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 $\Leftrightarrow$ 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
Shareholders incentives to rein in risk-taking depend on:

- observability of risk choice,
- verifiability of incentive contract,
- deposit insurance,
- investors' misperceptions of risk
We propose:

Tying CEO compensation to a measure of default risk (CDS spread)

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

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.