahl	652	0.662	0.286	0.158	1
Internal Succession x Segment Number x Segment Number	652	7.334	10.980	0	81
Internal Succession x Segment Number	652	1.969	1.860	0	9
Segment Number x Segment Number	652	9.960	11.679	1	81
Segment Number	652	2.693	1.646	1	9
COO or Non-CEO President	652	0.569	0.496	0	1
Acq Institutional Own Sum [OA – 1]	652	54.455	16.498	7.701	98.430
Acq Insider Own Sum [OA – 1]	652	3.518	6.450	0	59.701
Acq CEO Duality	652	0.581	0.494	0	1
Acq VP Alignment	652	0.215	0.546	0	8.935
Acq Total Pension Value	652	5,253.503	12,951.76	0	101,891
Acq Total Deferred Compensation	652	4,737.572	11,393.05	0	90,660.42
Acq CEO Total Cash Compensation	652	1,134.559	952.904	0.001	9,150
Acq CEO Delta	652	6,114.824	44,437.49	1.801	486,621
Acq CEO Vega	652	366.999	916.383	0	9,442.926
Acq CEO Tenure	652	3,604.532	2,666.397	41	15,826
Acq CEO Age	652	56.456	6.848	40	86
Acq Market Cap [OA – 22]	652	24,083.09	47,482.3	23.459	289,365.2
AcqMTBmin22_w	652	3.181	3.534	0.429	76.642
Acq Market Leverage [OA – 22]	652	0.126	0.115	0	0.716
Acq Div Adj Perform LTM [OA – 1]	652	16.875	42.819	-88.486	628
Acq 1Y Stock Return Vola [OA – 1]	652	33.188	15.434	12.964	132.648
ln Acq 1Y Stock Return Vola [OA – 1]	652	3.452	0.384	2.636	4.895
BTF Dummy	652	0.084	0.278	0	1
TTF Dummy	652	0.275	0.447	0	1
Private Target	652	0.733	0.443	0	1
Total Transaction Value	652	1,365.303	5,899.133	2	79,593.17
Relative Size Market Cap [OA – 22]	652	0.146	0.337	0.001	2.721
Friendly	652	0.997	0.055	0	1
Pure Cash	652	0.837	0.369	0	1
Horizontal Takeover	652	0.259	0.439	0	1
Acq Dividend Yield [OA – 1]	652	1.086	1.551	0	12.237
Acq Zero Dividend Payer [OA – 1]	652	0.469	0.499	0	1
Acq Low Dividend Payer [OA – 1]	652	0.265	0.442	0	1
Acq High Dividend Payer [OA – 1]	652	0.265	0.442	0	1
Acq Number of Directors	550	9.573	2.259	5	17
Acq Number of Directors Median	550	0.473	0.500	0	1
Acq Independent Directors Share	550	0.791	0.106	0.429	0.941
Acq Independent Directors Share Median	550	0.513	0.500	0	1
Acq Busy Independent Directors Share	546	0.300	0.207	0	1
Acq Busy Independent Directors Share Median	546	0.473	0.500	0	1
Acq Insider Directors Share	550	0.152	0.077	0	0.429
Acq Insider Directors Share Median	550	0.422	0.494	0	1
Acq Tech SIC	652	0.334	0.472	0	1
Acq ln Pay Gap Median	645	8.211	1.128	4.404	10.864
Acq ln Pay Gap Median x Acq Ln Pay Gap Median	645	68.695	17.740	19.391	118.025



1	Mining-Construction
2 & 3	Manufacturing
4	Transportation, Communications, Electric, Gas and Sanitary service
5	Wholesale and Retail Trade
6	Finance, Insurance and Real Estate
7 & 8	Services
9	Public Administration & Non Classifiable