



College of Business Administration
Department of Economics
Aggregate Economic Conditions & Analysis
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ECO 6206-0001
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Assignment V

Due February 19, 2002

Question I:

a) Show rigorously - in the simple transactions model of money demand - that evenly spaced withdrawals are optimal. Note that previously, we assumed that withdrawals are made at equal intervals (every $1/T$ months). Now, they are not made at equal intervals. Solve for the case wherein $T=2$.

Hint: If there are only 2 withdrawals ($T=2$), then the total period can be divided into sub-periods of length σ and $1-\sigma$ (where the length of the overall period is normalized to equal 1.) Set up the total costs as a function of (among other things) σ , and then minimize with respect to σ .

b) Now try the same for $T=3$.

c) In class, the cost of each withdrawal was constant. If the cost of a withdrawal increased with the size of the withdrawal, i.e.,

$$\phi = \phi(W) \quad \phi'(W) > 0$$

where W is the size of the withdrawal. Explain intuitively, how this changes the solution for T^* . Find the optimal value for T^* .