**Homework for Lecture 1-3**

**Question 1:**

What are the advantages of paying executives in shares vs a fixed salary? What are the advantages of paying executives in options rather than shares? What are the problems?

**Question 2:**

a) Establish the Modigliani-Miller theorem! What does it state in its general form?

What are its implications for dividend policies?

5 marks

b) What is the difficulty of explaining the existence of debt covenants and seniority of debt within a Modigliani-Miller world? Refer to Tirole chapter 2.3.

**Problem 1:** Referring to the slides on the Neutrality of the Pay-Out Strategy in lecture 3, show that a decrease in the number of shares of a company must necessarily result in an increase in the price of the shares! Hint: the price per share is V/n.

**Problem 2:** A company has 1,000 outstanding shares which trade at a value of $1. It issues 1,000 new shares in a rights offer: Existing shareholders have the right to purchase 1 new share for each old share they possess at the price of $0.50

a) What is the share price after the offer if investors evaluate each dollar invested in the firm equally valuable before and after the offer (i.e. if there is no asymmetric information problem)?

4 marks

b) Rights to purchase new shares are traded in the market. What is the value of the right to purchase one new share?

3 marks

c) An investor owns 100 shares. Demonstrate that the investor is indifferent between exercising the right and selling the right. In particular, what is his wealth, i.e. the value of his portfolio increased or decreased by the final value of any financial transaction?

d) What is the empirical evidence on the effect of seasoned equity offerings?