Class 13

UG3F14
Corporate Finance

Class 13 Topics and Content

- Capital Structure

- *The Business Debt to Equity Ratio Decisions*
- Factors Affecting Target Capital Structure
- Capital Structure and Corporate Taxes - Considerations

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- ***Capital Structure***

GlaxoSmithKline PLC and satellite television provider DirecTV announced bond issues. While part of GlaxoSmithKline's $9 billion bond offering was for general corporate purposes, much of it was to be used to buy back the company's stock. In DirecTV's case, all of the proceeds from its $2.5 billion issue were to be used to buy back stock. Target announced planed to issue new debt to buy back about $10 billion of its stock.

Why would companies like GlaxoSmithKline, DirecTV even consider borrowing money to repurchase their own stock? And why would Target did so at the expense of a credit rating downgrade?

optimal debt policies

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- ***Capital Structure***
  - ***The Business Debt to Equity Ratio Decisions***
    - ✓ Capital structure describes a firm's finances in terms of the balance between its debt and equity
    - ✓ The senior business's management team and other stakeholders will consider the proper mix of debt and equity for their ideal capital structure
    - ✓ The optimal capital structure is the right mix of debt and equity that minimizes the weighted average cost of capital (WACC) of a company while maximizing its market value
    - ✓ The lower the cost of capital, the greater the present value of the firm's future cash flows, discounted by the WACC

Maximizing the wealth and worth of the company and minimizing its cost of capital

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- ***Capital Structure***
  - ***The Business Debt to Equity Ratio Decisions***
    - ✓ Business leaders need to independently come up with a capital structure that works best for their operation by deciding on the right debt–equity ratio
    - ✓ The value of the firm:

$$V = B + S$$

B is the market value of the debt
S is the market value of the equity

- ✓ The firm should pick the debt–equity ratio that makes the total value as big as possible

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- ***Capital Structure***
  - ***The Business Debt to Equity Ratio Decisions***
    - ✓ Maximizing Firm Value versus Maximizing Stockholder Interests
      - Debt and Firm Value - Example:

The market value of the Yud LLC is $1,000 (100 shares of common stock @$10/share) and has no debt outstanding – unlevered. The business will borrow $500 and pay the proceeds to shareholders as an extra cash dividend of $5/share – levered. Management consulted with investment bankers, an agreed that operation will not change firm value more than $250. The possible outcomes are:

1. *Greater than the original firm value of $1,000 or $1,250*
2. *Equal to $1,000 or the same*
3. *Less than $1,000 or $750*

	Original Cap Structure	Possible Outcomes		
Components	No Debt	1	2	3
Debt	$ -	500	500	500
Equity	$ 1,000	$ 750	$ 500	$ 250
Value	$ 1,000	$ 1,250	$ 1,000	$ 750

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capital structure producing the highest firm value is the one that maximizes shareholder wealth

- *Capital Structure*
  - ***The Business Debt to Equity Ratio Decisions***
    - ✓ Maximizing Firm Value versus Maximizing Stockholder Interests
      - Debt and Firm Value - Example:
        - ✓ The original capital structure and the new three possibilities for the stockholder and the firm under the new capital structure:

	Payoff to Stockholder's after Restucturing		
Components	1	2	3
Capital Gains	$(250)	$ (500)	$ (750)
Dividends	$ 500	$ 500	$ 500
∆ Stockholer's Equity	$ 250	$ -	$ (250)

Outcome 1:

- Yud, LLC should restructure the firm because the stockholders would gain $250
- The price of the stock declines by $250 to $750, but holder's will receive $500 in dividends
- The value of the firm increases to $1,250

Outcome 2:

- Restructuring would not affect the stockholders' interest because the net gain to stockholders in this case is zero
- The value of the firm is unchanged

Outcome 3

- Yud, LLC should not restructure the firm because the stockholders would expect a $250 loss
- The stock price falls by $750 to $250 and they receive $500 in dividends
- Stockholder's net loss is $250, and the value of the firm would change by -$200

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- ***Capital Structure***
  - ***The Business Debt to Equity Ratio Decisions***
    - ✓ Maximizing Firm Value versus Maximizing Stockholder Interests
      - Debt and Firm Value

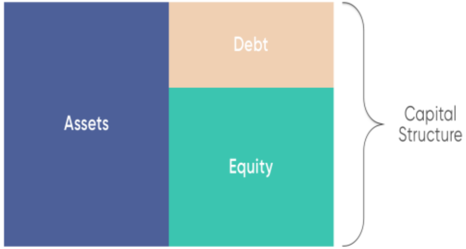
        Yud, LLC should borrow $500 if Outcome I is expected, and debt should be added to the capital structure

Capital structure producing the highest firm value is the one that maximizes shareholder wealth

Class 13

- Capital Structure

- Optimal Capital Structure
  - ✓ Companies use equity and debt capital for making acquisitions, other investments and conducting business operations. Managers usually balance debt and equity to find out the perfect capital structure
  - ✓ Debt financing offers the lowest cost of capital due to its tax deductibility, but too much debt poses a financial risk to shareholders and return on equity they require.
  - ✓ Companies should define the optimal structure, where the marginal benefit of debt will be equal to the marginal cost
  - ✓ To find the best capital structure for a particular business, the company can either issue more equity or debt, and the new acquired capital can be used for investing in other assets or repurchasing outstanding equity/debt as a form of recapitalization
  - ✓ Capital structure can differ in different industries - the mining industry has highly volatile cash flows therefore is not very suitable for debt, and insurance sector use great amounts of leverage and their structure presupposes huge amounts of debt



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- Capital Structure

- Optimal Capital Structure – All Equity
  - Scenario III equity shareholders get maximum return
  - More debt brings more income for owners in the capital structure until Rate of Earning of Capital (ROI) > Rate of Interest charged on Debt

	Scenarios		
	I	II	III
Equity Capital	$ 5,000,000	$ 4,000,000	$ 3,000,000
EBIT	$ 700,000	$ 700,000	$ 700,000
Interest	$ -	$ 100,000	$ 200,000
Earnings Before Taxes	$ 700,000	$ 600,000	$ 500,000
Taxes (30%)	$ 210,000	$ 180,000	$ 150,000
Net Income	$ 490,000	$ 420,000	$ 350,000
No. Shares Outstanding	500,000	400,000	300,000
EPS	$ 0.98	$ 1.05	$ 1.17
ROI	14.00%	17.50%	23.33%

Scenario II has the highest ROI

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- Capital Structure

- Factors Affecting Target Capital Structure
  - Cash Flow Position: The decision related to composition of capital structure also depends upon the ability of business to generate enough cash flow (bondholder's, dividends, or interests)
  - Cover some financial ratio requirements like Interest Coverage Ratio (ICR) or Debt Ratios
  - Return on Investment requirements: If ROI > Rate of Interest paid
  - Cost of Debt : If firm can arrange borrowed fund at low rate of interest then it will prefer more of debt as compared to equity
  - Tax Rate: High tax rate makes debt financing beneficial
  - Cost of Equity
  - Floatation Costs: Cost involved in the issue of shares or debentures.
  - Risks consideration
  - Flexibility: Excess of debt may restrict the firm's capacity to borrow further
  - Control of the business: The higher use of equity financing gives away company control .
  - Regulatory Framework
  - The General Stock Market Condition:
  - Capital Structure of similar Companies:

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- Capital Structure

- Capital Structure and Corporate Taxes - Considerations

Taxes affect the use of interest-paying debt
Increases in corporate tax rates lead to increases in leverage; increases in personal taxes on interest income decrease leverage; and increases in personal taxes on dividend income increase leverage
Leverage changes are stronger among corporate taxpayers, dividend-paying companies, and companies that have a low proportion of institutional investors

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- Managers should choose the capital structure that they believe will have the highest firm value because this capital structure will be most beneficial to the firm’s stockholders

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- Capital Structure / Financing Decisions

- The Concept of Capital Structure: Financing the Firm’s Operations
- Factors Affecting Target Capital Structure
- Capital Structure and Corporate Taxes - Considerations

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- *Capital Structure*
  - ***The Business Debt to Equity Ratio Decisions***
    - ✓ Financial Leverage and Firm Value: Determining that optimal capital structure
      - Example:

Eastern Corporation currently is unleveraged, and the firm is considering issuing debt to buy back some of its equity

Proposed Capital Structure

	Capital Structure	
	Current	Proposed
Assets	$ 8,000	$ 8,000
Debt	$ -	$ 4,000
Equity	$ 8,000	$ 4,000
Interest Rate	10%	10%
Mkt Value/Share	$ 20	$ 20
No. shares outstanding	400	200

Effect of economic conditions on EPS Current Capital Structure: No Debt

	Scenarios		
	Recession	Expected	Expansion
ROA	5%	15%	25%
Earnings	$ 400	$ 1,200	$ 2,000
ROE	5%	15%	25%
EPS	$ 1.00	$ 3.00	$ 5.00

Effect of economic conditions on EPS Proposed Capital Structure: Debt $4,000

	Scenarios		
	Recession	Expected	Expansion
ROA	5%	15%	25%
Earnings Before Interest	$ 400	$ 1,200	$ 2,000
Interest	$ 400	$ 400	$ 400
Earnings After Interest	$ -	$ 800	$ 1,600
ROE	0%	20%	40%
EPS	$ -	$ 4.00	$ 8.00

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