Lisbon School of Economics & Management
Universidade de Lisboa

Master in Monetary and Financial Economics

Banking and Insurance

Exam – 5 January 2026

1. Choose the most adequate answer to each of the following questions (**1,5/20** for each right answer and **-0,5/20** for each wrong answer):

- see spreadsheet

1.1. High credit/deposit ratios:
   a) characterize more efficient banking systems, as banks provide a higher level of funding to the economy.
   b) are the outcome of more expansionary monetary policies, as these policies decrease short-term interest rates and consequently the demand for bank deposits by savers.
   c) may pose financial stability challenges, namely when these ratios overcome 120%.
   d) are a necessary consequence of financial intermediation roles performed by banks.

1.2. The transmission of monetary policy effects:
   a) depend mostly on central banks;
   b) depend mostly on decisions taken by banks about their loan granting policies;
   c) depend mostly on the preferences of depositors about keeping their savings at banks;
   d) can be increased if central banks decide to keep reserve requirements and banks reduce their excess reserves.

1.3. Financial Stability:
   a) mostly imposes an adequate microprudential supervision, namely by setting limits on loan-to-value and debt-service-to income ratios;
   b) benefitted from the increasing relevance of macroprudential supervision since the Global Financial Crisis in the first decade of the current century;
   c) depends mostly on the risk management strategies and governance of banks;
   d) is challenged whenever the weight of banking activity in the economy increases.

1.4. Higher capital requirements:
   a) always benefit the performance of banks, as they will manage to obtain better credit ratings and consequently to decrease their cost of funding;
   b) are relevant to ensure that banks have the required resources to face their expected losses;
   c) impact on loan pricing;
   d) can always be avoided if banks adopt the internal ratings approach to compute these requirements for credit risk.

2. Please consider the following information about marginal gaps of a given Euro Area bank (figures in Million €):

	<1week	1week-1month	1-3 months	3-6 months	6-12 months
Liquidity Gaps	300	200	-100	50	-500
Interest Rate Gaps	100	300	400	600	500

2.1. Characterize the two risks mentioned, relating them to the main financial intermediation roles performed by banks. **(2,5/20)**

liquidity risk – stems from the mismatch between assets and liabilities involved in liquidity intermediation, by channeling savings to investment projects, through maturity transformation.

Interest rate risk – may also arise from liquidity intermediation as banks may grant loans and receive deposits with a different pricing structure. Moreover, it may also be related to risk intermediation, as banks assume the interest rate risk on behalf of society, pooling these exposures and hedging or preserving this risk.

2.2. Identify the main risks faced by the bank. **(2,5/20)**

- liquidity risk - liquidity shortfall in 6-12 month horizon, as this is the time bucket where cumulative gaps become negative.

- interest rate risk – decrease in interest rates, as all marginal interest rate gaps are positive.

2.3. Characterize the type of measures you would implement to tackle these risks. **(2,5/20)**

- liquidity risk - increase liquidity inflows, namely by adopting a more attractive policy regarding interest rates of deposits, issuing debt in the market or increasing borrowing from other banks or the central bank. A more restrictive policy concerning loan granting can also contribute for the reduction of liquidity shortfalls
- interest rate risk – hedge against interest rate risk through derivatives, increase loans granted charging a fixed rate and/or liabilities paying a floating rate.

2.4. Characterize the main alternative metrics to assess liquidity risk and the relevance of the level of capital ratios? **(2,5/20)**

Besides gaps, we have the regulatory ratios (LCR and NSFR; to be detailed) and the level of eligible collaterals to obtain liquidity from the ECB. A necessary condition to have access to ECB liquidity facilities is to comply with minimum capital requirements.

3. Please assume the following additional information about the same bank, as a % of a loan amount:

Operating Costs: 0,5%
ROE goal: 15%
Capital Requirement: 10%
Cost of Funding: 6-month Euribor + 1 p.p.

3.1. What is the minimum spread to be charged by this bank to grant a loan when the Probability of Default is 10% and the Loss Given Default is 70%. **(2,0/20)**

See spreadsheet

3.2. Characterize the impact of a bank's rating upgrade on this minimum spread, as well as additional measures to make the bank more competitive in its loan granting activity. **(2,0/20)**

- a rating upgrade must decrease the bank's cost of funding, namely when issuing bonds. Therefore, the minimum spread to charge on loans must be lower.