

ECO 120: Global Macroeconomics
Week 3 Homework: Market for Currencies

Directions: Notice that all problems ask you for a descriptive answer in addition to performing a calculation or manipulating a graphical model. For full credit, make sure that you do both. You may print these sheets and put your answers in the space provided or you may use your own paper to write your answers.

When you have finished, scan or take pictures of your work, combine all images to a single PDF file, and upload your work as a single PDF file to the Canvas Assignment area. There are apps available for Apple and Android mobile devices that can create PDF documents using your device's camera, including the Apple iPhone's native *Notes* app (use the *scan document* feature) and *Adobe Scan* app available for Android and Apple mobile devices. There are also free online tools such as <https://online2pdf.com/> and <https://www.easypdfcloud.com/>.

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For problems 1, 2, and 3, read the scenario and do the following (in order):

- For each problem, draw both currency markets. Example: if you are asked a question on the exchange rate between U.S. Dollars and Euros, you should draw the market for U.S. Dollars and market for Euros. It is true that these two graphs are redundant, so every change in one market has a corresponding change in the other market.
- Make sure you correctly label each market, both axes in each market, and both the supply and demand curves in each market.
- Determine if the scenario cause a shift in the demand and/or supply curve for each currency. If so, answer which curve(s), and which direction.
- Draw the supply and demand curves in both markets with appropriate shifts.
- Label the original and new equilibrium exchange rate and quantities.
- What is the impact of the relative value of each currency? What is the impact on quantity of currency traded?

1. Indonesia's largest exports are commodities and energy sources, including palm oil, gold, and petroleum gas. Indonesia's largest trading partner is China. As global prices of commodities and energy declined in 2022, Chinese demand for these goods shifted away from Indonesia toward other countries. Describe and illustrate the impact on the exchange rate between the Chinese Yuan (CNY) and the Indonesia Rupiah (IDR).

2. Demand for crude oil in India increased throughout 2022. Oil exports in Iraq are 99% of its total exports and India is one of Iraq's largest trading partners. Describe and illustrate the impact of the increase in oil demand in India on the equilibrium exchange rate between Indian Rupee (INR) and Iraqi Dinars (IQD).

3. In March 2022, Russia increased interest rates by 10 percentage points, while interest rates in the Euro area did not change. Describe and illustrate the impact on the exchange rate between the Russian Ruble (RUB) and the Euro (EUR).

4. Suppose financial investors expect the U.S. Dollar to appreciate against the Euro over the next three months. Describe and illustrate the impact on the exchange rate between the U.S. Dollar (USD) and the Euro (EUR).

5. On February 3, 2023, the Euro (EUR) / United Kingdom Pound Sterling (GBP) exchange rate was $1 \text{ GBP} = 1.12 \text{ EUR}$.
- (a) Suppose a French person is buying a car in the United Kingdom for 42,000 GBP. What will be the price in Euros?
- (b) Suppose a British person is traveling in Spain, and hotel room costs 280 EUR. What is the cost in U.K. Pounds?
- (c) One year ago, on February 3, 2022, the exchange rate was $1 \text{ GBP} = 1.12 \text{ EUR}$. From February 2022 to February 2023, did the U.K. Pound Sterling appreciate or depreciate against the Euro? Did the Euro appreciate or depreciate against the U.K. Pound Sterling?