USI, Financial Intermediation, Spring 2025
Case #1

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Due date: 23:59, April 1, 2025

In November 2024, UniCredit – a leading Italian bank – announced its intention to acquire Banco BPM, with the ambition to create a national banking entity with enhanced competitiveness against larger European players.

As a member of the ECB Supervisory Board, you are asked to re-evaluate the deal also considering its potential impact in terms of competition.

To facilitate this analysis, consolidated balance sheets and consolidated income statements for both UniCredit and Banco BPM are available, with amounts presented in millions of euros for UniCredit and thousands of euros for Banco BPM.

Part I: Bank Balance Sheet

1. What was the bank's net worth for both banks?
2. Suppose that the ECB had a reserve requirement ratio of 2.5%. Would Banco BPM be compliant with it? State possible methods Banco BPM could have adopted to remain compliant. What are the disadvantages of each of these methods? (For this question, suppose that only 50% of funding from clients are deposits).
3. Compute the ROA and ROE for both UniCredit and Banco BPM. Which of the two banks was more profitable?
4. Which of the two banks had more ability to control expenses? Which of the two banks had more ability to generate income (revenues) from ordinary activities?
5. In context of this question only, suppose that, prior to the merger, 6% of UniCredit's loan portfolio and 8% of Banco BPM's loans enter into distress and become worthless. What would be the consequence on their net worth?
6. Compute the Equity Multiplier for both banks. Suppose that the objective is, after the merge, to bring the overall Equity Multiplier to 15 for the combined bank. Suggest possible ways of achieving this target leverage ratio.
7. Do you believe that the merged entity possesses an excessive amount of market power especially in the Italian market? Motivate your answer.

Part II: Interest Rate Risk

Market yields and durations (in years) are reported in the consolidated balance sheets for relevant assets and liabilities.[1]

1. Compute the leverage-adjusted duration gap for both banks. Which bank is mostly exposed to interest rate risk and in which direction?

2. Use these values to compute what would be the expected change in the value of assets and liabilities of both banks from an 0.25 percent decrease in interest rates on each asset and 0.15 percent on each liability. For which bank would the predicted change in equity value be largest and why?

3. Suppose that, in the face of the current geopolitical uncertainty, the CFOs of both banks decide to conduct stress tests using the duration approach for two possible scenarios of the relative change in market interest rates – i.e., $\Delta R/(1+R)$ common across assets and liabilities. The scenarios considered are: (i) an increase of 100 bps (due to a spike in inflation) and (ii) a decrease of 50 bps (to stimulate the economy). Compute the predicted change in equity corresponding to these scenarios and comment.

Part III: Liquidity Risk

1. As CFO of Banco BPM, you are simulating the consequences of forced liquidations to meet an unforeseen withdrawal. Current market conditions imply that financial assets valued at fair value, whose value was 18.084.707 (7.391.989 + 10.692.718) as reported in Banco BPM's balance sheet, would be discounted at 40% if the bank has to sell them in less than 3 days, at 8% if the bank could wait for 5 days, and at no discount if the bank could wait for a week. Suppose a bank run occurs, and all depositors demand payment on the first day, with deposits representing 50% of the bank's direct funding from customers. What amount would they be able to receive? What if they demand to be paid within the first week? Assume that, among the *securities*, the bank can sell in a one-week horizon only those valued at fair value.

2. Which of the two banks was more exposed to liquidity risk based on the balance sheet statement? Provide some metric in support of your answer.

[1] For the others, assume duration is zero. These data are presented for educational purposes only, they do not come from the official documents.