

FIN 325 Corporate Finance

L11 (Theory): Agency Benefits of Leverage

Instructor: Adam Hal Spencer¹

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¹Departments of Economics and Finance, UW–Madison.

Managers v.s. investors

- Recall in L11 that we assumed the **managers** of the firm always acted in the best interests of the **shareholders**.
- Their incentives were assumed to be perfectly aligned — is this a good assumption?
- Managers have a **private** value, which they seek to maximise.
- Their own interests may differ from those of the shareholders.
- Called an **agency problem** in economics.
 - **Principal** — shareholders.
 - **Agent** — managers.
- The principal wants the agent to exert lots of effort in his work.
 - Problem is that the agent's effort is **unobservable**.
 - Only observe a **noisy signal** of his effort.

Management's objective

- Potential personal objectives the manager may have:
 - **Shirking**: minimising the cost of effort.
 - **Pet projects**: project that the manager likes that may have a negative NPV.
 - **Empire building**: manager likes having a grand department and lots of power.
 - **Gambling**: may assume high risk projects since it's not their own money.
 - **Quiet life**: only take safe projects with low NPV to avoid risk of being fired.
- Potential fixes
 - **Compensation**: align monetary payoffs of managers with the shareholders.
 - **Monitoring**: pay for some better way of revealing how much effort management exerts.
 - **Capital structure**: can use leverage to align incentives.

Executive compensation

- Attempt to make the payoff of the manager similar to that of the shareholders.
 - Stocks, bonuses and option compensation.
 - Ask management to invest their own capital.
- Rewarding the manager for good performance since **higher effort** is likely to lead to **better outcomes**.

Monitoring effort of the managers

- Small v.s. large shareholders.
 - One sole shareholder in the company: has strong incentive to monitor effort of managers.
 - Large number of small shareholders: **free-rider problem** arises where individual investors are unwilling to pay for monitoring.
- Shareholders delegate monitoring to the **board of directors**.
 - In place to monitor and advise the managers.
- **Creditors** also will typically monitor.
 - E.g. banks will investigate the credit worthiness of a debtor before making a loan.

Capital structure (1)

- Can be the case the compensation and monitoring are insufficient to align incentives.
- After a certain point, managers will start to respond less to monetary incentives.
- **Free cash flow hypothesis** of Jensen (1986).
 - Wasteful spending is more likely to take place when there is an abundance of free cash flow.
 - Empire building and investment in negative NPV projects are the big concern here.
 - Problem is more severe for larger, more mature companies.

Capital structure (2)

- Harford (1999) provides evidence **in favour** of free cash flow hypothesis.
 - Cash rich firms are more likely to make acquisitions; they are likely to be value destroying.
 - Operating performance is abnormally low after acquisition by cash-rich firms.



Capital structure (3)

- By assuming **leverage**, we can tie the managers' hands to some extent.
 - By committing to pay creditors, we reduce the free cash flow available to the managers.
 - Higher debt also reduces market capitalisation of equity.
 - Increases the ownership stake of shareholders — may now be more large shareholders — more incentive to monitor.
 - Also may increase ownership stake of managers — directly aligned incentives.
- Similar thing can be achieved through commitment to pay dividends regularly.

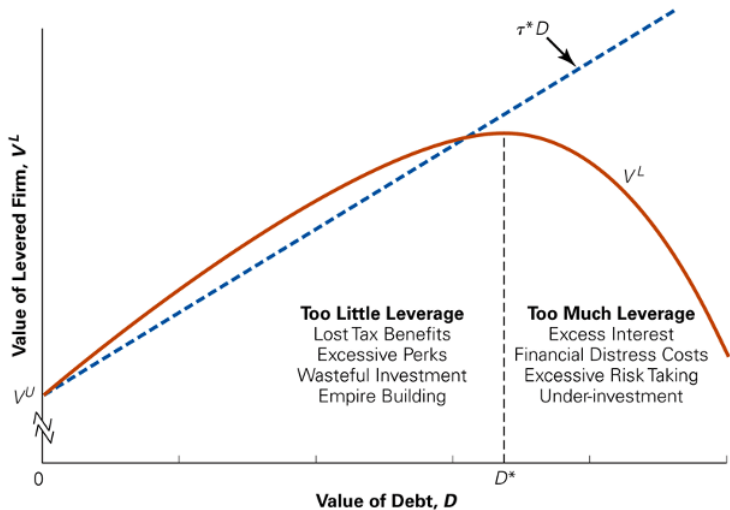
APV formula re-visited

- Benefits associated with leverage will raise the value of the firm in APV formula.

$$V_L = V_U + PV(DTS) - PV(CFD) \\ - PV(\text{Agency costs of debt}) + PV(\text{Agency benefits of debt})$$

- How big are the agency costs relative to the agency benefits?
- These benefits/costs are almost **impossible to quantify**.
- An example would be a pet project. If the firm without leverage takes the project but the debt in the firm with leverage is sufficient to reduce their cash flows such that they're unable to pay the upfront cost of the pet project, then V_L will be higher than V_U .

Optimal leverage



Growth, maturity and optimal debt

- R&D intensive firms.
 - Firms with high R&D costs typically have high future growth opportunities.
 - Typically maintain low debt levels.
 - Low current cash flows and risky business activities
 - High chance of default if they had high leverage.
 - Lots of intangible assets: high CFD.
- Mature firms
 - Lots of tangible assets.
 - Stable cash flows.
 - Typically have high levels of debt.

Managerial entrenchment theory

- APV method with tradeoff theory explains how firms **should** choose their level of leverage.
- May not coincide with reality.
- **Managerial entrenchment theory** suggests that managers choose optimal debt to **avoid discipline of debt** and **ensure their own job security**.
- Managers aim to minimise leverage to minimise job loss that would accompany financial distress.
- Are also constrained to maintain a certain level of leverage to keep shareholders/board happy.

Takeaways

- Conflicts not only exist between shareholders and debtholders, but also between shareholders and managers.
- Can mitigate the difference through compensation, monitoring or reducing free cash flows.
- Issuing debt or committing to pay dividends can solve free cash flow problem.