Lecture 3 - Recommended Problems

François Geerolf

☆ Problem 7, Chapter 4

This problem examines the effect of introduction of ATMs and credit cards on money demand. For simplicity, let's examine a person's demand for money over a period of four days.

Suppose that before ATMs and credit cards, this person goes to the bank once at the beginning of each four-day period and withdraws from her savings account all the money she needs for four days. Assume that she needs $4 per day.

a. How much does this person withdraw each time she goes to the bank? Compute this person's oney holdings for days 1 through 4 (in the morning, before she needs any of the money she withdraws).

b. What is the amount of money this person holds, on average?

Suppose now that with the advent of ATMs, this person withdraws money once every two days.

c. Recompute your answer to part (a).

d. Recompute your answer to part (b).

Finally, with the advent of credit cards, this person pays for all her purchases using her card. She withdraws no money until the fourth day, when she withdraws the whole amount necessary to pay for her credit card purchases over the previous four days.

e. Recompute your answer to part a.

f. Recompute your answer to part b.

g. Based on your previous answers, what do you think has been the effect of ATMs and credit cards on money demand?