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**Master in Monetary and Financial Economics**

**Banking and Insurance**

**Exam – 1 February 2021**

1. Explain the impact of credit risk on banks’:
2. loan pricing

* risk-adjusted spreads

1. capital requirements

* IRB and standard approach
* NPL=> higher capital requirements

1. net income

* impairments, via stage 2 and 3

1. profitability

- NI/ROE or NI/ROA

- RAROC

1. asset quality indicators

* NPEs, including forborne loans

(6,0)

1. Describe the impact on a bank’s risks of a decision to offer 30-year fixed rate residential mortgage loans and the measures that should be put in place to mitigate those risks. (4,0)

- credit risk: 30y loan involves higher PD => careful assessment of the borrower’s credit risk and lower limits on LTV and DTI

- interest rate risk: may help to mitigate the usual positive interest rate gaps => may be used as a strategy to mitigate the exposure to interest rate fluctuations

- liquidity risk: increased by very long-term loans => the bank has to ensure large and stable liquidity buffers, e.g. via a sound reputation among depositors, as well as to increase the average maturity of liabilities and/or decrease the average maturity of other assets.

1. Explain the role of banks in the transmission of monetary policy effects, calculating the impact of an injection of 5 000 Million Euros of liquidity by the European Central Bank, through an open market operation, assuming:

(i) reserve requirement rate = 5%

(ii) coefficient of preference for central bank’s money = 10%

(iii) excess reserves coefficient = 20%

(5,0)

* See excel file

1. Explain the role of monetary policy and prudential regulation in avoiding excessive levels of bank credit. (2,5)

* Monetary policy can refrain banks to offer too much credit, by increasing interest rates
* Prudential regulation can impose more demanding capital requirements, as well more conservative macroprudential rules, e.g. lower caps on LTV and DTI

1. Explain the role of securitization and credit derivatives in the subprime crisis. (2,5)

* CDS – increase exposure to credit risk, namely to financial institutions
* Securitisations – instrumental to spread the risk of residential mortgage loans worldwide, namely through the less subordinated tranches, receiving very high credit ratings