Quiz 1: Valuation

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

1. Ulysses Inc., a publicly traded toy manufacturing company, is considering investing in a 5-year joint venture with Lowie Inc, a movie company, to produce animated movies. You have been provided with the following information on the cost of equity and capital of the two companies:

	Ulysses Inc.	Lowie Inc.
Cost of equity	9%	12%
Cost of capital	7.50%	10%

The following are the projected cash flows for Ulysses' share of the joint venture:

	Time period (years)					
	0	1	2	3	4	5
Revenues		\$100	\$110	\$125	\$140	\$160
- COGS (includes depreciation)		\$40	\$44	\$50	\$56	\$64
Operating income		\$60	\$66	\$75	\$84	\$96
- Taxes		\$18	\$20	\$23	\$25	\$29
After-tax operating income		\$42	\$46	\$53	\$59	\$67
- (Cap ex – Depreciation)	\$80	\$0	\$0	\$0	\$0	\$0
- Change in working capital		\$5	\$5	\$5	\$5	\$5
Cash flow	-\$80	\$37	\$41	\$48	\$54	\$62

Estimate the value of the joint venture to Ulysses. (Provide your rationale for the discount rate that you use) (3 points)

2. Lucas Media is a company that is incorporated in Brazil but it operates in three countries: Brazil, the United States and Portugal. You have information on the three countries (and what the average company generates in revenues in that country):

Country	10-year government bond rate	Sovereign Rating	Sovereign default spread	Standard deviation of equity index	Standard deviation of gov't bond	Average company: % of revenues
Brazil	8% (in Reais)	Baa1	1.50%	25%	20%	80%
US	2% (in US $)	Aaa	0%	20%	15%	75%
Portugal	7.5% (in Euros)	Caa	6.00%	30%	20%	60%

The implied equity risk premium for the US is 7% but cannot be computed for Brazil and Portugal. The firm is in two businesses: movies and TV broadcasting, with details below (EV: Enterprise value):

	Revenues in country (millions)			Global sector average	
Business	Brazil	US	Portugal	Unlevered Beta	EV/Sales ratio
Movies	$2.00	$1.40	$0.60	1.2	1.00
TV Broadcasting	$0.50	$0.10	$0.40	0.9	3.00

If the firm has no debt outstanding, estimate the **cost of equity for the firm in nominal Brazilian Reais for its Portuguese operations**. (4 points)

3. You have been asked to review the numbers for TalkTones, a social media company that is planning to go public. The company reported the following revenues and operating income (in millions):

	Most recent	1 year ago	2 years ago	3 years ago
Revenues	$1,000	$700	$400	$200
Pre-tax Operating Income	-$200	-$300	-$200	-$100

The cost of acquiring new customers accounted for half of all operating expenses in each of the period and the company offers strong evidence that acquired customers stay on as customers for three years. If you capitalize customer acquisition costs and the corporate tax rate is 40%, estimate the corrected pre-tax operating income for the company for the most recent year. (3 points)