

## Master in Monetary and Financial Economics

### Banking and Insurance

Exam – 3 February 2017

Time: 2:00h

I (10/20)

Tick the most appropriate answer:

*(wrong answer = -0,25; minimum for question 1. = 0)*

- 1) Traditionally, risk has been defined as
  - A) any situation in which the probability of loss is one.
  - B) any situation in which the probability of loss is zero.
  - C) uncertainty concerning the occurrence of loss.
  - D) the probability of a loss occurring.
  
- 2) Objective risk is defined as
  - A) the probability of loss.
  - B) the relative variation of actual loss from expected loss.
  - C) uncertainty based on a person's mental condition or state of mind.
  - D) the cause of loss.
  
- 3) Sue double-majored in mathematics and statistics in college. She also enrolled in a number of finance courses. After graduation, she was hired by Econodeath Insurance Company. Her job is to calculate premium rates for life insurance coverages. Sue is a(n)
  - A) actuary.
  - B) underwriter.
  - C) claims adjustor.
  - D) producer.
  
- 4) Which of the following is implied by the pooling of losses?
  - A) sharing of losses by an entire group
  - B) inability to predict losses with any degree of accuracy
  - C) substitution of actual loss for average loss
  - D) increase of objective risk

5) Loss control includes which of the following?

- I. Loss reduction
- II. Loss prevention
- A) I only
- B) II only
- C) both I and II
- D) neither I nor II

6) The long-run relative frequency of an event based on the assumption of an infinite number of observations with no change in the underlying conditions is called

- A) objective probability.
- B) objective risk.
- C) subjective probability.
- D) subjective risk.

7) Following good health habits can be categorized as

- A) loss prevention.
- B) risk retention.
- C) noninsurance transfer.
- D) personal insurance.

8) From the insured's perspective, the use of deductibles in insurance contracts is an example of

- A) risk transfer.
- B) loss control.
- C) risk avoidance.
- D) risk retention.

9) The use of fire-resistive materials when constructing a building is an example of

- A) risk transfer.
- B) loss control.
- C) risk avoidance.
- D) risk retention.

10) All of the following statements about risk retention are true EXCEPT

- A) It may be used intentionally if commercial insurance is unavailable.
- B) It may be used passively because of ignorance.
- C) Its use is most appropriate for low-frequency, high-severity types of risks.
- D) Its use results in cost savings if losses are less than the cost of insurance.

11) The function of an actuary is to

- A) adjust claims.
- B) determine premium rates.
- C) negotiate reinsurance treaties.
- D) invest insurance company assets.

12) Insurers obtain data which can be used to determine rates from

- A) pricing pools.
- B) insurance advisory organizations.
- C) banks.
- D) reciprocal exchanges.

13) Which of the following statements about underwriting policy is (are) true?

- I. A company must establish an underwriting policy consistent with company objectives.
- II. Underwriting policy is usually subjective and allows the underwriter considerable flexibility with respect to lines written and forms used.

- A) I only
- B) II only
- C) both I and II
- D) neither I nor II

14) Which of the following statements about underwriting standards is (are) true?

- I. One purpose of underwriting standards is to reduce adverse selection against the insurer.
- II. Equitable rates should be charged so that each group of policyowners pays its own way in terms of losses and expenses.

- A) I only
- B) II only
- C) both I and II
- D) neither I nor II

15) The process of transferring risk to the capital markets through the use of financial instruments such as bonds, futures contracts, and options is known as

- A) consolidation of risk.
- B) avoidance of risk.
- C) securitization of risk.
- D) compartmentalization of risk.

16) Which of the following statements is (are) true about life insurance company investments?

- I. The majority of life insurance company general account assets are invested in bonds.
- II. The majority of life insurance company separate account assets are invested in stocks.

- A) I only
- B) II only
- C) both I and II
- D) neither I nor II

17) One method through which reinsurance is provided is through an organization of insurers that underwrites insurance on a joint basis. Through the organization, financial capacity is available for large commercial risks. This reinsurance arrangement is a(n)

- A) quota-share treaty.
- B) surplus-share treaty.
- C) excess-of-loss treaty.
- D) reinsurance pool.

18) Catastrophe bonds are made available to institutional investors in the capital markets through an entity that is specially created for that purpose. This entity is called a

- A) risk retention group.
- B) fraternal insurance company.
- C) captive insurance company.
- D) special purpose reinsurance vehicle.

19) Liability Insurance Company (LIC) was approached by a regional airline to see if LIC would write the airline's liability coverage. LIC agreed to write the coverage and entered into an agreement with a reinsurer. Under the agreement, LIC retains 25 percent of the premium and pays 25 percent of the losses, and the reinsurer receives 75 percent of the premium and pays 75 percent of the losses. This reinsurance arrangement is best described as

- A) excess-of-loss reinsurance.
- B) surplus-share reinsurance.
- C) quota-share reinsurance.
- D) pool reinsurance.

20) Ross studied engineering in college. After graduation, he went to work for an insurance company. Ross visits properties insured by his company. He conducts inspections and makes recommendations about alarm systems, sprinkler systems, and building construction. In what functional area does Ross work?

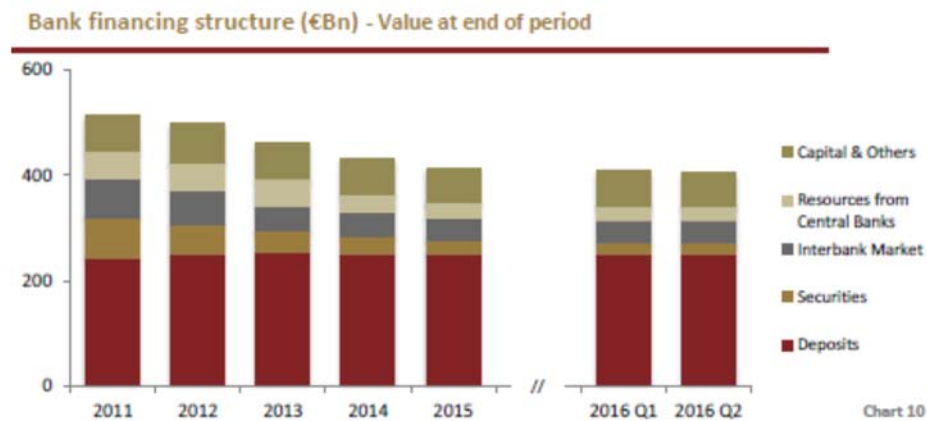
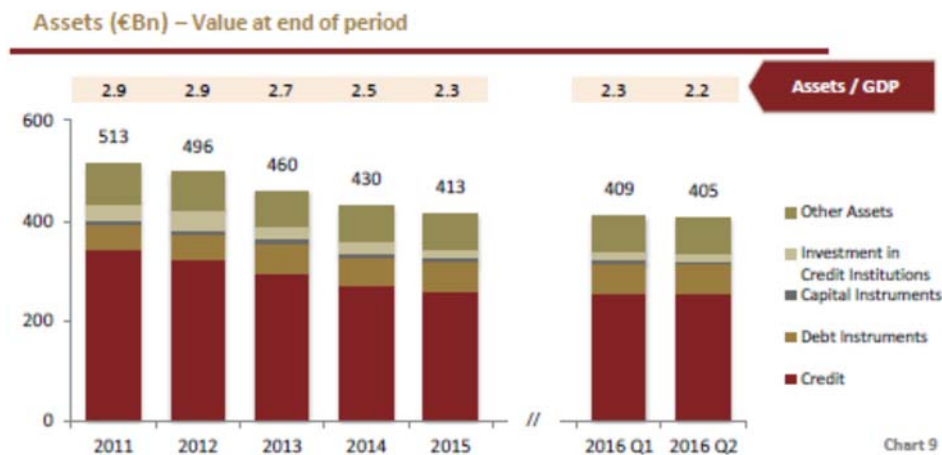
- A) underwriting
- B) loss control
- C) information systems
- D) claims adjusting

Question	Option			
	A)	B)	C)	D)
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Name: \_\_\_\_\_

## II (10/20)

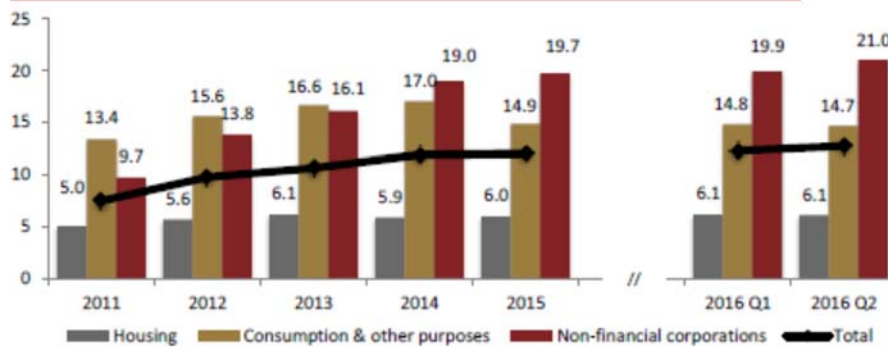
1. Please discuss the main risks of asymmetric information faced by banking institutions (2,5/20)
2. Please discuss in which extent we could live without banking institutions. (2,5/20)
3. Please comment the following charts, namely taking into consideration the impacts of the subprime crisis and the Economic and Financial Adjustment Program in Portugal between 2011 and 2014, (5/20)



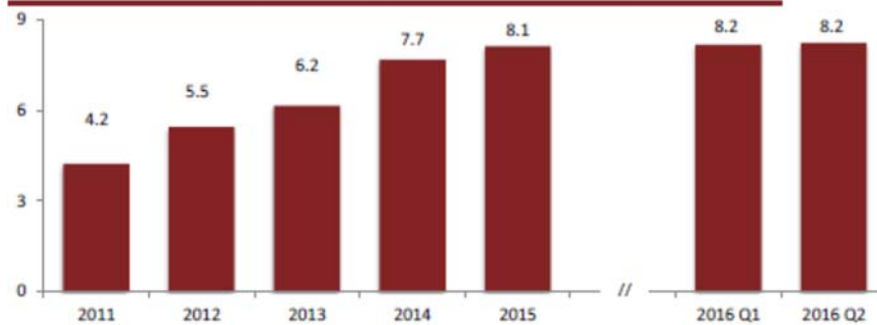
Liquidity gap in cumulative maturity ladders for domestic institutions  
(% of stable assets) – Value at end of period



Credit at Risk ratio (% of gross credit) – Value at end of period



Credit Impairments (% of gross credit) – Value at end of period



ROA & ROE (%) – Value in the period



Note: Return is measured by earnings before taxes and minority interests.

Income and costs (% of gross income) – Value in the period

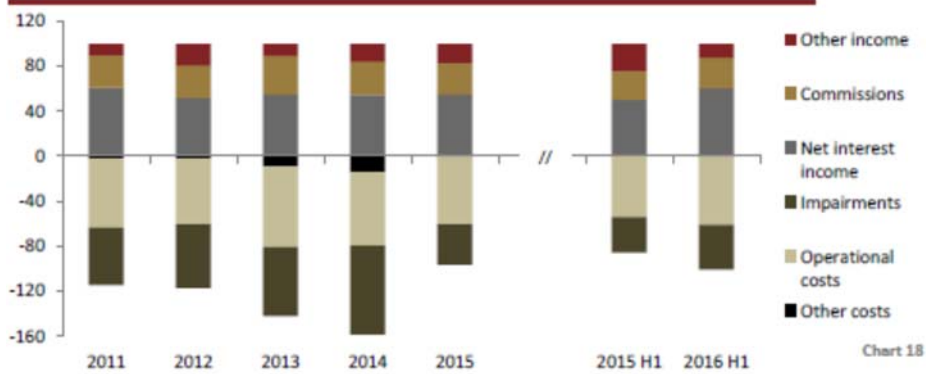


Chart 18

Cost-to-Income (%), Operational Costs (€Bn) – Value in the period

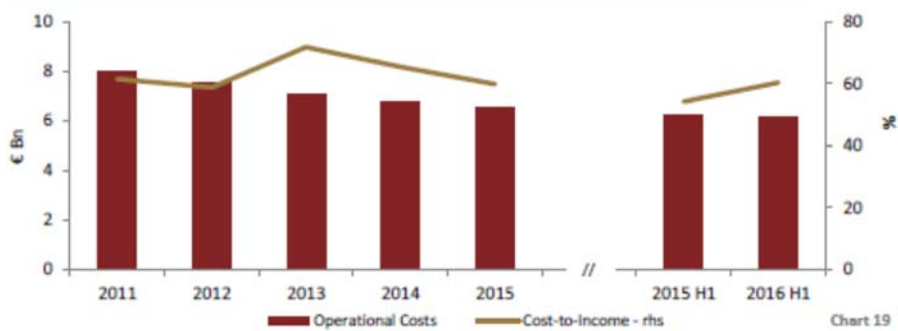


Chart 19

Tier 1 capital to Total Assets ratio – Value at end of period (%)

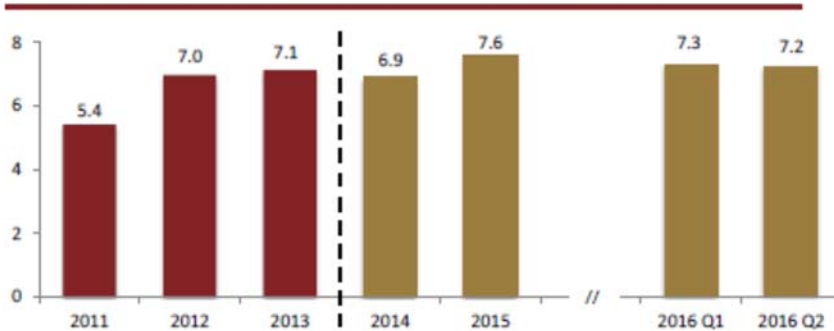


Chart 21

Core Tier 1 ratio (until 2013) and CET 1 ratio (from 2014) – Value at end of period (%)

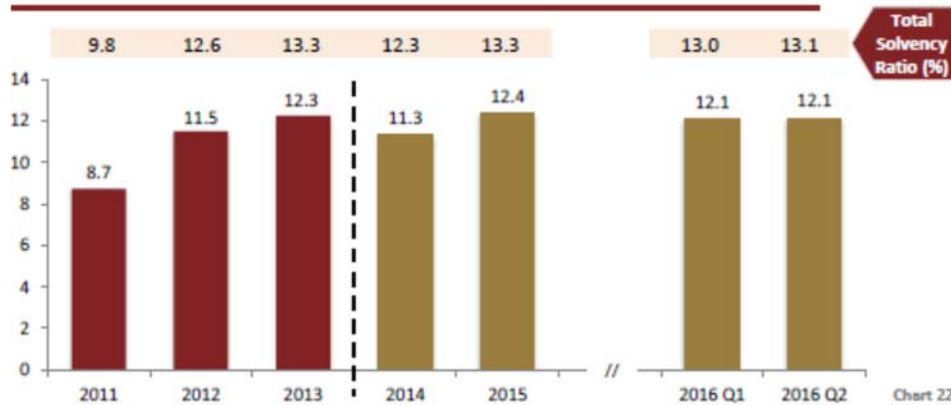


Chart 22

Source: Banco de Portugal (2016), "Portuguese Banking System Recent Developments – 2<sup>nd</sup> quarter 2016".