

ECON 300
Advanced Macroeconomics
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Final Exam

1. (20 Points-Two-period Partial Equilibrium) Suppose that Ahmet has income of $Y_1 = 900$ when he is young and $Y_2 = 945$ when he is old. The real interest rate is $r = 0.05$. The overall utility function of Ahmet is $U = \frac{c_1^{1-\theta} - 1}{1-\theta} + \left(\frac{1}{1+\rho}\right) \frac{c_2^{1-\theta} - 1}{1-\theta}$, where $\theta = 0.5$ and $\rho = 0.05$. Find the optimal values of c_1 , c_2 and s .

2. (20 Points) Suppose that firms in Turkey are become infected with *optimism* due to increase in global liquidity (e.g., US Fed prints US Dollars jauntily), and they expect that uncertainty will be *lower* in the *current period*.

(a) Determine how does this affect current macroeconomic variables in a *Monetary Intertemporal model*? (=what will happen to current values of Y , C , I , N , M^s , w , and APL)

(b) Following the shock in (a), suppose now that the monetary authority wants to **stabilize the price level** in the face of decreasing uncertainty (*presume that the impact of the change in Y on money demand dominates the impact of the change in real interest rate on money demand*). Determine what it should do and how will it affect current macroeconomic variables (i.e., Y , C , I , N , M^s , w , and APL ?)

Hint: Do not forget to **illustrate** and **discuss** equilibrium effects and **verify** how this fits the stylized facts of the business cycle, whenever applies.

3. (20 Points) Suppose that there was a very strong earthquake in the North-West of Turkey and 20% of Turkey's physical capital stock is lost. In return, policy makers increased money supply aiming to stimulate economy and to recover from the negative effects of the capital loss. Evaluate the macroeconomic implications of the physical shock and the monetary policy together in the *Monetary Intertemporal Framework*. Do you expect that the government policy would achieve what it aims for? Why or Why not? Do not forget to **illustrate** and **discuss** equilibrium effects and **verify** how this fits the stylized facts of the business cycle.

4. (20 Points) How does a policy mix of an increase in *current* government purchases, anticipated to be temporary, together with a decrease in money supply affect current macroeconomic variables in a *Monetary Intertemporal Model*? (Presume that the impact of the change in Y on money demand dominates the impact of the change in real interest rate on money demand). Do you think that the policy mix makes sense? Why? Why not?

Hint: Do not forget to **illustrate** and **discuss** equilibrium effects and **verify** how this fits the stylized facts of the business cycle.

5. (20 Points) How does a decrease in the money supply affect macroeconomic variables in a *New Keynesian Model* (=show the non-neutrality of money)?

Hint: Do not forget to **illustrate** and **discuss** equilibrium effects and **verify** how does this fit the stylized facts of business cycle?