

Topics in Financial Economics: Hart's Hard Budget Constraint Model

Tianxi Wang

Economics Department, U of Essex

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- Core: How to constrain the management of the public company.
- Give a role for the long term debt.
- Based on the book by Oliver Hart (1995), "Firms, Contracts and Financial Structure" (Chapter 6, page 126-140).

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- The management cannot divert the company's cash into its own pocket. Otherwise, we would not see the public company.

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- The liquidation decision is not contractible.
- Investors are risk neutral, and the risk free rate is 0 .

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- The core of the model consists in how to decision capital structure to constrain the manager, so as to enforce the optimal liquidation.

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- therefore, liquidation happens if and only if

$$y_1 < P_1 \text{ and}$$

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- If $y_1 = 5$, $L = 6$ and $y_2 = 7$, what is the optimal contract?
- Generally, if it is known at $t = 0$ that $y_2 > L$, the optimal capital structure has $b_1 = L$ and $b_2 = 0$; if it is known at $t = 0$ that $y_2 \leq L$, the optimal capital structure has $b_1 = 0$ and $b_2 = y_2$.

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- More interestingly: At $t = 0$ there are two states: (y_1^A, y_2^A, L^A) and (y_1^B, y_2^B, L^B) ; $y_2^A > L^A$ but $y_2^B < L^B$, that is, the best decision is to continue for case A and to liquidate for case B.

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- If debt renegotiation is possible:

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 - 3 Myers-Majluf: It depends on the seniority of debt, but it presumes the manager acts in the interest of old shareholders; if the manager only cares the firm's value, he has no incentive to issue debt.

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- As _____, It can hardly explain outside equity, in two senses: The firm's value can be maximized without any outside equity; in the extension, the manager will use free cash up for empire building rather than for dividend, so outside equity is infeasible.