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:

$$\overline{V}_A = qK_A$$
$$\overline{V}_T = qK_T$$
$$\overline{V} = q(K_A + K_T)$$

 \implies Long-run gains from mergers: 0.

Typical Case: A acquiring ${\rm T}$

• Announcement effects

- Acquirer:

$$S(K_A + K_T) - PK_T - S_A K_A$$

$$= (S - S_A)K_A + (S - P)K_T$$
- Target:

 \implies A-shareholders lose from dilution $(S - S_A < 0)$ or gain from "money machine" $(S - S_A > 0)$

 $(P-S_T)K_T$

 \implies A-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: $(P\frac{q}{S}-q)K_T$.

 \implies 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. $\implies q > P \ge S$.
 - 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) $\implies q > P \ge S_T$.
 - Cash mergers disporportionately 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,
 Milgrom and Weber (1982) for common/affiliated 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:

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

How?

 \longrightarrow Heaton (FM 2002)

 \longrightarrow Malmendier and Tate (2007)