

## EE431 Economics of Financial Markets and Institutions Problem Set 6

Please submit at the BE office, 5th floor department of Economics building.

Deadline of submission : Tuesday 22 November, 2016, before 15.00 hrs.

1. The bank you own has the following balance sheet:

Assets		Liabilities	
Reserves	\$75 million	Deposits	\$500 million
Loans	\$255 million	Bank Capital	\$100 million

- (a) If the bank suffers a deposits outflow of \$20 million with a required reserve ratio on deposits of 10%, does the bank has enough reserves to meet the reserve requirement?

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- (b) If the bank suffers a deposits outflow of \$50 million (in stead of \$20 million in question a) with a required reserve ratio on deposits of 10%, does the bank have enough reserves to meet the reserve requirement?

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2. Suppose that you are the manager of a bank whose \$75 million of asset have an average modified duration of 4, while its \$75 million of liabilities have an average modified duration of 6. Conduct a duration analysis for the bank and show what will happen to the net worth of the bank if interest rate rise by 2%.

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3. Suppose that you are the manager of a bank that has \$15 million of fixed-rate assets, \$30 million of rate-sensitive assets, \$25 million of fixed rate liabilities and \$20 million of rate-sensitive liabilities. Conduct a gap analysis for the bank, and show what will happen to bank profits if interest rate rises by 5%.

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