AP MACROECONOMICS • EXERCISE SHEET

# 4.4 Banking and the Expansion of the Money Supply

Name: _____ Class: _____ Date: _____ **Total: 9 marks**

## Objective

Build the skills to answer exam questions on **banking and the expansion of the money supply**.

**You must be able to:**

- explain **fractional reserve banking** 部分准备金银行 and the role of **required reserves** 法定准备金
- use the **money multiplier** 货币乘数 $\left(\frac{1}{\text{reserve ratio}}\right)$
- trace how a new deposit expands the money supply

## 1 Worked examples

Study these first. Each one shows the method for a question type used later.

■ **Fractional reserve banking**

A bank keeps only a **fraction** of deposits as **required reserves** and lends out the rest.

■ **The money multiplier**

$$\text{money multiplier} = \frac{1}{\text{reserve ratio}}.$$

■ **Deposit expansion**

A new deposit is lent, spent, re-deposited, lent again⋯so the money supply grows by up to (deposit × multiplier). With a reserve ratio of 0.10, the multiplier is 10.

## 2 Practice

**2.1** State what fractional reserve banking means. [1]

**2.2** The reserve ratio is 0.20. Find the money multiplier. [2]

**2.3** State what happens to the money supply when a bank lends out its excess reserves. [1]

## 3 Exam-style questions

**3.1** The money multiplier is [1]

- **A** the reserve ratio
- **B** $\dfrac{1}{\text{reserve ratio}}$
- **C** $1 - \text{reserve ratio}$
- **D** $(\text{reserve ratio})^2$

**3.2** A lower reserve requirement makes the money multiplier [1]

- **A** smaller
- **B** larger
- **C** zero
- **D** negative

**3.3** The reserve ratio is 0.10 and a new \$2000 deposit is made.

(a) Find the money multiplier. [1]

(b) Find the maximum increase in the money supply. [2]

## 4 Go further

- work through the **4.4 Banking and the Expansion of the Money Supply** lesson on the **Learn** page;

- read the **Financial Sector** section of the AP Macroeconomics handout on the **Know** page.

## Solutions

**2.1** banks keep only a fraction of deposits as reserves and lend the rest.

**2.2** $\dfrac{1}{0.20} = 5$.

**2.3** it increases (the loans become new deposits elsewhere).

**3.1 B**.

**3.2 B**.

**3.3** (a) $\dfrac{1}{0.10} = 10$. (b) $2000 \times 10 = \$20\,000$.