

2. FinSafe is a publicly traded bank, with 300 million shares outstanding, trading at \$20/share. The book value of equity in the company is \$4 billion and the expected net income next year is \$500 million. You can assume that book value of equity is a good measure of regulatory capital in the bank. You have run a regression of price to book ratios at banks against return on equity and regulatory capital as a percent of risk adjusted assets and arrived at the following:

Price to Book ratio = $0.145 + 7.00 \text{ Return on Equity} + 6.00 \text{ (Regulatory Capital / Risk Adjusted Assets)}$

[Thus, if your ROE is equal to 10% and your regulatory capital is 5% of risk adjusted assets, your price to book = $0.145 + 7.00 (.10) + 6.00 (.05) = 1.145$]

- a. If you believe that FinSafe is correctly priced, relative to other banks, what is the value of the risk adjusted assets at the bank? (1.5 points)

- b. Now assume that FinSafe expects to sell off its mortgage banking division, which has expected net income of \$200 million next year and a current book value of equity of \$2 billion. You expect to be able to sell the division at book value and pay the cash (\$2 billion) out as dividends. If the mortgage banking division accounts for 60% of the risk-adjusted assets in the bank, estimate the price per share after the sale. (2.5 points)

3. LookBack Inc. is a privately owned paper company with net debt of zero and an expected after-tax cash flow of \$10 million next year, anticipated to grow 3% a year in perpetuity. You are the owner of the firm and have been approached by a venture capitalist, offering you \$25 million for a 25% stake in the firm. You know that the venture capitalist has holdings primarily in manufacturing companies and that the correlation of the VC's portfolio with the market is 0.60. If you believe that the VC's offer is a fair one, estimate what the company would be worth if you decided to go public instead. (The risk free rate is 3% and the market equity risk premium is 5%) (3 points)