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**Question 3: Equity Valuation and Analysis****(27 points)**

IT Corporation was established just a year ago and is planning a EUR 5 million equity financing so that it can begin fully-fledged operations. Mr. Young, a venture capitalist, is considering purchasing newly issued shares of IT and then selling his equity when the company goes public. According to the business plan submitted by the IT management team, IT Corporation plans to go public in five years time with net income of EUR 20 million. It anticipates a price earnings ratio (PER) at the time of the IPO of 30, which is the industry average. IT currently has 1 million shares issued and outstanding and no plans for further stock issues or dividend payments until the IPO. Mr. Young thinks that the required rate of return on IT equity should be 50%.

- a) Calculate the total market capitalization (theoretical price) after the equity financing of IT from Mr. Young's perspective. (6 points)
- b) Calculate the share price at which Mr. Young should purchase new shares of IT. (6 points)
- c) It is common for venture capitalists to employ extremely high required rates of return of between 40% and 100% when making equity investments in new startups. Discuss two reasons why privately-held startups are required to have far higher rates of return than publicly-traded companies. (4 points)
- d) "Real options" are the options, inherent in corporate management and business operations, to modify, cancel and defer investment projects as conditions warrant. It is possible to use option valuation theory to calculate the impact of this inherent flexibility in corporate management on the value of an investment project or a company as a whole.
  - d1) Mr. Young is considering applying the "real option" approach to evaluate venture capital investments. Discuss why the real option approach is considered to be a suitable evaluation method for venture capital investments. (5 points)
  - d2) Briefly explain, in general, under which circumstances it might be better to use real options to value projects and list three examples you can think of. (6 points)