

International macroeconomics (2019–2020)

Final exam

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20 January 2020, 9.00

Surname: _____

First name: _____

ID or passport number: _____

Group: _____

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** (= 1.5 minutes per point or 12 minutes per question).

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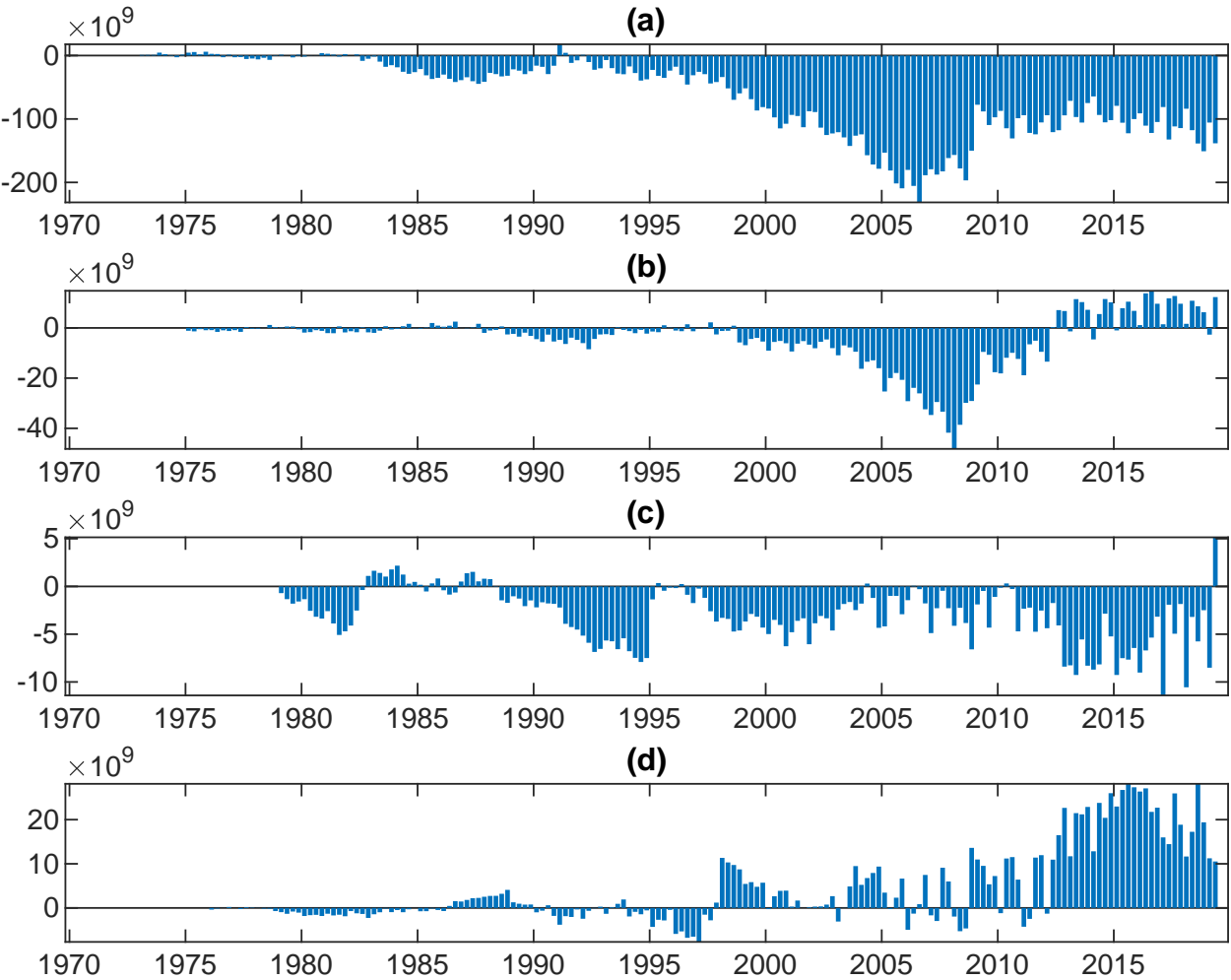


Figure 1: Current account balances of four countries (in US dollars): Korea, Mexico, Spain and the United States (not necessarily in this order). Source: International Financial Statistics (IMF).

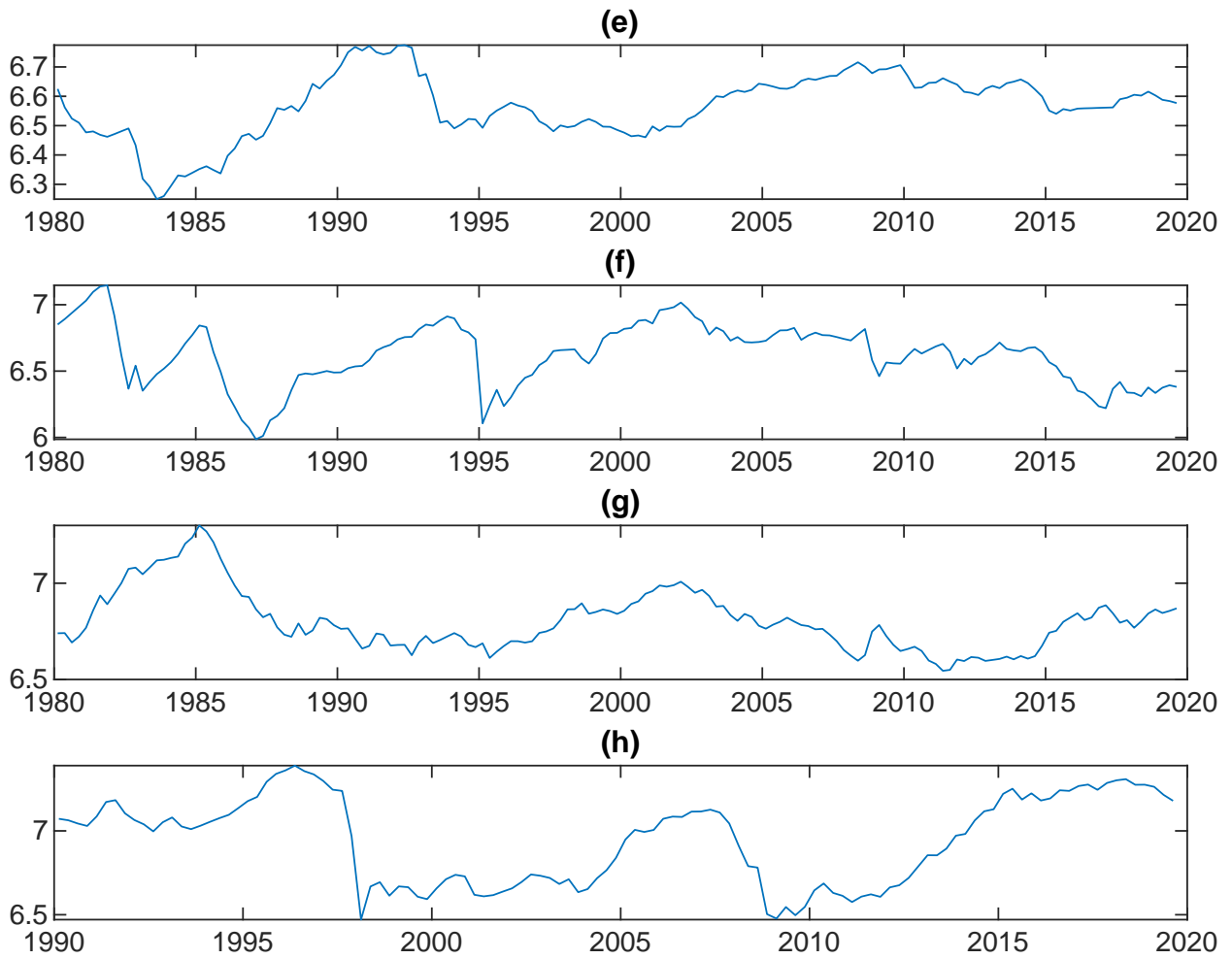


Figure 2: Real effective exchange rates of four countries (CPI-based, in logarithms to the base 2): Korea, Mexico, Spain and the United States (not necessarily in this order). Source: International Financial Statistics (IMF).

1. Figures 1 and 2 plot the current account balances and real exchange rates of Korea, Mexico, Spain and the United States in random order. Please indicate to which variable and country each of the graphs (a) through (h) belong. Behind your answers, indicate in one or two words the reason for your choice.

(a) [1]

(b) [1]

(c) [1]

(d) [1]

(e) [1]

(f) [1]

(g) [1]

(h) [1]

Total of question 1: [8]

2. (a) What is financial leverage?

[1]

(b) How is the leverage coefficient defined?

[1]

(c) Consider the following balance sheets:

Household A (San Francisco):

Assets		Liabilities	
Car	20	Net wealth	20
House	80	Morgage loan from bank B1	80

Bank B1 (New York):

Assets		Liabilities	
Mortgage loan to household A	80	Equity	5
Other mortgage loans	20	Bonds	50
		Bank deposits	45

Bank B2 (Frankfurt):

Assets		Liabilities	
Bonds of bank B1	20	Equity	10
Loans to firms	80	Bank deposits	90

(Question continues on next page.)

- i) Calculate the leverage coefficients of the household A and the banks B1 and B2. [3]
- ii) Suppose now that the house of the household A loses 10% of its value and that A stops paying back the loan it received from B1. Using the example, explain why the failure of the household A in California to service its debt matters for the stability of the German banking system. [3]

Total of question 2: [8]

3. (a) State the definition of the real exchange rate, Q , and its logarithm, q . [2]
- (b) If the home country H has a high real exchange rate compared to a foreign country F, what can we say about the price levels of both countries? [1]
- (c) If the home country H has a high real exchange rate compared to a foreign country F, what can we say about the purchasing power of a given amount of money in both countries? [1]
- (d) What is purchasing power parity? [1]
- (e) Log-difference the real exchange rate, Q_t , and interpret the resulting equation in economic terms. [1]
- (f) State the equation that determines the nominal exchange rate in the currency flow model. [1]
- (g) Suppose that the central banks do not intervene in the foreign exchange market, so that the nominal exchange rate, s , is free to float. Assume also that all goods can be traded. Under these assumptions, given an initial deviation of the real exchange rate from purchasing power parity, why may good-market arbitrage not be able to bring the real exchange rate back to PPP. [1]

Total of question 3: [8]

4. Explain briefly two (!) of the following three economic concepts:

[8]

1. Uncovered interest parity (UIP)
2. Real interest rate
3. Short-selling

(Hint: To abbreviate things, provide a diagram where possible.)

Total of question 4: [8]

5. (a) What are capital inflows? Please provide a brief definition. [2]

(b) Why do central banks of a countries that run large current account deficits, but receive even stronger capital inflows, often choose to accumulate official reserves? In providing your answer, try to be as "technical" as you can. [6]

Total of question 5: [8]

