



**STRATHMORE INSTITUTE OF MATHEMATICAL SCIENCES
BBS ACTUARIAL SCIENCE**

END OF SEMESTER EXAMINATION

BSA 3219 Actuarial Asset Management

DATE: 15th December 2022

TIME: 2 Hours

INSTRUCTIONS

- 1) Answer question one and any other two questions**
- 2) Question one is compulsory and carries 30 marks**
- 3) All other questions carry 20 marks each**

Question 1

A.

In a particular country, an agency, independent of the central bank, is responsible for the management of the national debt. The agency is accountable to the Treasury (Ministry of Finance) of the country concerned.

- (i) Discuss, with reasons, the objectives that such an agency could be given. (6)
- (ii) Discuss how the agency could develop a portfolio of bonds with different characteristics to help it meet these objectives. (9)

B.

The economy of a particular country has the following characteristics:

- a high level of personal savings;
- a low level of government borrowing;
- a good reputation for price stability;
- controls on the outflow of capital.

(i) Discuss how these characteristics might affect the level of government bond yields in the country concerned.

(5)

- (ii) The government decides to remove the controls on the outflow of capital and significantly increase its budget deficit, to be financed mainly by selling long-dated bonds.

Discuss how these measures might affect the shape and level of the yield curve.

(6)

- (iii) The government of a different country is concerned about deflation in the short-to-medium term. It proposes to tell the central bank to 'print' money and use the money to buy back government bonds of all terms to maturity. Investors generally support this move but some worry that it might lead to inflation at some point in the future.

Discuss how this measure may affect the shape and level of the yield curve.

(4)

[Total 15 marks]

[Total 30]

Question 2

A.

In response to a developing recession and fears of deflation, the government of a particular country, which is a small open economy, has increased its borrowing plans significantly. It is predicted that the debt to GDP ratio will increase from 40% to 70% over a given five-year period.

(i) Discuss the impact that concerns about deflation may have on long-term bond yields, *all other things being equal*.

(2)

(ii) Explain the possible effects of increased saving, caused by the recession, on the level of government bond yields, *all other things being equal*.

(3)

(iii) (a) Discuss, with reasons, the likely impact on government bond yields of the policy of expanding borrowing, *all other things being equal*.

(b) Explain what is meant by “crowding out” of economic activity by increased government borrowing and describe the various forms of crowding out that may arise as a result of this policy change.

[5]

B.

(i) Describe why regulation may be desired to overcome the problem of information asymmetries in investment markets.

(5)

(ii) Describe the regulatory mechanisms (both private and statutory) that can be used to overcome information asymmetries.

(5)

[Total 20]

Question 3

A.

Discuss the reasons why a government might choose to regulate financial markets and financial institutions.

(10)

B.

- (i) Discuss the economic factors that affect long-term government bond yields in an economy that is open to capital flows.

(10)

[Total 20]

Question 4

A.

(i) Describe the economic functions of financial intermediaries.

(8)

(ii) Discuss the essential differences between the intermediation functions of retail banks and those of insurance companies and pension funds.

(5)

B.

Discuss the intermediation functions of a defined contribution pension fund.

(7)

[Total 20]

Question 5

(i)

'Banks and insurance companies perform intrinsically different economic functions.'

Critically discuss this statement.

(10)

- (ii) A central bank decides to loosen its monetary policy stance. Describe how the effects of this policy change would be transmitted through the economy. In your answer, distinguish between the effects of "quantitative easing" (the loosening of monetary policy by central bank purchases of securities) and the effects of a reduction in short-term interest rates.

(10)

[Total 20]