

# Governance, board inattention, and the appointment of overconfident CEOs

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# Why are there so many overconfident CEOs?

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- **Observe:** Many CEOs are **'overconfident'** according to some metrics (Malmendier and Tate, 2005, 2008; Malmendier et al, 2011; Banerjee et al, 2015; Humphery-Jenner et al, 2016)

How does this happen?



CEO – Why???

# Motivation -- Good Side

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- Confidence is a critical ingredient of success in a wide range of domains (see e.g., Johnson and Fowler, 2011).
  - Helps generate a self-fulfilling prophecy in which exaggerated confidence actually increases the true likelihood of success
  - Important in innovative industries -- overconfidence can encourage managers to invest in innovation (Galasso and Simcoe, 2012; Hirshleifer et al, 2013)
  - Moderate levels of confidence (c.f. high overconfidence) can improve decision-making both theoretically (Goel and Thakor, 2008), and empirically (Pikulina et al, 2013)
  - “Over-optimism” (which is related to over-confidence) can encourage managers to work harder to meet their optimistic forecasts (Hilary et al, 2013)

# Motivation **Not-So-Good Side**

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- Overconfidence has several negatives: faulty assessments and unrealistic expectations (i.e., underestimating risks and overestimating returns), leading to
  - Suboptimal corporate decision making (Dittrich et al, 2005)
  - Overinvestment/risk-taking (Malmendier and Tate, 2005), including hubristic takeovers (Malmendier and Tate, 2008), and excessively 'sticky' SG&A (Chen et al, 2013)
  - Lower firm value and performance (Malmendier and Tate, 2005, 2008; Banerjee et al, 2015)
  - Sub-optimally low dividends (Deshmukh et al)
  - Greater litigation risk (Banerjee et al, Forthcoming)

# Implications/ hypotheses

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- At CEO selection stage, boards lack full information (Zajac, 1990; Zhang, 2008)
- Information asymmetry (**IA**) still exists when selecting an **internal** candidate as a CEO role differs from other roles (Zhang and Rajagopalan, 2004)
- This IA can cause boards to misinterpret signals about candidates skills
- OC execs more likely to send signals that might cause boards to confuse luck with skill
  - OC execs tend to take **more risk** (see e.g., Banerjee et al, 2015)
  - **Overinvest** (following Malmendier and Tate, 2005, 2008; Kolasinski and Li, 2013)
  - **Enter new markets** without sufficiently heeding competition (Moore et al, 2007)
- **Luck with such risk-taking** could be disproportionately rewarded given that execs are asymmetrically rewarded for successes but not punished for failures (see e.g., on acquisitions: Harford and Schonlau, 2013)

**Hypothesis 1:** If firm has more OC execs, more likely to make internal appointment

**Hypothesis 2:** When appointing internally, more likely to choose an OC individual

# Implications/ hypotheses (cont.)

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## Why are such hiring errors more likely?

- **Busy boards**

- Busy boards (with directors on multiple other boards) have less time to spend on the subject company (Masulis and Mobbs, 2014)
- This can reduce value in the company (companies) they neglect

- **Entrenched boards**

- Entrenchment enables directors and executives to make-self interested decisions and/or exercise less discipline (i.e., shirk) when making them (Bertraind and Mullainathan)
- This can destroy value (see e.g., Masulis et al, 2007, 2009; Harford et al, 2012)
- Shirking might cause the board to spend less time than is optimal disentangling luck from skill

**Hypothesis 3:** Likelihood of appointing OC higher in busy board

**Hypothesis 4:** Likelihood of appointing OC higher in entrenched board

# Data (1)

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- **Datasets**

1. **Firm-level**: Choosing whether to appoint an internal CEO or an external CEO
  2. **Executive level**: Cross-sectional sample to examine which internal CEO is appointed
- Identify all turnover events between 1994 and 2011 that involve Execucomp (i.e. S&P 1500) companies: **3188** turnover events
  - In each turnover event, we collect data on the 'seasoned' executives (executives who are there for at least one year): **8016** executives

# Data (2)

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- **Overconfidence measures**

- Follow Malmendier and Tate (2005, 2008) option-based measures of overconfidence
- Logic: an executive's human capital is undiversified and is concentrated in her company.
- Thus, a rational, risk-averse executive will want to cash-out her options early to reduce her risk exposure, while an overconfident executive might not.

- **Reported continuous measure:** “Confidence(*t*)”: Calculated as

$$\text{Confidence}(t) = \frac{\text{Value per vested option } (t)}{\text{Price } (t)}$$

- Value-Per-Vested-Option(*t*) = (Estimated Value of In-the-Money Unexercised Exercisable Options (Fiscal Year-End Stock Price) / Unexercised Exercisable Options for an executive in year *t*)
- **Robustness:** Holder67, Ranking of executive in the company



# H-1: OC and the internal/external decision

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- Expect that OC executives are more likely to be promoted to CEO → Firms with execs who are more OC will be more likely to hire internally

- Logit model to examine likelihood of internal hire:

$$h_i = \alpha + \mathbf{e}_i\beta + \mathbf{x}_i\theta + \lambda_t + \epsilon_j$$

- Where,  $h_i$  is an indicator that equals one if the company hires internally in turnover event  $i$ ,  $\mathbf{e}_i$  is a vector of executive-level characteristics associated with turnover event  $i$ ,  $\mathbf{x}_i$  is a vector of firm-specific characteristics (including industry dummies) in turnover event  $i$  and  $\lambda_t$  is a set of year dummies.

# H1: Insider appointment

Dependent Variable	Insider appointed as CEO		
Max Executive Confidence	0.819*** [0.000]	1.020*** [0.000]	
Max Executive Compensation	0.913*** [0.000]	0.880*** [0.000]	
Max Executive Shareholding	0.213*** [0.000]	0.209*** [0.000]	
Max Executive Tenure > 2 Years	0.482* [0.099]	0.362 [0.271]	
Max Executive Age	0.022*** [0.004]	0.023*** [0.003]	
Max Executive Missing-Age	-0.302*** [0.003]	-0.323*** [0.002]	
Mean Executive Confidence		1.130*** [0.000]	1.504*** [0.000]
Mean Executive Compensation		0.870*** [0.001]	0.829*** [0.002]
Mean Executive Shareholding		0.631*** [0.000]	0.686*** [0.000]
Mean Executive Tenure > 2 Years		0.549*** [0.008]	0.423* [0.051]
Mean Executive Age		-0.007 [0.578]	-0.010 [0.459]
Mean Executive Missing-Age		-1.412*** [0.000]	-1.454*** [0.000]

One S.D. increase in “Confidence”  
Increases likelihood of internal hire  
By 8.88%

Note:

- Logit models
- Controls suppressed
- Year and SIC 2D FE
- Robust to an OLS LPM

# H-2: OC & selection of internal candidates

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- We examine which internal executive is more likely to be appointed to CEO
- Use a **conditional logit model**: Why?
  - Conditional logit accounts for grouping of executives by firm: Isolates executive-specific factors (i.e. eliminates firm-characteristics)
  - Conditional logit accounts for the decision that firms make - between executives that are available to them at that turnover event (i.e. we should not compare the executives for event  $j$  at time  $t$  with the executives for event  $k$  at time  $t + n$ )
- Model is of the following form:
$$h_{i,j} = \alpha + c_j\beta + x_j\theta + \varepsilon$$
- Look at different sub-samples to examine role of OC in different companies
- Check that independence of irrelevant alternatives ('IIA') assumption holds by iteratively examining whether coefficients change when omitting a random alternative

# H2: Baseline

Sample	All		Top 3 Highest Paid Executives	
	[1]	[2]	[3]	[4]
Exec Confidence	0.880*** [0.007]		0.701* [0.057]	
log[Exec Confidence]		1.226*** [0.004]		0.980** [0.041]
Exec Compensation	1.949*** [0.000]	1.947*** [0.000]	1.918*** [0.000]	1.919*** [0.000]
Exec Shareholding	0.272*** [0.000]	0.273*** [0.000]	0.282*** [0.000]	0.282*** [0.000]
Exec Male	0.753*** [0.001]	0.755*** [0.001]	0.777*** [0.002]	0.779*** [0.002]
Exec Position: CFO	-0.799*** [0.000]	-0.800*** [0.000]	-0.843*** [0.000]	-0.843*** [0.000]
Exec Position: COO	0.651*** [0.000]	0.649*** [0.000]	0.599*** [0.000]	0.597*** [0.000]
Exec Position: President	2.663*** [0.000]	2.664*** [0.000]	2.453*** [0.000]	2.454*** [0.000]
Exec Position: Chair	2.537*** [0.000]	2.539*** [0.000]	2.637*** [0.000]	2.638*** [0.000]
Tenure greater than 2 years	-0.051 [0.743]	-0.054 [0.727]	-0.051 [0.789]	-0.052 [0.783]
Exec Age	-0.045*** [0.000]	-0.045*** [0.000]	-0.047*** [0.000]	-0.047*** [0.000]
Exec Age Missing	-3.954*** [0.000]	-3.956*** [0.000]	-3.760*** [0.000]	-3.762*** [0.000]
Observations	8,016	8,016	5,133	5,133
Pseudo R-squared	0.6000	0.6002	0.5916	0.5918

One S.D. increase in confidence associated with 5% increase in being selected as CEO

Economically meaningful as firms have 4 plausible Internal candidates on average, so one S.D increase in confidence increases hiring chance from 25% to 30% (i.e., a one fifth increase)

# H-3: Board Busyness

Sample	Director Busyness		Directors with 3+ Directorships	
	High	Low	High	Low
Exec Confidence	1.763*** [0.008]	1.103** [0.020]	2.100*** [0.002]	0.912* [0.050]
Exec Compensation	2.774*** [0.000]	1.274*** [0.002]	2.190*** [0.000]	1.581*** [0.000]
Exec Shareholding	0.165 [0.121]	0.295*** [0.000]	0.237** [0.027]	0.271*** [0.000]
Exec Male	0.594* [0.097]	0.718** [0.030]	0.576 [0.119]	0.737** [0.024]
Exec Position: CFO	-1.090*** [0.000]	-0.648** [0.038]	-1.137*** [0.000]	-0.653** [0.034]
Exec Position: COO	0.530** [0.029]	0.715*** [0.001]	0.589** [0.017]	0.667*** [0.001]
Exec Position: President	3.011*** [0.000]	2.315*** [0.000]	3.049*** [0.000]	2.288*** [0.000]
Exec Position: Chair	2.633*** [0.000]	2.376*** [0.000]	2.802*** [0.000]	2.223*** [0.000]
Tenure greater than 2 years	-0.008 [0.975]	-0.136 [0.589]	-0.118 [0.643]	-0.034 [0.894]
Exec Age	-0.055*** [0.000]	-0.043*** [0.000]	-0.058*** [0.000]	-0.039*** [0.000]
Exec Age Missing	-3.963*** [0.000]	-3.603*** [0.000]	-4.041*** [0.000]	-3.556*** [0.000]
Observations	2,810	2,825	2,853	2,782
Pseudo R-squared	0.6214	0.5604	0.6321	0.5474

# H-4: Governance / Entrenchment (ATPs)

	GIM Index		BCF Index	
	$\geq 10$	$< 10$	$\geq 3$	$< 3$
Exec Confidence	2.102*** [0.001]	0.320 [0.545]	2.666*** [0.000]	0.245 [0.606]
Exec Compensation	1.583*** [0.004]	2.398*** [0.000]	1.677*** [0.010]	2.168*** [0.000]
Exec Shareholding	0.285** [0.022]	0.196*** [0.004]	0.371*** [0.003]	0.220*** [0.001]
Exec Male	0.708* [0.053]	0.637* [0.060]	0.967** [0.016]	0.556* [0.056]
Exec Position: CFO	-1.070*** [0.002]	-1.046*** [0.000]	-0.818*** [0.004]	-1.003*** [0.001]
Exec Position: COO	0.585*** [0.010]	0.865*** [0.000]	0.490* [0.055]	0.860*** [0.000]
Exec Position: President	2.631*** [0.000]	2.549*** [0.000]	2.514*** [0.000]	2.641*** [0.000]
Exec Position: Chair	2.482*** [0.000]	2.557*** [0.000]	2.462*** [0.000]	2.477*** [0.000]
Tenure greater than 2 years	-0.097 [0.712]	0.175 [0.474]	-0.073 [0.782]	0.128 [0.570]
Exec Age	-0.053*** [0.000]	-0.042*** [0.000]	-0.049*** [0.000]	-0.050*** [0.000]
Exec Age Missing	-4.182*** [0.000]	-4.251*** [0.000]	-3.303*** [0.000]	-4.309*** [0.000]
Observations	3,021	3,307	1,921	4,611
Pseudo R-squared	0.6237	0.5828	0.5398	0.6207

# Conclusion

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- We analyze why overconfident CEOs are so prevalent
- We look at the CEO selection stage
- Hypothesize and show that
  - Preponderance of OC individuals increases likelihood of an internal hire
  - When hiring internally, more likely to select an OC individual
  - Effect is strongest with busy boards and entrenched boards (i.e., where oversight might be lesser)

# Selected Robustness Tests



# Robustness – Holder X measure

Dependent Variable	CEO Selection				
	[1]	[2]	[3]	[4]	[5]
Holder100	0.605*** [0.000]				
Holder80		0.498*** [0.000]			
Holder67			0.477*** [0.000]		
Holder50				0.411*** [0.002]	
Holder30					0.542*** [0.000]
Exec Compensation	2.074*** [0.000]	2.090*** [0.000]	2.092*** [0.000]	2.104*** [0.000]	2.114*** [0.000]
Exec Shareholding	0.275*** [0.000]	0.279*** [0.000]	0.275*** [0.000]	0.276*** [0.000]	0.279*** [0.000]
Exec Male	0.790*** [0.001]	0.794*** [0.001]	0.785*** [0.001]	0.758*** [0.001]	0.761*** [0.001]
Exec Position: CFO	-0.770*** [0.000]	-0.778*** [0.000]	-0.785*** [0.000]	-0.772*** [0.000]	-0.784*** [0.000]
Exec Position: COO	0.663*** [0.000]	0.684*** [0.000]	0.675*** [0.000]	0.675*** [0.000]	0.683*** [0.000]
Exec Position: President	2.632*** [0.000]	2.630*** [0.000]	2.632*** [0.000]	2.628*** [0.000]	2.626*** [0.000]
Exec Position: Chair	2.566*** [0.000]	2.573*** [0.000]	2.592*** [0.000]	2.610*** [0.000]	2.589*** [0.000]
Tenure greater than 2 years	-0.351** [0.047]	-0.322* [0.068]	-0.299* [0.089]	-0.267 [0.129]	-0.292* [0.098]
Exec Age	-0.048*** [0.000]	-0.048*** [0.000]	-0.048*** [0.000]	-0.047*** [0.000]	-0.046*** [0.000]
Exec Age Missing	-3.992*** [0.000]	-3.996*** [0.000]	-3.981*** [0.000]	-3.993*** [0.000]	-3.977*** [0.000]
Observations	7,123	7,123	7,123	7,123	7,123
Pseudo R-squared	0.6134	0.6117	0.6112	0.6104	0.6111

# Succession plan related issues

Sample	Old CEO $\leq$ 65 [1]	Old CEO $\leq$ 60 [2]	All [3]	All [4]	All [5]
A: Executive Confidence	0.971*** [0.008]	1.186*** [0.007]	0.910*** [0.007]	0.863*** [0.009]	0.896*** [0.008]
B: Executive's Position: President	2.670*** [0.000]	2.685*** [0.000]	2.696*** [0.000]	2.662*** [0.000]	2.715*** [0.000]
C: Executive's Position: COO	0.734*** [0.000]	0.545*** [0.005]	0.652*** [0.000]	0.621*** [0.001]	0.595*** [0.002]
A x B			-0.134 [0.736]		-0.220 [0.618]
A x C				0.122 [0.803]	0.238 [0.658]
Executive Compensation	2.017*** [0.000]	1.554*** [0.000]	1.951*** [0.000]	1.949*** [0.000]	1.952*** [0.000]
Executive Share Ownership	0.241*** [0.000]	0.247*** [0.000]	0.272*** [0.000]	0.272*** [0.000]	0.272*** [0.000]
Executive is Male	0.755*** [0.002]	0.735** [0.010]	0.755*** [0.001]	0.752*** [0.001]	0.754*** [0.001]
Executive's Position: CFO	-0.770*** [0.000]	-0.786*** [0.002]	-0.799*** [0.000]	-0.800*** [0.000]	-0.801*** [0.000]
Executive's Position: Chairman	2.601*** [0.000]	2.588*** [0.000]	2.540*** [0.000]	2.536*** [0.000]	2.540*** [0.000]
Executive Tenure > 2 years	-0.114 [0.497]	-0.035 [0.865]	-0.051 [0.742]	-0.050 [0.746]	-0.050 [0.748]
Executive Age	-0.045*** [0.000]	-0.042*** [0.000]	-0.045*** [0.000]	-0.045*** [0.000]	-0.045*** [0.000]
Executive Missing Age	-4.033*** [0.000]	-4.126*** [0.000]	-3.955*** [0.000]	-3.955*** [0.000]	-3.956*** [0.000]
Observations	6,681	3,903	8,016	8,016	8,016
Pseudo R-squared	0.6008	0.5715	0.6000	0.6000	0.6001

# Family firms

Sample	New CEO younger than former CEO		Non-Family Firms	
	[1]	[2]	[3]	[4]
Exec Confidence	0.798** [0.046]		0.903*** [0.009]	
log[Exec Confidence]		1.078** [0.037]		1.260*** [0.005]
Exec Compensation	2.447*** [0.000]	2.445*** [0.000]	2.040*** [0.000]	2.038*** [0.000]
Exec Shareholding	0.335*** [0.000]	0.335*** [0.000]	0.337*** [0.000]	0.339*** [0.000]
Exec Male	0.677*** [0.009]	0.678*** [0.009]	0.920*** [0.000]	0.922*** [0.000]
Exec Position: CFO	-0.708*** [0.001]	-0.710*** [0.001]	-0.759*** [0.000]	-0.761*** [0.000]
Exec Position: COO	0.833*** [0.000]	0.831*** [0.000]	0.679*** [0.000]	0.677*** [0.000]
Exec Position: President	2.827*** [0.000]	2.828*** [0.000]	2.669*** [0.000]	2.670*** [0.000]
Exec Position: Chair	3.065*** [0.000]	3.067*** [0.000]	2.473*** [0.000]	2.474*** [0.000]
Tenure greater than 2 years	0.016 [0.931]	0.015 [0.937]	-0.065 [0.689]	-0.067 [0.679]
Exec Age	-0.048*** [0.000]	-0.048*** [0.000]	-0.043*** [0.000]	-0.043*** [0.000]
Exec Age Missing	-3.948*** [0.000]	-3.949*** [0.000]	-3.986*** [0.000]	-3.987*** [0.000]
Observations	6,322	6,322	7,297	7,297
Pseudo R-squared	0.6449	0.6450	0.6077	0.6080