

Economics 4021, Spring 2013, 2nd Mid-Term Exam

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March 27, 2013

Do both questions in 70 minutes. Open books, notes, and laptops.

Question 1 (50%)

Company X announces a dividend policy that pays \$1 per share in odd-numbered years and \$2 per share in even numbered years. The relevant rate of return for companies like X is 5% per year.

(a) Suppose all investors are rational people who know and believe the announced dividend policy. What is the share price in odd years? In even years?

(b) Next assume that all investors are myopic people who think (wrongly, as it turns out) that all dividend changes are permanent. Find the share prices in odd and even years.

(c) Now suppose that some investors are myopic and others are rational. Which investor type would be selling company X stock in odd years? In even years?

Question 2 (50%)

Study growth patterns in a Solow-type economy with zero population growth, 100% depreciation, 20% saving rate and technology $Y = 10K^\alpha N^{1-\alpha}$ with $\alpha = 1/2$.

(a) Suppose subsistence income is zero. Find the steady-state values of capital per worker and income per worker.

(b) Now assume that subsistence income is 2.5 units and that people save 20% of their income in excess of subsistence. Calculate the steady state values of capital per worker and income per worker.

(c) Describe the growth path of an economy that starts with initial income per worker $y_0 = 10$ units. What if $y_0 = 5$ units?