Revision Lecture

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Roadmap

L2: Modigliani & Miller

- A benchmark regarding capital structure and firm value.

- What's the best way to finance a new project?

- If there are no financial frictions $\Rightarrow$ capital structure doesn't matter.

    $\iff$ If capital structure matters $\Rightarrow$ there are financial frictions.

- What are these financial frictions?

- Identifying these frictions is the real contribution of this theorem.

L3: Capital Market Incompleteness and Imperfections

- Risk averse investors dislike uncertainty.

- Complete asset markets allow investors to insure themselves against all permissible states of nature in the future.

- Incomplete markets makes it harder for these investors to insure themselves.

- Firms can create value by helping "insure" their investors.

- Market imperfections just mess things and make it harder to trade.

L4: Taxes

- The tax code makes debt advantageous relative to equity.

- Interest deductions are tax deductible.

- If this is the only friction, firms should borrow as much as possible and repurchase shares.

L5: Bankruptcy Costs

- If bankruptcy is costly, then we can get an interior solution for optimal borrowing.

- Ex-ante versus ex-post.

- The lenders pass the expected value of these costs onto the firm.

- How does the form of the bankruptcy cost function affect the optimal solution?

L6: Agency Conflicts

- Typical assumption is that a firm's manager will act in the best interests of the owners.

- What if the manager gets some private benefit from actions that conflict with the interest of the owners?

- Contracts need to be designed to align the incentives better.

- A firm with cash wouldn't need necessarily to raise external financing. When the conflict is particularly pronounced, this firm would have higher value than one that issues new financing.

L7: Information Asymmetry

- Sometimes the insiders of a firm have more information than outsiders.

- This can impede their ability to raise external financing.

- If external financiers believe a firm to be of inferior quality, markets can break-down (lemons problem).

- Again, firms that need not raise external financing can end up with a higher value.

L8: Empirical Methods I

- Ordinary least squares: most basic regression model that chooses parameter to minimise the sum of squared deviations of the linear model from the data.

- This method is asymptotically unbiased when certain assumptions hold.

- Classic issue is endogeneity: when regressions are correlated with the residual term in the model.

- OLS is then no longer consistent.

L9: Empirical Methods II

- How can we mitigate the issues with endogeneity?

- Instrumental variable: correlated with the endogenous regressor but only affects the outcome variable through said regressor. Two stage least squares: first stage cleanses the regressor of endogeneity.

- Panel data: can use fixed effects to control for unobserved heterogeneity.

- Difference in differences: take the difference in averages across control and treatment groups before and after a reform. Removes selection bias.

L10: Empirical Literature

- What evidence have researchers found regarding the importance of these frictions?

- Taxes: most compelling evidence is tax reform experiment in 1986. Lower corporate tax rate lead to less borrowing.

- Bankruptcy costs: firms with more tangible assets borrow more.

- Agency: again firms with more tangible assets borrow more. May indicate that firms with fewer agency issues increase borrowing.

- Information asymmetry: mixed evidence.

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1 Corporate Finance

2 Asset Pricing

3 Financial Intermediation

4 Conclusion

L11: Consumption-Based Asset Pricing

- Asset pricing is all about the stochastic discount factor and Euler equations.

- Euler equation: it equates the marginal cost and benefit of holding another unit of an asset.

- Marginal cost: the foregone consumption at t to save more. Marginal benefit: the marginal benefit of extra consumption at $t+1$.

L12: Portfolio Choice

- Say an investor has some funds to put into some assets.

- How would you best allocate the funds?

- Special utility function (quadratic) that makes it all about the risk-return tradeoff.

- What's the story when we don't have quadratic utility?

L13: Asset Pricing Bubbles

- An asset's fundamental value equals the expected discounted value of its future dividends.

- Discounting using what object? The SDF.

- Asset pricing bubbles exist when its price is above fundamental value.

- These can persist in our framework when agents all expect the price to keep going up in the future.

L14: Equilibrium Asset Pricing

- So far, we've micro-founded the demand for an arbitrary asset.

- How do we pin-down the price in general equilibrium?

- Specify the supply. Then the price clears the market for the security.

- The market rewards risk in terms of covariance of an asset's return with the return on aggregate consumption in CCAPM.

- Covariance with a market portfolio in regular CAPM.

L15: Factor Models

- Starts of with the CAPM.

- From there, researchers have thought about other aggregate factors that predict asset returns.

- Famous examples: 3 factor model, 5 factor model.

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L16: Bank Runs

- Banks can implement the solution to the social planner's problem as an equilibrium outcome.

- Banks in this model pool funds and allow agents to insure each other against liquidity risk.

- Another "bad" equilibrium can come about though.

- Everyone runs on the bank if they think that others will as well.

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Summary

- Good luck!