

FIN325 - Homework 1
Due : September 28

Problem 1 (20pts)

A corporation has the option to prepay (call) a bond with 4 years to maturity, \$50M in remaining principal, a 10% yearly rate, fixed and monthly payments. It can replace this bond with a 4 year bond with the same remaining payment structure. Prepayment penalties are \$750,000. How low must the yearly rate on the new bond be to justify calling the old bond (ignoring the option value of waiting to refi)?

Problem 2 (30pts)

Company XYZ just reported the following income statement for the past year and balance sheet:

Income statement		Assets		Liabilities and equity	
Sales	5M	Cash	2M	Current liabilities	2M
COGS	2M	Other current assets	5M	LT liabilities	10M
SG&A	1M	PP&E	10M	Preferred equity	2M
Depreciation	2M	Intangible Assets	2M	Common equity	5M
Net Income before taxes	0M				
Taxes on net income	0M				
Net Income	0M				

1. Calculate and report the company's EBIT and EBITDA
2. The company is trading at a trailing EBITDA multiple of 10. The market value of its liabilities equals their book value. What is the market value of its common equity?

Problem 3 (50pts)

This problem's goal is to compare and contrast the EBITDA multiples of Facebook (FB) and Boston Properties (BXP).

1. Report the most recent EBITDA multiple computed by Yahoo finance for both companies
2. Calculate EBITDA for the most recent four quarters for both companies based on the two companies' annual report. Report the details of your calculations.
3. Calculate enterprise value for both companies and the associated EBITDA multiple. Compare to Yahoo's estimate of the same multiple.
4. Provide plausible explanations for why these very different corporations trade at similar (and high) EBITDA multiple.