Quiz 1: Valuation

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

1. Romero Inc. is a Brazil-based publicly traded company in the chemical business that is considering buying a Dietz Inc, a privately held German chemical company. You have been provided with the following expected cash flow for next year, in Euros, for Dietz:

	Most recent year	*Next year*
Revenues	1,000.0€	1,015.0€
Operating Income after taxes	200.0€	203.0€
- Reinvestment	80.0€	81.2€
FCFF	120.0€	121.8€

You have also been told that Dietz gets all of its revenues in Germany and that the expected growth rate in this cash flow is 1.5% (in Euro terms) in perpetuity. While you don't have a cost of capital for Dietz, you do know that neither Romero nor Dietz has any debt and that Romero's cost of equity, in nominal $R (Brazilian Reais) terms, is 20%. The expected inflation rate is 8% in nominal $R and 1% in Euros and the country risk premium for Brazil is 3%; Germany has no country risk. Estimate the value of Dietz. (3 points)

2. Slavic Air is an East European airline that is growing rapidly and you have been asked to compute its cost of capital. The company derives its revenues in three countries and has two businesses: passenger and freight traffic. The breakdown of revenues in the most recent year is in the table below, with information about government bond rates in the three countries.

	Currency	*Govt Bond Rate (in local currency)*	*Govt Bond Rate (in Euros)*	*Passenger Revenues (in millions)*	*Freight Revenues (in millions)*
Poland	Zloty	6.00%	2.25%	PLN 500.00	PLN 250.00
Hungary	Forint	5.00%	2.50%	PLN 250.00	PLN 250.00
Germany	Euros	1.00%	1.00%	PLN 250.00	PLN 500.00

While value is proportional to revenues in both businesses, the passenger traffic business is more risky, with an unlevered beta of 1.25, than the freight traffic business, with an unlevered beta of 0.75. Slavic has a market capitalization of $1 billion, debt outstanding of $500 million and faces a marginal tax rate of 25%.

a. Estimate the levered beta for Slavic Air. (1 point)

b. Estimate the <u>cost of equity in Euros</u> for Slavic Air. (The mature market equity risk premium is 6% and Germany is a mature market with a Aaa rating. You can assume that equity is 1.5 times more volatile than government bonds in both Poland and Hungary) (2 points)

c. Estimate the after-tax cost of debt (in euros) for Slavic Air. You don't have a bond rating for Slavic Air but you have computed a synthetic rating of Baa3 for the company, with a default spread of 2%. (1 point)

3. Taco Shell Inc. is a restaurant with operating lease commitments of $30 million a year for the next 8 years. It has a cost of capital of 8%, a cost of equity of 10%, a pre-tax cost of debt of 4% and an after-tax cost of debt of 2.5%. Which of the following is the debt value of operating leases? (1 point)
   i. $ 160.05 million
   ii. $ 172.40 million
   iii. $ 201.98 million
   iv. $ 215.10 million
   v. $ 240.00 million

4. TeleMedia is a technology firm that reported an operating loss of $15 million in the most recent year (just ended), after R&D expenses of $100 million. If R&D has a 3-year life and the company's R&D expenses in the last three years have been $30 million (3 years ago), $ 60 million (2 years ago) and $90 million (last year) respectively, what is the "corrected" operating income that TeleMedia would have reported if R&D had been capitalized? (2 points)