Executive Compensation and Risk Taking

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Incentives and Risk Taking

Modern agency theory of executive pay
Holmstrom and Tirole (1993) **:**

Stock-based compensation aligns CEO and shareholders' **long-term objectives**:

– Stock price an unbiased estimate of fundamentals

– Induces managers to focus on long-run value

– Performance measure that cannot be manipulated easily

Incentives and Risk Taking

Caveats:

- No leverage
- No Stock-options
- No endogenous choice of risk or volatility of earnings
- Complete markets ⇔ Risk-neutral investors
- No speculative bubbles

Incentives and Risk Taking

Bolton, Scheinkman and Xiong (2006) :

- Differences of opinion + short-sales constraints => *speculative bubbles*
- Endogenous choice of volatility
- **Short-termist incentives**: play into the bubble & feed the speculative option value with volatility

Bolton, Scheinkman and Xiong (2004) :

Earnings manipulation that destroys long-run fundamental value to drive up short-term stock performance

(see also Peng and Roell, 2008a,b,c)

Enron and *Corporate Scandals* of 2002

Analysis by *Financial Times* of the 25 largest bankruptcies in 2001 – 2002:

- 52 executives and directors walked away with pay > $10M, 31 > $25M, 16 > $50M, 8 > $100M
- Ken Lay (CEO, Enron), $247M,
- Gary Winnick (CEO, global crossing), $512M.

Bolton, Mehran, and Shapiro (2009)

- The average non-financial firm in the U.S. has nearly 60% equity and 40% debt
- For financial institutions, at least 90% of the balance sheet is debt; for investment banks it is closer to 95%
- In a simple model, we establish the socially optimal level of risk-taking and show:
  - with standard compensation packages, CEOs will increase risk
  - ability to lever the firm amplifies risk-taking

Bolton, Mehran, and Shapiro (2009)

- Shareholders incentives to rein in risk-taking depend on:
  - **observability** of risk choice,
  - **verifiability** of incentive contract,
  - **deposit insurance**,
  - investors' **misperceptions of risk**

Bolton, Mehran, and Shapiro (2009)

- **We propose:**
- Tying CEO compensation to a measure of default risk (**CDS spread**)

$$Compensation = \bar{w} + s_E P_E + s_D(\bar{P} - P_{CDS})$$

- **Empirical evidence**: using a SEC regulation on increasing compensation transparency in 2007, we show that the market (CDS spread) believes tying compensation to debt-like compensation (deferred compensation and pension) leads to lower risk

Bolton, Mehran, and Shapiro (2009)

- **Optimal** *versus* **Equilibrium CDS-based compensation**
- Would shareholders use CDS prices to influence a CEO's choice?
  - **Renegotiation**: shareholders may have incentives to undo contract once bonds have been issued
  - **Deposit Insurance**
  - **Naive Bondholders**

Conclusion

- Risk taking increases when it is less observable and there is more leverage
- Shareholders may not have the incentive to correct for risk taking due to: renegotiation, deposit insurance, and naive bondholders
- Basing compensation on CDS spreads can decrease risk taking
- Empirical evidence seems to suggest this will work