AFIN8003 - Workshop 6

Banking and Financial Intermediation

Dr. Mingze Gao

2024-08-28

1 MCQ

1. The risk that the borrower is unwilling or unable to fulfil the terms promised under the loan contract is:

   ☐ liquidity risk
   ☐ interest rate risk
   ☐ default risk
   ☐ market risk

2. A loan which is made and taken down immediately is a:

   ☐ syndicated loan
   ☐ loan commitment
   ☐ spot loan
   ☐ secured loan

3. A portion of a loan which a borrower may not use but which must be kept on deposit at the lending institution is a:

   ☐ compensating balance
   ☐ revolving credit line
   ☐ loan commitment
   ☐ minimum reserve requirement

4. The process of restricting the quantity of loans to an individual borrower is:

   ☐ leverage lending
   ☐ covenants
   ☐ using implicit contracts
   ☐ credit rationing

5. The historic default risk experience of a bond or loan is referred to as:

   ☐ credit scoring models
   ☐ mortality rates
   ☐ RAROC
   ☐ implicit contracts

6. Which of the following factors may affect the promised return an FI receives on a loan?

   ☐ fees relating to the loan
   ☐ the interest rate on the loan
   ☐ the credit risk premium on the loan
   ☐ all of the listed options are correct

7. Which of the following refers to restrictions in bond and loan contracts that either encourage or limit certain actions by the borrower?

   ☐ mortality rates
   ☐ RAROC
   ☐ covenants
   ☐ credit rationing

8. Credit scoring models include all of the following broad types except:

   ☐ linear discriminant models
   ☐ linear probability models
   ☐ term structure models
   ☐ logit models

9. According to Altman's credit scoring model, which of the following Z-scores would indicate a high default risk firm?

   ☐ less than 1.81
   ☐ between 1 and 1.81
   ☐ between 1.81 and 2.99
   ☐ greater than 2.99

10. The expected income per dollar lent is 0.4 cents. The 99th percentile historic (extreme case) default rate for this type of borrower is 5 per cent and the dollar proportion that cannot be recaptured is 85 per cent. The RAROC is:

    ☐ 4.25%
    ☐ 6.756%
    ☐ 9.41%
    ☐ 4.324%

2 Short answer questions

2.1 Q1 - Loan returns

Metrobank offers one-year loans with a 9 per cent stated or base rate, charges a 0.25 per cent loan origination fee, imposes a 10 per cent compensating balance requirement and must pay a 6 per cent reserve requirement to the central bank. The loans typically are repaid at maturity.

(a) If the risk premium for a given customer is 2.5 per cent, what is the simple promised interest return on the loan?
(b) What is the contractually promised gross return on the loan per dollar lent?
(c) Which of the fee items has the greatest impact on the gross return?

2.2 Q2 - RAROC

A bank is planning to make a loan of $5 000 000 to a firm in the steel industry. It expects to charge a servicing fee of 50 basis points. The loan has a maturity of 8 years and a duration of 7.5 years. The cost of funds (the RAROC benchmark) for the bank is 10 per cent.Assume the bank has estimated the maximum change in the risk premium on the steel manufacturing sector to be approximately 4.2 per cent, based on two years of historical data. The current market interest rate for loans in this sector is 12 per cent.

(a) Using the RAROC model, estimate whether the bank should make the loan.
(b) What should be the duration in order for this loan to be approved?