Exam # 1

2/23/2026

Answer the following questions. You can use a (1 page) notes sheet and a calculator (but no other devices).

Choose 5 questions to answer. Include at least either of question 5 or 7 in your selection. Your grade will be calculated as a percentage of the sum of possible points in your choice.

1. (20 points) FX transactions basics.

   (a) Your Canadian friend owes you USD 200. The current USD/CAD exchange rate is at 0.80. You are OK with being paid in CAD. How many CAD do you request from your friend?

   (b) If the JPY/EUR exchange rate is 132.00 JPY/EUR and it takes 40.00 THB (Thai Baht) to purchase one EUR, what is the price of a Baht expressed in Yen (i.e., JPY/THB rate)?

   (c) You observe the USD/EUR exchange rate at 1.23 today, while it was 1.40 several years ago. Which currency has appreciated, which has depreciated? By how much?

   (d) Last year, you invested USD 20,000 in a European Hedge Fund which is denominated in EUR. The fund's performance has been OK, with a return (in EUR) of +10%. But the USD/EUR exchange rate went from 1.3600 a year ago to 1.2850 USD/EUR today. If you sold your investment today, how many USD would you be able to collect?

   (e) Starbucks must pay KES 480,000,000 to its Kenyan coffee supplier. Citibank quotes Starbucks a bid and ask of 96.00–100.00 KES/USD. One is the price at which they buy and the other at which they sell the currency. They follow the "rip-off" rule which implies they use the most unfavorable price to Starbucks. Given this, what is the USD amount of the payment?

2. (15 points) UIP and CIP

   (a) What is a forward contract? What theory provides a formula for the forward rate of the home (h) currency per unit of foreign (f) currency? Provide the formula and define its variables

   (b) What theory provides a formula for the spot rate of the home (h) currency per unit of foreign (f) currency? Provide the formula and define its variables

   (c) Why do we say that one of the options is "covered" and the other is "uncovered"? to what type of risk is being covered and by which parity?

3. (15 points) Forward Contracts: Assume CIP holds.

   (a) You observe the following market conditions:

   $E_{t,CHF/USD} = 0.9534$ (Swiss francs per Dollar in period t)

   The 1-year USD interest rate is 1.20% p.a. (per year)
   The 1-year CHF interest rate is 0.35% p.a.

What is the 1-year forward rate between CHF/USD, $F_{t+1,CHF/USD}$?

(you can treat either location as home, but as the exchange rate given denotes the price of the Dollar, it may be convenient to treat the Switzerland as "home" and the US as "foreign". The "$t+1$" in the forward rate denotes that the rate is valid one period ahead from today, t)

(b) You observe the following market conditions:

$F_{t+1,JPY/USD} = 102.80$ (forward rate)

1-year USD interest rate = 0.8% p.a.
1-year JPY interest rate = 0.0% p.a.

What is the spot price of the USD in terms of JPY ($E_{t,JPY/USD}$)?

(c) You observe the following market conditions:

$E_{t,USD/GBP} = 1.42$, $F_{t+1,USD/GBP} = 1.38$
$E_{t,USD/CAD} = 0.78$, $F_{t+1,USD/CAD} = 0.83$

What is the forward rate for CAD/GBP, i.e., $F_{t+1,CAD/GBP}$?

4. (10 points) Consider the quantity theory of money with interest-sensitive liquidity demand: $L(i)$.

   What does the theory predict should happen to the nominal interest rate if real income increases? Assume that the central bank does not change the money supply and that prices are fixed. Explain your answer and provide a plot for that money market.

5. (20 points) Consider a world with two countries, home and foreign. Prices are sticky in the short run, but flexible in the long run. At time T there is a *permanent decrease in the home money supply*, assume nothing else changes.

   (a) What happens to $E_{h/f}$, the home-foreign spot exchange rate, in both the short and long- run? Explain your answer using whatever figures and equations you find suitable.

   (b) Is the short-run exchange rate $E_{h/f}$ above or below the expected long-run exchange rate? Will it stay this way forever? [Hint: think about overshooting]

6. (10 points) How would a fixed exchange rate regime help a country control inflation? Use at least one of the equations discussed in class in your answer.

7. (20 points) Consider a world with two countries, home and foreign. For the questions below, use the quantity theory of money with interest-sensitive liquidity demand. Assume that prices are flexible.

   The home country was holding a money supply growth at 5% per year. At time T, a *permanent* change of the money supply growth to 3% is announced. Nothing else changes.

   (a) By how much the interest rate changes at time T? explain your answer by using the model and parities discussed in class

   (b) Plot the paths of M_h, $E_{h/f}$, M_h/P_h, and P_h over time (with "time" on the x-axis)