International economics (2025–2026)

Nikolas A. Müller-Plantenberg*

14 January 2026, 12.00

Surname: _____

First name: _____

ID or passport number: _____

Question	Points	Obtained
1	8	
2	8	
3	8	
4	8	
5	8	
Total	40	

Instructions

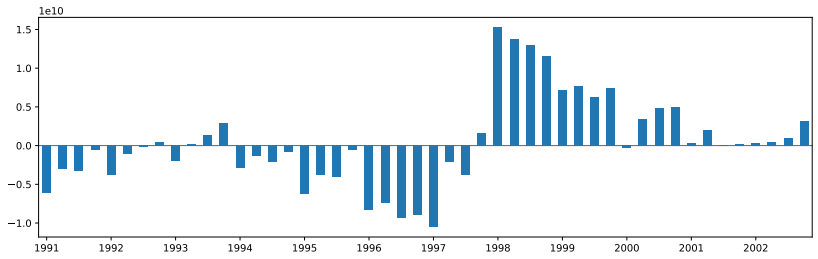
The exam consists of **five questions.**

In total, it is possible to obtain up to **40 points**.

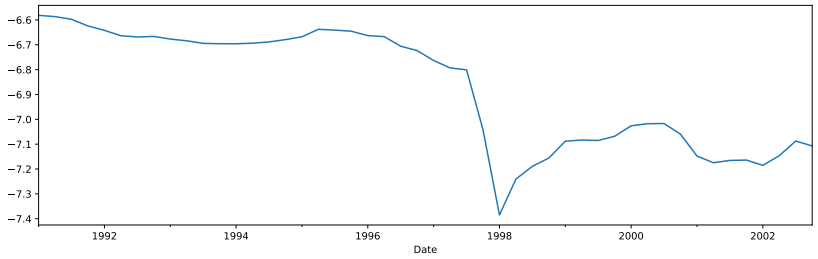
Duration of exam: **1 hour and 20 minutes** (= 2 minutes per point or 16 minutes per question).

Mobile phones must be **switched off** and placed **in your bag** before the exam begins.

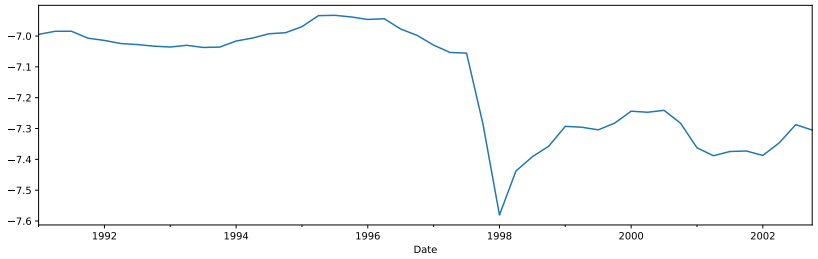
*E-mail: nikolas.mullerpl@uam.es. Address: Faculty of Economics and Business Administration, Universidad Autónoma de Madrid, 28049 Madrid, Spain.



(a) Korea's current account in 2010 US dollars.



(b) Nominal exchange rate of the Korean won vis-à-vis the US dollar (in natural logarithms).



(c) Real exchange rate of Korea vis-à-vis the United States (in natural logarithms).

Figure 1: South Korea's current account and its nominal and real exchange rates vis-à-vis the United States. The ticks on the time axis correspond to the first quarter of the corresponding years. Source: International Financial Statistics (IMF).

1. Figure 1 plots the Korean current account, the nominal exchange rate of the Korean won vis-à-vis the US dollar and the real exchange rate of Korea vis-à-vis the United States. Based on the models and concepts we saw in class, answer the following questions.

   (a) Why did the nominal and real exchange rates stay relatively constant in the first half of the 1990s (up to 1996) and then fall so sharply in 1997? [4]

(b) The current account of Korea recorded the second-largest *deficit* in the world in 1996, yet emerged with the world's third-largest *surplus* in 1998. What could explain this massive turnaround of the current account in just two years? [4]

Total of question 1: [8]

2. Consider the following monetary model of the exchange rate:

$$X^{\text{H}} = \frac{1}{P^{\text{H}}}, \tag{1}$$

$$X^{\text{F}} = \frac{1}{P^{\text{F}}}, \tag{2}$$

$$S = \frac{X^{\text{H}}}{X^{\text{F}}}, \tag{3}$$

$$M^{\text{H}}V^{\text{H}} = P^{\text{H}}Y^{\text{H}}, \tag{4}$$

$$M^{\text{F}}V^{\text{F}} = P^{\text{F}}Y^{\text{F}}, \tag{5}$$

where the variables M^{H}, M^{F}, V^{H}, V^{F}, Y^{H} and Y^{F} are exogenous and the remaining variables endogenous.

Note that the model is similar to, but not quite the same as, the monetary model of exchange rate determination that we saw in class.

(a) Unlike from the monetary model that we saw in class, the model here consists of five equations. How many endogenous variables does the model in equations 1 to 5 have? [1]

(b) What does the variable X stand for? [1]

(c) Interpret equation 4 in economic terms. [1]

(d) Convert the model to logarithms. [1]

(e) Based on the logarithmic version of the model, derive the reduced form of the model (that is, the equations that express the endogenous variables in terms of the exogenous variables). [2]

(f) What effect does a rise in the foreign money supply, M^{F}, by one percent have on the endogenous variables? [2]

Total of question 2: [8]

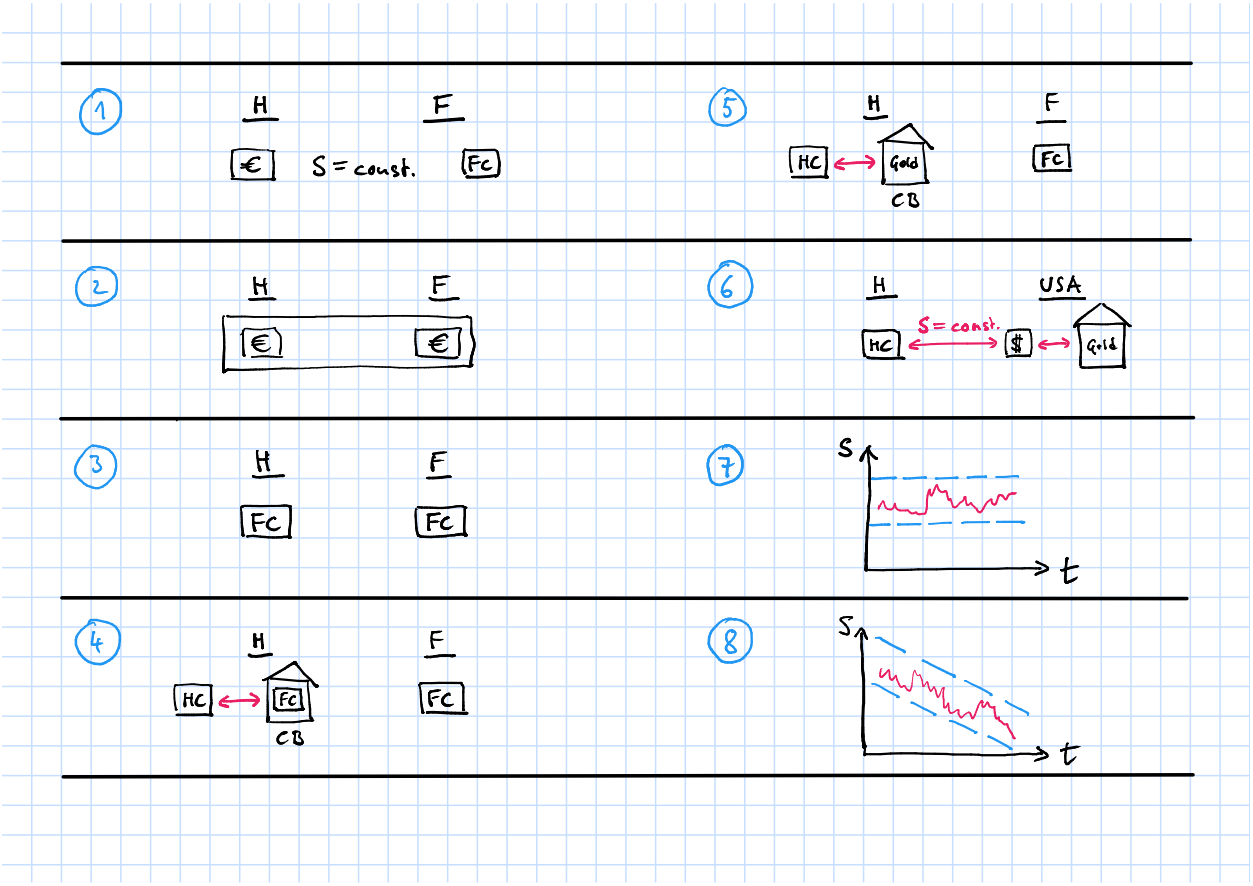


Figure 2: Exchange rate regimes.

3. Please state the names of the exchange rate regimes (or systems) shown in figure 2.

   (a) (1) [1]

   (b) (2) [1]

   (c) (3) [1]

   (d) (4) [1]

   (e) (5) [1]

   (f) (6) [1]

   (g) (7) [1]

   (h) (8) [1]

Total of question 3: [8]

4. (a) Using a partial-equilibrium supply and demand diagram for an imported good in a small economy, illustrate the welfare effects of an import tariff. Clearly label: [8]

   - the world price and the domestic price with the tariff,
   - domestic supply and demand,
   - imports before and after the tariff,
   - government tariff revenue
   - and the areas representing the deadweight loss.

   Explain the source of the deadweight loss.

Total of question 4: [8]

5. (a) Consider the Ricardian model with two goods, cheese (C) and wine (W), and three countries called X, Y and Z. Let L denote the hours available in each country, a_{LC} the unit labour requirement in the production of cheese and a_{LW} the unit labour requirement in the production of wine. The following values of L, a_{LC} and a_{LW} are given: [4]

$$L^X = 800, \qquad L^Y = 2000, \qquad L^Z = 1200, \tag{6}$$

$$a^X_{LC} = 8, \qquad a^Y_{LC} = 10, \qquad a^Z_{LC} = 3, \tag{7}$$

$$a^X_{LW} = 2, \qquad a^Y_{LW} = 5, \qquad a^Z_{LW} = 6. \tag{8}$$

If the relative price of cheese, P_C/P_W, is 3, then how much cheese and how much wine will be produced in the world and who exports what to whom? Please show how you arrive at your answer.

(b) Being as specific as possible, show how the following transactions are recorded in the (published) balance of payments of the home economy:

i) A domestic resident purchases foreign bonds issued by a private entity abroad. [2]

ii) Later, the domestic resident receives interest payments on these foreign bonds. [2]

Total of question 5: [8]