International macroeconomics (2025–2026)

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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.

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1. The Asian Financial Crisis began in mid-1997 with a speculative attack on the Thai baht and quickly spread to other East and Southeast Asian economies. Countries such as Malaysia and Indonesia experienced sharp currency depreciations, capital flight, collapsing asset prices and deep recessions.

   This question is on a key choice governments faced at the time: accept IMF assistance with strict policy conditions or pursue alternative strategies.

   Malaysia, led by Prime Minister Mahathir Mohamad, initially raised interest rates and tightened fiscal policy, similar to IMF advice. However, in September 1998, Malaysia decisively rejected IMF assistance, lowered interest rates and imposed capital controls.

   Indonesia, ruled by President Suharto, followed a very different path. As the crisis intensified, Indonesia sought IMF assistance starting in late 1997 and accepted IMF conditions including sharp fiscal tightening and high interest rates.

   Mahathir and Suharto thus responded to the same external shock in fundamentally different ways. Interestingly, Malaysia's rejection of the IMF preserved political stability and led to a faster recovery, while Indonesia's IMF-led adjustment led to a sharp rise in poverty and coincided with institutional breakdown and regime change as Suharto was forced to resign in May 1998 after more than 30 years in power.

   Now let's look at two of the IMF's policy prescriptions one by one. Please answer the following questions, using what you have learned about exchange rates where possible:

   (a) Regarding the money supply, the IMF advised crisis countries to pursue a tight monetary policy, meaning a restriction of money supply growth.

      i) Why did the IMF believe that a restrictive monetary policy was crucial for recovery? [2]

ii) Why may controlling money supply growth not address the root cause of a currency crisis? In other words, if money growth was not the main problem, what may it have been? [2]

iii) Comment on the probable motivation for Malaysia's decision to loosen monetary policy? [1]

(b) At the time of the Asian Financial Crisis, the IMF's position was strongly in favour of capital account openness and against the use of capital controls, especially controls on capital outflows.

i) Why do you think did the IMF oppose restrictions on capital movements? [1]

ii) Why do you think did Malaysia directly contradict IMF advice and impose capital controls on short-term flows? [2]

Total of question 1: [8]

2. Following this question, you can find a table with the balance of payments and international investment position of Spain, as published by the Banco de España. Based on the data provided in the table, answer the following questions.

   (a) The item A.1.2 is positive throughout the period covered by the table. Why? [1]

   (b) The item A.1.3 is generally negative (except in 2024 IV and 2025 I). Why? [1]

   (c) The item A.1.4 is negative throughout the period. Why? [1]

   (d) The item A.3.1.1 is positive throughout the period. Does this mean that Spanish residents are undertaking direct investment abroad or that foreign residents are undertaking direct investment in Spain? Explain briefly. [1]

   (e) What variable did we use in the course to denote item B.1? [1]

   (f) What was the level of item A.1 before the global financial crisis of 2008 (roughly)? [1]

   (g) How does the level of item B.1 compare to Spain's current GDP? [1]

   (h) Which items in the table are stocks and which are flows? [1]

Total of question 2: [8]

Millones de euros

	Serie en cuadro y columna/ Time Series in Table and Column	2023	2024	2024 II	2024 III	2024 IV	2025 I	2025 II	
A. BALANZA DE PAGOS									**A. BALANCE OF PAYMENTS**
A.1. Cuenta corriente (I - P)	**17.1/1**	**40 917**	**50 678**	**13 379**	**15 273**	**9 181**	**9 972**	**14 652**	**A.1. Current account (Receipts-Payments)**
1.1. Bienes	17.4/1	-35 050	-33 857	-6 423	-10 362	-10 713	-12 628	-9 009	1.1. Goods
1.2. Servicios	17.4/4	92 499	100 205	27 009	31 566	22 042	23 040	30 348	1.2. Services
1.3. Renta primaria	17.5/1	-4 897	-4 024	-3 136	-1 759	901	566	-2 604	1.3. Primary income
1.4. Renta secundaria	17.6/1	-11 635	-11 647	-4 071	-4 171	-3 049	-1 005	-4 083	1.4. Secondary income
A.2. Cuenta de capital (I - P).	**17.6/10**	**16 902**	**18 064**	**3 217**	**4 564**	**8 451**	**2 521**	**3 461**	**A.2. Capital account (Receipts-Payments)**
CUENTA CORRIENTE MÁS CUENTA DE CAPITAL (a)	17.1/5	57 818	68 741	16 596	19 837	17 632	12 493	18 112	CURRENT AND CAPITAL ACCOUNT (a)
A.3. Cuenta financiera (VNA - VNP)	**17.1/6**	**54 279**	**83 917**	**26 612**	**13 552**	**26 661**	**9 745**	**25 079**	**A.3. Financial account** (net change in assets-net change in liabilities)
3.1. Total, excepto Banco de España	17.2/3	-60 088	132 119	63 124	-4 655	27 517	6 984	4 210	3.1. Total excluding Banco de España
3.1.1. Inversión directa	17.2/7	3 508	26 695	8 295	3 362	13 612	3 706	2 896	3.1.1. Direct investment
3.1.2. Inversión de cartera	17.2/8	-23 826	-2 322	17 167	-23 869	19 228	-4 551	-5 228	3.1.2. Portfolio investment
3.1.3. Otra inversión	17.2/9	-33 192	106 461	37 920	16 679	-6 029	7 119	6 767	3.1.3. Other investment
3.1.4. Derivados financieros	17.2/10	-6 579	1 285	-257	-828	706	710	-224	3.1.4. Financial derivatives
3.2. Banco de España	17.2/2	114 367	-48 202	-36 512	18 207	-855	2 760	20 868	3.2. Banco de España
3.2.1. Reservas	17.2/11	6 000	1 325	-127	-162	1 098	-1 466	1 129	3.2.1. Reserves
3.2.2. Posición neta BE frente al Eurosistema	17.2/12	119 257	-37 745	-34 596	20 854	3 685	4 851	23 108	3.2.2. BE net position with the Eurosystem
3.2.3. Otros del BE	17.2/13	-10 890	-11 783	-1 789	-2 486	-5 638	-625	-3 369	3.2.3. Other BE
A.4. Errores y omisiones netos	**17.1/9**	**-3 540**	**15 176**	**10 016**	**-6 286**	**9 029**	**-2 749**	**6 966**	**A.4. Net errors and omissions**
B. POSICIÓN DE INVERSIÓN INTERNACIONAL									**B. INTERNATIONAL INVESTMENT POSITION**
B.1. Posición total neta	**17.21/1**	**-737 883**	**-653 878**	**-676 494**	**-716 251**	**-653 878**	**-688 590**	**-722 275**	**B.1. Total net position**
1.1. Banco de España	17.21/13	-128 536	-170 092	-195 418	-172 671	-170 092	-167 351	-150 077	1.1. Banco de España
1.2. Resto sectores	17.21/2	-609 347	-483 786	-481 075	-543 580	-483 786	-521 239	-572 198	1.2. Other sectors

EUR millions

a. El saldo de la cuenta corriente y de capital determina la capacidad (+) o necesidad (-) de financiación de la economía./ The current and capital account balance determines the net lending (+) or borrowing (-).

3. Consider the following model of the current account:

$$\max_{C_1, C_2, CA_1, CA_2} u(C_1) + u(C_2), \tag{1}$$

where

$$Y_1 = C_1 + I_1 + G_1 + CA_1, \tag{2}$$
$$Y_2 = C_2 + I_2 + G_2 + CA_2, \tag{3}$$
$$CA_2 = -CA_1. \tag{4}$$

where Y_t, I_t and G_t, $t \in \{1, 2\}$, are exogenous.

Rather than assuming logarithmic utility, let the utility function be defined as:

$$u(C) = C - \frac{\gamma}{2}C^2. \tag{5}$$

(a) Show that the constraints 2 and 3 are equivalent to the two constraints of the "intertemporal approach to the current account". [1]

(b) What term do economists use when they refer to equation 2 or equation 3? [1]

(c) Derive the Euler equation for this problem? [3]

(d) Find the solution for C_1 and C_2 as a functions of the exogenous variables. [2]

(e) Find the solution for CA_1 and CA_2 as a functions of the exogenous variables. [1]

Total of question 3: [8]

4. In the currency flow model, the rate of nominal appreciation is given by:

$$\Delta s_t = -(\Delta p_t^{\text{H}} - \Delta p_t^{\text{F}}) + \xi(ICF_t - \Delta b_t^{\bar{\text{H}}\bar{\text{F}}}), \tag{6}$$

where the "international cash flow", ICF_t, is given by:

$$ICF_t = CA_t - (\Delta e_t^{\text{HF}} + \Delta b_t^{\text{HF}}). \tag{7}$$

(a) Suppose a country wants to let its currency float freely. Derive the values of Δs_t, Δq_t and $\Delta b_t^{\bar{\text{H}}\bar{\text{F}}}$ under this exchange rate regime. [2]

(b) Suppose a country wants to keep its *real* exchange rate constant. Derive the values of Δs_t, Δq_t and $\Delta b_t^{\bar{\text{H}}\bar{\text{F}}}$ under this exchange rate regime. [2]

(c) Suppose a country wants to fix its *nominal* exchange rate. Derive the values of Δs_t, Δq_t and $\Delta b_t^{\bar{\text{H}}\bar{\text{F}}}$ under this exchange rate regime. [2]

(d) In their attempt to reduce macroeconomic volatility, some countries opt for exchange rate pegs (option A: fixing the *nominal* exchange rate), while other adopt crawling pegs (option B: trying to keep the *real* exchange rate stable). Please state very briefly one advantage and one disadvantage of each of these two exchange rate regimes. [2]

Total of question 4: [8]

5. (a) Which economic variables do the placeholders [1], [2], [3], [4] and [5] represent in the following equations? [4]

$$Y = C + I + G + [1] \tag{8}$$
$$Y^{\mathrm{P}} = C + I + G + [2] \tag{9}$$
$$z_{t+1}^{\mathrm{HF}} = z_t^{\mathrm{HF}} + [3] \tag{10}$$
$$b_t^{\bar{\mathrm{H}}\bar{\mathrm{F}}} = [4] - [5] \tag{11}$$

(b) What is the difference between the base money supply (M0) and the broad money supply (M2)? [2]

(c) How are currency crises defined? [2]

Total of question 5: [8]