Quiz 3: Valuation

Answer all questions and show necessary work. Please be brief. This is an open book, open notes exam.

1. You have been asked to price Papillon Bank, a small privately-owned bank, planning a public offering, and have collected the following information:

	Papillon Bank	*Average French Bank*
Price to Book	NA	1.5
Return on Equity	15%	12%
Expected Growth Rate (in perpetuity)	3%	3%

If the average bank is fairly priced, given its fundamentals, and Papillon Bank is expected to have net income of $150 million next year, estimate how much Papillon's equity value will be, if fairly priced. (You can assume that Papillon is as risky as the average bank.) (3 points)

2. Collor Media is a young, growing media company and you are trying to price its shares today. You have been given the following information on the company:

	Current	*In year 5*
Revenue	$ 100.00	$ 1,000.00
After-tax Operating Income	$ (20.00)	$ 150.00
Book Debt	$ 150.00	$ 400.00
Book Equity	$ (30.00)	$ 600.00
Cash	$ 20.00	$ 200.00

The company is expected to have a cost of capital of 15% for the next 5 years, but its cost of capital will drop to 9% thereafter and its revenues will grow at 3% a year forever after yer 5, in perpetuity. You have run a regression of EV/Sales across media companies today and have obtained the following output:
EV/Sales = 0.50 + 12.00 (Return on Invested Capital) + 8.00 (Expected revenues growth rate in the next 5 years)
All percentages are entered as decimals in the regression; 20% would be 0.20)
Assuming that the company has 200 million shares outstanding today, estimate the price per share for the stock today. (You can ignore the effect of intermediate cash flows) (3 points)

3. You have been asked to review the valuation of a privately-owned family business for an all-equity funded transaction. The analyst who valued the business arrived at a value of $200 million, based upon a cost of equity of 18% and an expected growth rate of 3% a year forever. She has made two mistakes:
   - The FCFF was computed without considering the salaries that would need to be paid to family members who work at the firm. You estimate that these salaries would amount to $2.5 million next year, before taxes.
   - The potential buyer is a publicly traded company, whose investors are diversified. You believe that only 30% of the risk in this company is market risk.

   If the risk free rate today is 3%, the equity risk premium is 6% and the corporate tax rate is 20%, estimate the fair value for the firm in this transaction.
   (4 points)