Econ 234C – Corporate Finance
Lecture 7: External Investment (III)+(IV)
Capital Structure

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Outline

1. Organization: Exams

2. External Investment (III): Market Inefficiencies

3. External Investment (IV): Managerial Hubris
1 Organization

Midterm: week after next week! (3/20)

Material: nothing surprising

- Material covered in class

- Especially starred papers; but know the basic idea (empirics or model) of other papers we mentioned

- My aim: a useful theoretical exercise (based on toy model from class) and some explanations or criticism of empirical results (e.g. interpretation of a table; critique of an empirical approach)

- You do not need to have done any homeworks
Final exam: 5/18?

Alternative is last class: 5/8.
2 External Investment (III): Misvaluation

Shleifer-Vishny Model

Two firms $A$ and $T$ with

- “Short-Run” Value:
  \[ V_A = S_A K_A \]
  \[ V_T = S_T K_T \]
  \[ V = S(K_T + K_A) \]

  $\implies$ Short-run gains from mergers: $V - V_A - V_T$

- “Long-Run” Values:
  \[ \overline{V}_A = q K_A \]
  \[ \overline{V}_T = q K_T \]
  \[ \overline{V} = q(K_A + K_T) \]

  $\implies$ Long-run gains from mergers: 0.
Typical Case: A acquiring T

- Announcement effects

  - Acquirer:
    \[ S(K_A + K_T) - PK_T - S_A K_A = (S - S_A)K_A + (S - P)K_T \]

  - Target:
    \[ (P - S_T)K_T \]

\[ \Rightarrow A\text{-shareholders lose from dilution} (S - S_A < 0) \text{ or gain from “money machine”} (S - S_A > 0) \]

\[ \Rightarrow A\text{-shareholders gain from high SR assessment of synergy relative to price} (S - P > 0). \]
• Long-run abnormal returns if cash payment $PK_T$.
  
  – Combined: 0
  – For $A$-Shareholders: $(q - P)K_T$.
  – For $T$-Shareholders: $(P - q)K_T$.

• Long-run abnormal returns if stock payment $x = \frac{PK_T}{S(K_A+K_T)}$.
  
  – Combined Value: 0
  – For $A$-Shareholders: $(q - P\frac{q}{S})K_T$.
  – For $T$-Shareholders: $(P\frac{q}{S} - q)K_T$.

$\Rightarrow$ In the LR, $A$-shareholders gain from high valuation $(S - P > 0)$. 
**Result:** Difference between LR value creation and LR (mean-reversion) returns.

- LR return of $A$ without acquisition: $(q - S_A)K_A$. (Negative if $A$ initially overpriced.)

- *Incremental* LR return of $A$ from acquisition: $(1 - \frac{P}{S})qK_T$. (Positive if $P < S$.)

$\implies$ In the LR, $A$-shareholders gain from high valuation $(S - P > 0)$ even if overall LR return is negative. (“Not as negative as they would have been without the acquisition.”)
Conclusions

• Predictions of Market Timing Theory

1. Characteristics of stock mergers
   - Acquirer has high prior returns.$\Rightarrow q > P \geq S$.  
   - Acquirer overvalued (signs: earnings manipulation, insider selling)
   - Stock mergers disporportionately high when aggregate or industry valuations are high.
   - Stock mergers disporportionately high when valuations are highly disperse.
2. Characteristics of cash mergers

- Target has low prior returns (is undervalued) $\implies q > P \geq S_T$.

- Cash mergers disproportionately high when aggregate or industry valuations are low.
Empirical issues:

How could you get a good benchmark for over/under valuation?

How could you separate the Tobin’s Q effect from the over/under valuation effect?

How could you really get a good measure of the Long Run returns of the acquirers?
3 External Investment (IV): Hubris

Roll (JB 1986): The Hubris Hypothesis

• Let’s step back from assuming a given acquirer $A$ and a given target $T$. Instead: $N$ potential acquirers of a given target $T$.

• Valuation process

  – Acquirers $A_1, A_2, ..., A_n, ..., A_N$ evaluate $T$
  – Current market values $V_{A_1}, V_{A_2}, ..., V_{A_N}, V_T$
  – Expected value of merger for $A_n$: $E_n[V_{n,T}] - V_{A_n}$
• How much should company $A_n$ bid (at most)?

  – Vickrey (1961) for private values,

  – If expectation based on signal drawn from a common distribution:
    $b_n < E_n[V_{n,T}] - V_{A_n}$

    * E.g. $E_n[V_{n,T}] - V_{A_n} = E_n[V_T]$ and
      signals about future value of $T$ drawn from common distribution.

    * Then $b_n < E_n[V_T]$.

  – Else: winner’s curse.
• Hubris hypothesis (version 1): Bidders do not account for winner’s curse and bid (up to) $E_n[V_T]$.

• Hubris hypothesis (version 2): Bidders account for winner’s curse, shade their bid, but over-estimate the private-value element.

• Additional plausibility arguments:
  
  – We observe bids $b_n > V_T$ but not (rarely) $b_n < V_T$; thus we observe upwards bias but not downwards error.

  – Little opportunity to learn from past mistakes (few acquisitions over a managers lifetime, noisy outcome).
Executives appear particularly prone to display overconfidence in experiments.

Three main factors:

* Being in control (incl. illusion of control)
* High commitment to good outcomes
* Reference point not concrete

(Weinstein, 1980; Alicke et al., 1995)
Missing piece:

→ Difference in opinion (between rational investors/market and overoptimistic managers) affects bidding behavior.

How?

→ Heaton (FM 2002)

→ Malmendier and Tate (2007)