Example: Disney California Adventure – The 2008 judgment call

- Disney opened the Disney California Adventure (DCA) Park in 2001, at a cost of \$1.5 billion, with a mix of roller coaster rides and movie nostalgia. Disney expected about 60% of its visitors to Disneyland to come across to DCA and generate about \$100 million in annual after-cash flows for the firm.
- By 2008, DCA had not performed up to expectations. Of the 15 million people who came to Disneyland in 2007, only 6 million visited California Adventure, and the cash flow averaged out to only \$ 50 million between 2001 and 2007.
- In early 2008, Disney faced three choices:
 - Shut down California Adventure and try to recover whatever it can of its initial investment. It is estimated that the firm recover about \$ 500 million of its investment.
 - Continue with the status quo, recognizing that future cash flows will be closer to the actual values (\$ 50 million) than the original projections.
 - Invest about \$ 600 million to expand and modify the park, with the intent of increasing the number of attractions for families with children, is expected to increase the percentage of Disneyland visitors who come to DCA from 40% to 60% and increase the annual after tax cash flow by 60% (from \$ 50 million to \$ 80 million) at the park.

DCA: Evaluating the alternatives...

 Continuing Operation: Assuming the current after-tax cash flow of \$ 50 million will continue in perpetuity, growing at the inflation rate of 2% and discounting back at the theme park cost of capital in 2008 of 6.62% yields a value for continuing with the status quo

Value of DCA =
$$\frac{\text{Expected Cash Flow next year}}{(\text{Cost of capital - g})} = \frac{50(1.02)}{(.0662 - .02)} = \$1.103 \text{ billion}$$

 <u>Abandonment</u>: Abandoning this investment currently would allow Disney to recover only \$ 500 million of its original investment.

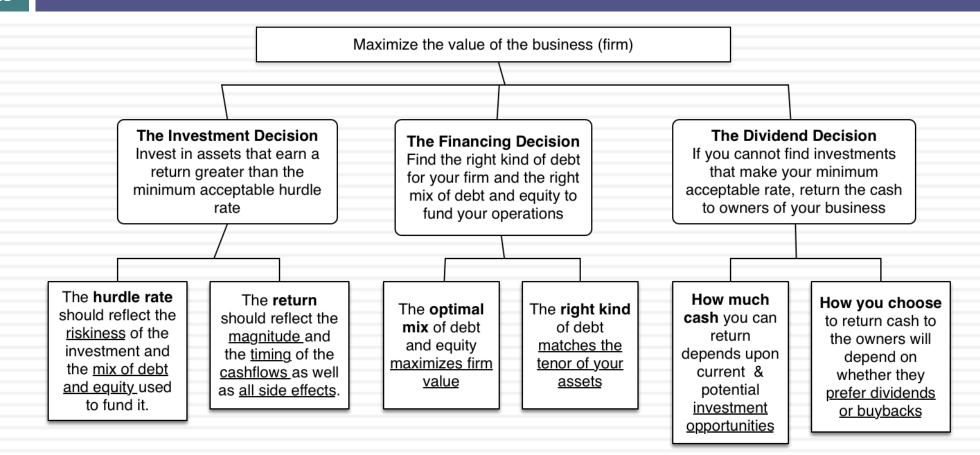
Abandonment value of DCA = \$ 500 million

<u>Expansion</u>: The up-front cost of \$ 600 million will lead to more visitors in the park and an increase in the existing cash flows from \$ 50 to \$ 80 million.

Value of CF from expansion =
$$\frac{\text{Increase in CF next year}}{(\text{Cost of capital - g})} = \frac{30(1.02)}{(.0662 - .02)} = \$662 \text{ million}$$

First Principles

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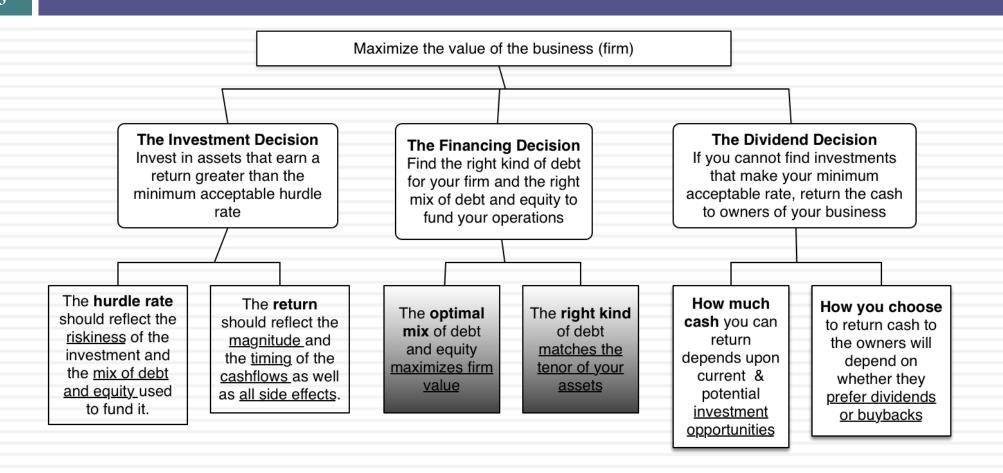


CORPORATE FINANCE
LECTURE NOTE PACKET 2
CAPITAL STRUCTURE, DIVIDEND
POLICY AND VALUATION

Aswath Damodaran

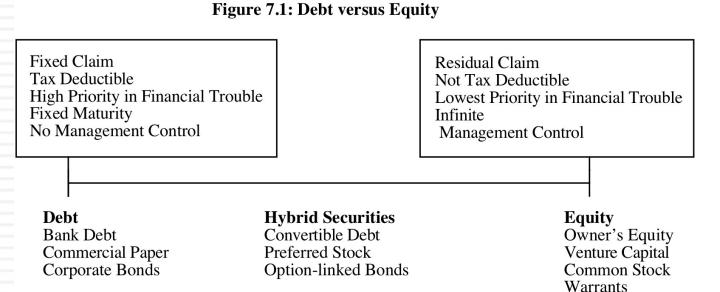
CAPITAL STRUCTURE: THE CHOICES AND THE TRADE OFF

"Neither a borrower nor a lender be"
Someone who obviously hated this part of corporate finance

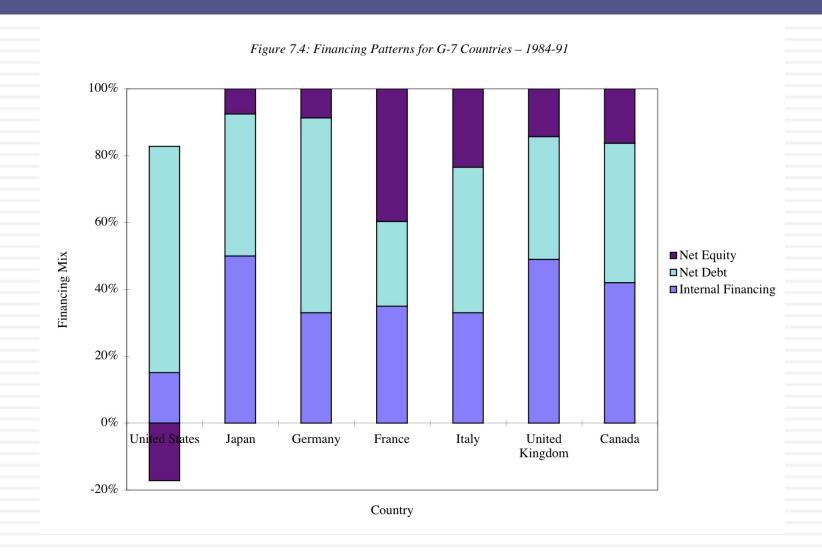


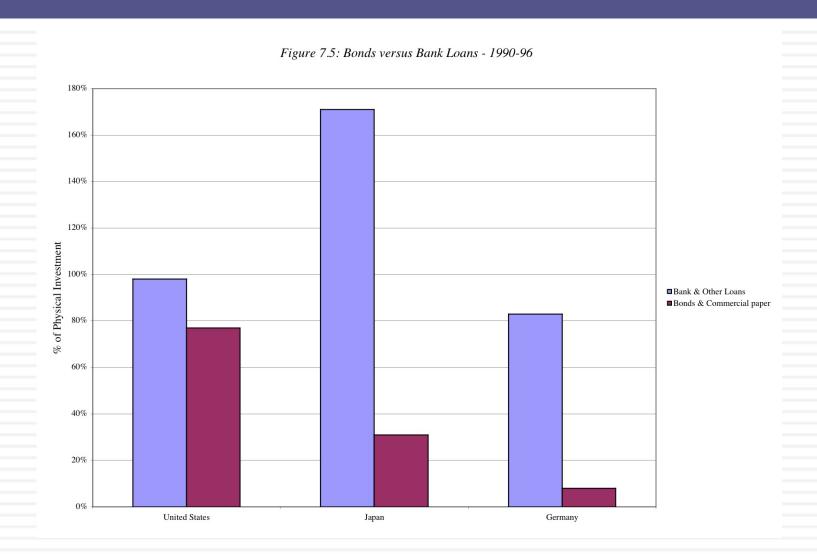
The Choices in Financing

- There are only two ways in which a business can raise money.
 - The first is debt. The essence of debt is that you promise to make fixed payments in the future (interest payments and repaying principal). If you fail to make those payments, you lose control of your business.
 - The other is equity. With equity, you do get whatever cash flows are left over after you have made debt payments.



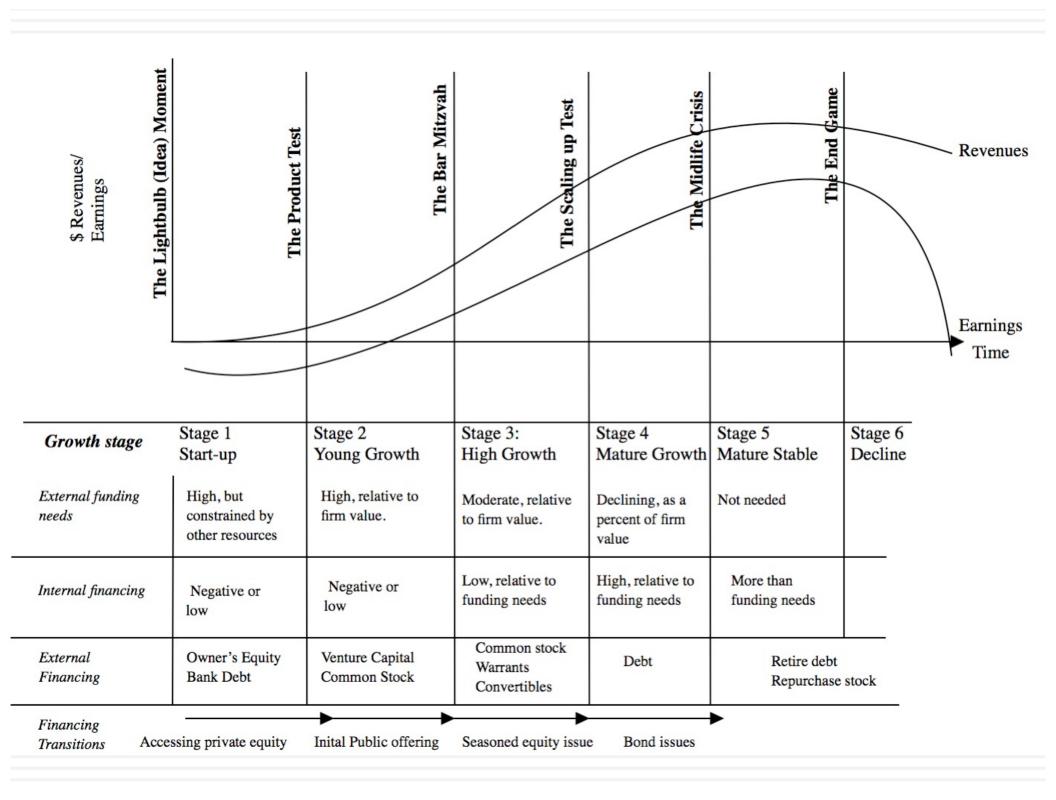
Global Patterns in Financing...





Assessing the existing financing choices: Disney, Vale, Tata Motors, Baidu & Bookscape

	Disney	Vale	Tata Motors	Baidu
BV of Interest bearing Debt	\$14,288	\$48,469	535,914₹	¥17,844
MV of Interest bearing Debt	\$13,028	\$41,143	477,268₹	¥15,403
Lease Debt	\$2,933	\$1,248	0.00₹	¥3,051
Type of Debt				
Bank Debt	7.93%	59.97%	62.26%	100.00%
Bonds/Notes	92.07%	40.03%	37.74%	0.00%
Debt Maturity				
<1 year	13.04%	6.08%	0.78%	1.98%
1- 5 years	48.93%	23.12%	30.24%	68.62%
5-10 years	20.31%	29.44%	57.90%	29.41%
10-20 years	4.49%	3.00%	10.18%	0.00%
> 20 years	13.24%	38.37%	0.90%	0.00%
Currency for debt				
Debt in domestic currency	94.51%	34.52%	70.56%	17.90%
Debt in foreign currency	5.49%	65.48%	29.44%	82.10%
Fixed versus Floating rate debt				
Fixed rate debt	94.33%	100.00%	100.00%	94.63%
Floating rate debt	5.67%	0.00%	0.00%	5.37%



The Transitional Phases...

- The transitions that we see at firms from fully owned private businesses to venture capital, from private to public and subsequent seasoned offerings are all motivated primarily by the need for capital.
- In each transition, though, there are costs incurred by the existing owners:
 - When venture capitalists enter the firm, they will demand their fair share and more of the ownership of the firm to provide equity.
 - When a firm decides to go public, it has to trade off the greater access to capital markets against the increased disclosure requirements (that emanate from being publicly lists), loss of control and the transactions costs of going public.
 - When making seasoned offerings, firms have to consider issuance costs while managing their relations with equity research analysts and rat

Measuring a firm's financing mix ...

- The simplest measure of how much debt and equity a firm is using currently is to look at the proportion of debt in the total financing. This ratio is called the debt to capital ratio:
 - Debt to Capital Ratio = Debt / (Debt + Equity)
- Debt includes all interest bearing liabilities, short term as well as long term. It should also include other commitments that meet the criteria for debt: contractually pre-set payments that have to be made, no matter what the firm's financial standing.
- Equity can be defined either in accounting terms (as book value of equity) or in market value terms (based upon the current price). The resulting debt ratios can be very different.

The Financing Mix Question

- In deciding to raise financing for a business, is there an optimal mix of debt and equity?
 - If yes, what is the trade off that lets us determine this optimal mix?
 - What are the benefits of using debt instead of equity?
 - What are the costs of using debt instead of equity?
 - If not, why not?

The Illusory Benefits of Debt

- At first sight, the benefit of debt seems obvious. The cost of debt is lower than the cost of equity.
- That benefit is an illusion, though, because debt is cheaper than equity for a simple reason. The lender gets both first claim on the cash flows and a contractually pre-set cash flow. The equity investor is last in line and has to demand a higher rate of return than the lender does.
- By borrowing money at a lower rate, you are not making a business more valuable, but just moving the risk around.

Costs and Benefits of Debt

Benefits of Debt

- Tax Benefits: The tax code is tilted in favor of debt, with interest payments being tax deductible in most parts of the world, while cash flows to equity are not.
- Adds discipline to management: When managers are sloppy in their project choices, borrowing money may make them less so.

Costs of Debt

- Bankruptcy Costs: Borrowing money will increase your expected probability and cost of bankruptcy.
- Agency Costs: What's good for stockholders is not always what's good for lenders and that creates friction and costs.
- Loss of Future Flexibility: Using up debt capacity today will mean that you will not be able to draw on it in the future.

Tax Benefits of Debt

- When you borrow money, you are allowed to deduct interest expenses from your income to arrive at taxable income. This reduces your taxes. When you use equity, you are not allowed to deduct payments to equity (such as dividends) to arrive at taxable income.
- The dollar tax benefit from the interest payment in any year is a function of your tax rate and the interest payment:
 - Tax benefit each year = Tax Rate * Interest Payment
 The caveat is that you need to have the income to cover interest payments to get this tax benefit.
- Proposition 1: Other things being equal, the higher the marginal tax rate of a business, the more debt it will have in its capital structure.





The Effects of Taxes

- You are comparing the debt ratios of real estate corporations, which pay the corporate tax rate, and real estate investment trusts, which are not taxed, but are required to pay 95% of their earnings as dividends to their stockholders. Which of these two groups would you expect to have the higher debt ratios?
- a. The real estate corporations
- b. The real estate investment trusts
- c. Cannot tell, without more information

Tax Law and Debt

- At the end of 2017, the United States had one of the highest marginal corporate tax rates in the world (about 40%). Most companies had effective tax rates well below this, with the average effective tax rate closers to 22%. Which tax rate drives the tax benefit of debt and why?
 - a. Marginal tax rates
 - b. Effective tax rates
- At the end of 2017, a tax reform act passed Congress and became law, lowering the federal corporate tax rate from 36% to 21%? Holding all else constant, what should you expect to see happen to debt at US companies?

Debt adds discipline to management

- If you are managers of a firm with no debt, and you generate high income and cash flows each year, you tend to become complacent. The complacency can lead to inefficiency and investing in poor projects. There is little or no cost borne by the managers
- Forcing such a firm to borrow money can be an antidote to the complacency. The managers now have to ensure that the investments they make will earn at least enough return to cover the interest expenses. The cost of not doing so is bankruptcy and the loss of such a job.





Debt and Discipline

- Assume that you buy into this argument that debt adds discipline to management. Which of the following types of companies will most benefit from debt adding this discipline?
- Conservatively financed (very little debt), privately owned businesses
- Conservatively financed, publicly traded companies, with stocks held by millions of investors, none of whom hold a large percent of the stock.
- Conservatively financed, publicly traded companies, with an activist and primarily institutional holding.

Bankruptcy Cost

- □ The expected bankruptcy cost is a function of two variables-
 - the probability of bankruptcy, which will depend upon how uncertain you are about future cash flows
 - the cost of going bankrupt
 - direct costs: Legal and other Deadweight Costs
 - indirect costs: Costs arising because people perceive you to be in financial trouble
- Proposition 2: Firms with more volatile earnings and cash flows will have higher probabilities of bankruptcy at any given level of debt and for any given level of earnings.
- Proposition 3: Other things being equal, the greater the indirect bankruptcy cost, the less debt the firm can afford to use for any given level of debt.



Debt & Bankruptcy Cost

- Rank the following companies on the magnitude of bankruptcy costs from most to least, taking into account both explicit and implicit costs:
- a. A Grocery Store
- b. An Airplane Manufacturer
- High Technology company