***Financial Markets and Institutions, 7e* (Saunders)**

**Chapter 19 Types of Risks Incurred by Financial Institutions**

1) The risk that an FI may not have enough capital to offset a sudden decline in the value of its assets is called operational risk.

Answer: FALSE

Difficulty: 2 Medium

Topic: Technology and Operational Risk

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 19-01 Describe the major risks faced by financial institutions.

Accessibility: Keyboard Navigation

2) Risk arising from unhedged positions in securities, currencies, and derivatives is called market risk.

Answer: TRUE

Difficulty: 1 Easy

Topic: Market Risk

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 19-01 Describe the major risks faced by financial institutions.

Accessibility: Keyboard Navigation

3) Loan charge-offs do not lead to insolvency risk because when loans are written off both loans and liabilities are reduced.

Answer: FALSE

Difficulty: 2 Medium

Topic: Credit Risk; Insolvency Risk

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 19-01 Describe the major risks faced by financial institutions.; 19-02 Recognize that insolvency risk is a consequence of the other types of risk.

Accessibility: Keyboard Navigation

4) Maintaining a diversified loan portfolio helps a bank reduce systematic credit risk.

Answer: FALSE

Difficulty: 2 Medium

Topic: Credit Risk

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 19-01 Describe the major risks faced by financial institutions.

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5) A corporate borrower failing to repay a loan on time due to equipment breakdowns is an example of firm specific credit risk.

Answer: TRUE

Difficulty: 1 Easy

Topic: Credit Risk

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 19-01 Describe the major risks faced by financial institutions.

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6) The subprime crisis is a good example of the credit risk faced by financial institutions.

Answer: TRUE

Difficulty: 2 Medium

Topic: Credit Risk

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 19-01 Describe the major risks faced by financial institutions.

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7) Many intermediaries, such as banks, cannot be asset transformers and match maturities of their assets and liabilities at the same time.

Answer: TRUE

Difficulty: 1 Easy

Topic: Interest Rate Risk

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 19-01 Describe the major risks faced by financial institutions.

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8) A bank that has made floating rate loans funded by longer maturity deposits is at risk from falling interest rates.

Answer: TRUE

Difficulty: 2 Medium

Topic: Interest Rate Risk

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 19-01 Describe the major risks faced by financial institutions.

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9) Rising interest rates decrease the value of fixed-income assets and increase the value of fixed-income liabilities.

Answer: FALSE

Difficulty: 2 Medium

Topic: Interest Rate Risk

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 19-01 Describe the major risks faced by financial institutions.

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10) A U.S. bank has £900 million in loans it has made to corporate customers and it has £750 million in deposits when the exchange rate is £1 = $1.98. The bank will have a net foreign exchange loss on these accounts if the exchange rate moves to £1 = $1.95.

Answer: TRUE

Difficulty: 2 Medium

Topic: Foreign Exchange Risk

Bloom's: Analyze; Apply

AACSB: Analytical Thinking

Learning Goal: 19-01 Describe the major risks faced by financial institutions.

Accessibility: Keyboard Navigation

11) Assets in a bank's trading book tend to be held for a longer time than assets held in the banking book.

Answer: FALSE

Difficulty: 1 Easy

Topic: Market Risk

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 19-01 Describe the major risks faced by financial institutions.

Accessibility: Keyboard Navigation

12) A U.S. bank has £700 million in loans it has made to corporate customers and it has £850 million in deposits. The net foreign exchange exposure from these accounts may be hedged by selling 150 million pounds forward.

Answer: FALSE

Difficulty: 2 Medium

Topic: Foreign Exchange Risk

Bloom's: Analyze; Apply

AACSB: Analytical Thinking

Learning Goal: 19-01 Describe the major risks faced by financial institutions.

Accessibility: Keyboard Navigation

13) Breakdowns of ATMs and fraudulent use of information stored on a bank's computer system are examples of operational risk.

Answer: TRUE

Difficulty: 2 Medium

Topic: Technology and Operational Risk

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 19-01 Describe the major risks faced by financial institutions.

Accessibility: Keyboard Navigation

14) Nationalization of private financial institutions is an example of sovereign risk.

Answer: TRUE

Difficulty: 2 Medium

Topic: Country/Sovereign Risk

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 19-01 Describe the major risks faced by financial institutions.

Accessibility: Keyboard Navigation

15) Reinvestment risk occurs when a financial institution holds longer-term assets relative to liabilities and faces uncertainty about the interest rate at which it can reinvest funds borrowed over a longer period.

Answer: FALSE

Difficulty: 2 Medium

Topic: Interest Rate Risk

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 19-01 Describe the major risks faced by financial institutions.

Accessibility: Keyboard Navigation

16) A bank has total assets of $620 million and $68.2 million in equity. The managers of the bank realize that $18.6 million of its $372 million loan portfolio will not be repaid. After the bank charges off these unexpected bad loans the bank's equity to asset ratio will be \_\_\_\_\_\_\_\_.

A) 11.00 percent

B) 10.64 percent

C) 9.77 percent

D) 8.25 percent

E) 8.00 percent

Answer: D

Explanation: (68.2m − 18.6m)/(620m − 18.6m) = 8.25%

Difficulty: 2 Medium

Topic: Credit Risk

Bloom's: Understand; Analyze; Apply

AACSB: Analytical Thinking

Learning Goal: 19-01 Describe the major risks faced by financial institutions.

Accessibility: Keyboard Navigation

17) The risk that an unanticipated increase in liability withdrawals may cause an FI to have to sell assets at fire sale prices is an example of

A) credit risk.

B) liquidity risk.

C) interest rate risk.

D) sovereign risk.

E) technology risk.

Answer: B

Difficulty: 1 Easy

Topic: Liquidity Risk

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 19-01 Describe the major risks faced by financial institutions.

Accessibility: Keyboard Navigation

18) Interest rate risk is probably greatest at which of the following intermediaries?

A) Commercial banks

B) Savings institutions

C) Life insurers

D) Pension funds

Answer: B

Difficulty: 2 Medium

Topic: Interest Rate Risk

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 19-01 Describe the major risks faced by financial institutions.

Accessibility: Keyboard Navigation

19) Second Bank now offers web banking services. Last week a computer glitch posted all web deposit transfers to the wrong accounts. This is an example of

A) credit risk.

B) liquidity risk.

C) stupidity risk.

D) technological risk.

E) operational risk.

Answer: E

Difficulty: 2 Medium

Topic: Technology and Operational Risk

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 19-01 Describe the major risks faced by financial institutions.

Accessibility: Keyboard Navigation

20) MONDEX spent $50 million to develop the Smart Card, but tests of prototypes in New York and Canadian cities revealed very little consumer interest. This is an example of

A) credit risk.

B) liquidity risk.

C) stupidity risk.

D) technological risk.

E) operational risk.

Answer: D

Difficulty: 2 Medium

Topic: Technology and Operational Risk

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 19-01 Describe the major risks faced by financial institutions.

Accessibility: Keyboard Navigation

21) Rank order the net charge-off rates from high to low for the following loan types:

I. C&I loans

II. Credit card loans

III. Real estate loans

A) I, II, III

B) I, III, II

C) II, I, III

D) II, III, I

E) III, I, II

Answer: C

Difficulty: 2 Medium

Topic: Credit Risk

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 19-01 Describe the major risks faced by financial institutions.

Accessibility: Keyboard Navigation

22) Repurchase agreements (repos) are used extensively to finance security holdings. In 2007, many investment banks and other financial institutions were unable to roll over their maturing repurchase agreements during the subprime mortgage crisis. This inability to get new repo financing is an example of

A) credit risk.

B) liquidity risk.

C) sovereign risk.

D) technological risk.

E) operational risk.

Answer: B

Difficulty: 2 Medium

Topic: Liquidity Risk

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 19-01 Describe the major risks faced by financial institutions.

Accessibility: Keyboard Navigation

23) A thrift makes long-term fixed-rate mortgages funded with short-term deposits and then interest rates rise. Which of the following is true?

A) Profitability would decline.

B) Profitability would increase.

C) The market value of equity increases.

D) Interest income would fall.

E) Profitability and market value of equity increase.

Answer: A

Difficulty: 2 Medium

Topic: Interest Rate Risk

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 19-01 Describe the major risks faced by financial institutions.

Accessibility: Keyboard Navigation

24) In year one, a bank facing reinvestment risk earns 11 percent on its assets and pays 10 percent on its liabilities. In year two, the bank had a negative profit spread of 100 basis points. Which of the following is true? In year two,

A) rates rose 100 basis points.

B) rates rose 200 basis points.

C) rates fell 100 basis points.

D) rates fell 200 basis points.

E) None of these options are correct.

Answer: D

Difficulty: 2 Medium

Topic: Interest Rate Risk

Bloom's: Understand; Analyze; Apply

AACSB: Analytical Thinking

Learning Goal: 19-01 Describe the major risks faced by financial institutions.

Accessibility: Keyboard Navigation

25) For most financial institutions, present value uncertainty is the risk that

A) the market value of an asset (liability) will decline if interest rates increase.

B) interest income will rise by more than interest expense when rates increase.

C) assets will be insufficient to cover loan losses.

D) bank capital will be insufficient to cover loan losses.

E) real interest rates will exceed nominal rates.

Answer: A

Difficulty: 2 Medium

Topic: Interest Rate Risk

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 19-01 Describe the major risks faced by financial institutions.

Accessibility: Keyboard Navigation

26) In October 2005, the Bankruptcy Reform Act was signed into law. This law primarily

A) made it easier for many debtors to receive bankruptcy protection.

B) made it more difficult for many debtors to receive bankruptcy protection.

C) applied only to corporations.

D) applied only to corporations and financial institutions.

E) made it easier for foreign debtors to seek debt relief under U.S. law.

Answer: B

Difficulty: 2 Medium

Topic: Credit Risk

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 19-01 Describe the major risks faced by financial institutions.

Accessibility: Keyboard Navigation

27) A bank has book value of $5 million in liquid assets and $95 million in nonliquid assets. Large depositors unexpectedly withdraw $9.5 million in deposits. To cover the withdrawals the bank sells all of its liquid assets at book value. To raise the additional funds needed the bank sells the necessary amount of nonliquid assets at 80 cents per dollar of book value. As a result, the bank's equity will \_\_\_\_\_\_\_\_.

A) remain unchanged

B) fall $4.5 million

C) fall $3.6 million

D) fall $1.4 million

E) fall $5.0 million

Answer: C

Explanation: (9.5m − 5m) × 80% = 3.6m

Difficulty: 2 Medium

Topic: Liquidity Risk

Bloom's: Understand; Analyze; Apply

AACSB: Analytical Thinking

Learning Goal: 19-01 Describe the major risks faced by financial institutions.

Accessibility: Keyboard Navigation

28) Which of the following would normally be banking book assets rather than trading book assets?

A) Long position in Gold

B) Short position in bonds

C) FX forward contracts

D) Long-term loans

E) Options on interest rates

Answer: D

Difficulty: 1 Easy

Topic: Market Risk

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 19-01 Describe the major risks faced by financial institutions.

Accessibility: Keyboard Navigation

29) A bank has on-balance-sheet assets with a book value of $940 million and a market value of $985 million and on-balance-sheet liabilities with a book value of $900 million and a market value of $930 million. The bank also has off-balance-sheet assets currently valued at $150 million and off-balance-sheet liabilities worth $160 million. Stockholders' net worth should be valued at \_\_\_\_\_\_\_\_ million.

A) $30

B) $40

C) $45

D) $50

E) $55

Answer: C

Explanation: (985m + 150m) − (930m + 160m) = 45m

Difficulty: 3 Hard

Topic: Off-Balance-Sheet Risk

Bloom's: Analyze; Apply

AACSB: Analytical Thinking

Learning Goal: 19-01 Describe the major risks faced by financial institutions.

Accessibility: Keyboard Navigation

30) The £ is worth 1.2569 euros and the euro is worth $1.5568. Statistical analysis indicates that when the euro rises 1 percent against the dollar, the pound rises 0.5 percent against the euro and vice versa. A U.S. bank has assets of £40 million that mature in one year funded with liabilities of €55 million due in six months. The bank would be hurt by

I. an increase in the value of the euro against the dollar.

II. a decrease in the value of the euro against the dollar.

III. an increase in euro interest rates relative to pound interest rates.

IV. an increase in pound interest rates relative to euro interest rates.

A) I only

B) I and II only

C) I and III only

D) II and IV only

E) II and III only

Answer: C

Explanation: The euro value of the assets = £40 x 1.2569 = €50.277 M, so the bank has a net euro liability exposure that puts it at risk from an increase in the value of the euro against the dollar. Because the pound assets mature in one year and the euro liabilities mature in six months, the bank is at risk from rising euro interest rates relative to pound interest rates.

Difficulty: 3 Hard

Topic: Foreign Exchange Risk

Bloom's: Understand; Analyze; Apply

AACSB: Analytical Thinking

Learning Goal: 19-01 Describe the major risks faced by financial institutions.

Accessibility: Keyboard Navigation

31) Argentina has refused to pay loans made to it by foreign institutions three times. This is an example of

A) operational risk.

B) liquidity risk.

C) foreign exchange risk.

D) sovereign risk.

E) insolvency risk.

Answer: D

Difficulty: 1 Easy

Topic: Country or Sovereign Risk

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 19-01 Describe the major risks faced by financial institutions.

Accessibility: Keyboard Navigation

32) A bank invests $250 million to add the ability to provide online bill paying for its customers. Usage of the new service is at about 50 percent of expected usage. This is an example of

A) technological risk.

B) operational risk.

C) market risk.

D) credit risk.

E) derivative risk.

Answer: A

Difficulty: 1 Easy

Topic: Technology and Operational Risk

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 19-01 Describe the major risks faced by financial institutions.

Accessibility: Keyboard Navigation

33) CHIPS and ACH are

A) potato products of Frito Lay.

B) check clearing systems run by the Federal Reserve.

C) retail payment systems used in Europe.

D) international bank regulators.

E) wholesale electronic payment systems.

Answer: E

Difficulty: 2 Medium

Topic: Technology and Operational Risk

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 19-01 Describe the major risks faced by financial institutions.

Accessibility: Keyboard Navigation

34) The terrorist attacks on the World Trade Center in 2001 are an example of \_\_\_\_\_\_\_\_.

A) regulatory risk

B) liquidity risk

C) credit risk

D) insolvency risk

E) event risk

Answer: E

Difficulty: 1 Easy

Topic: Other Risks and Interaction among Risks

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 19-03 Understand how the various risks faced by financial institutions are related.

Accessibility: Keyboard Navigation

35) Having longer maturity assets than liabilities causes banks to bear which of the following risks?

I. Interest rate risk

II. Liquidity risk

III. Credit risk

A) I only

B) I and II only

C) I and III only

D) II and III only

E) I, II, and III

Answer: B

Difficulty: 2 Medium

Topic: Credit Risk; Interest Rate Risk; Liquidity Risk

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 19-01 Describe the major risks faced by financial institutions.

Accessibility: Keyboard Navigation

36) Regulators' overall evaluation of the riskiness of a depository institution is measured by the \_\_\_\_\_\_\_\_.

A) Basel Accord

B) CRA rating

C) CAMELS rating

D) Exposure scale

E) FFIEC score

Answer: C

Difficulty: 1 Easy

Topic: Why Financial Institutions Need to Manage Risk: Chapter Overview

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 19-01 Describe the major risks faced by financial institutions.

Accessibility: Keyboard Navigation

37) The Fed allowed nonbank financial institutions to borrow money from the discount window during the mortgage crisis and even allowed nonbanks to swap mortgages for Treasury securities. This was an attempt by the Fed to reduce \_\_\_\_\_\_\_\_ at institutions.

A) operational risk

B) technological risk

C) liquidity risk

D) foreign exchange risk

E) diversifiable risk

Answer: C

Difficulty: 2 Medium

Topic: Liquidity Risk

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 19-01 Describe the major risks faced by financial institutions.

Accessibility: Keyboard Navigation

38) A bank has invested in U.S. Treasury investments that mature in two years. They will be held until maturity. The investments are funded with three-year maturity time deposits. The primary risk this bank faces is

A) refinancing risk.

B) reinvestment risk.

C) liquidity risk.

D) credit risk.

E) off-balance-sheet risk.

Answer: B

Difficulty: 2 Medium

Topic: Interest Rate Risk

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 19-01 Describe the major risks faced by financial institutions.

Accessibility: Keyboard Navigation

39) If a bank is exposed to refinancing risk, its profitability is reduced if interest rates \_\_\_\_\_\_\_\_ and if it is exposed to reinvestment risk, its profitability is reduced if interest rates \_\_\_\_\_\_\_\_.

A) rise; fall

B) rise; rise

C) fall; rise

D) fall; fall

E) rise; stay the same

Answer: A

Difficulty: 2 Medium

Topic: Interest Rate Risk

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 19-01 Describe the major risks faced by financial institutions.

Accessibility: Keyboard Navigation

40) Which one of the following intermediaries is likely to engage in more asset liability maturity matching?

A) Banks

B) Savings associations

C) Savings banks

D) Life insurers

Answer: D

Difficulty: 2 Medium

Topic: Interest Rate Risk

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 19-01 Describe the major risks faced by financial institutions.

Accessibility: Keyboard Navigation

41) A guarantee issued by an FI that obligates the FI to pay if the purchaser of the letter defaults on a debt is called a

A) loan commitment.

B) forward rate agreement.

C) credit swap agreement.

D) collar.

E) None of these options are correct.

Answer: E

Difficulty: 1 Easy

Topic: Off-Balance-Sheet Risk

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 19-01 Describe the major risks faced by financial institutions.

Accessibility: Keyboard Navigation

42) In May 2007, the largest known credit card theft was discovered when it was revealed that 200 million card numbers were stolen from TJX Company. This is an example of

A) credit risk.

B) operational risk.

C) liquidity risk.

D) technological risk.

E) regulatory risk.

Answer: B

Difficulty: 2 Medium

Topic: Technology and Operational Risk

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 19-01 Describe the major risks faced by financial institutions.

Accessibility: Keyboard Navigation

43) If a bank invested $75 million in a two-year asset paying 12 percent interest per year and simultaneously issued a $75 million one-year liability paying 10 percent interest per year, what would be the net interest income in two years if, at the end of the first year, all interest rates increased by 1.5 percentage point?

A) Decrease by $0.725 million

B) Decrease by $1.875 million

C) Increase by $1.875 million

D) Increase by $0.725 million

E) Decrease by $0.385 million

Answer: B

Explanation:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | | |  | |
| Year 1 interest income  = $75m × 0.12 = | $ | 9.0 | m | |  | |
| Year 1 interest expense = $75m × 0.10 = | $ | 7.5 | m | |  | |
| Net interest income | $ | 1.5 | m | |  | |
|  |  |  |  | |  | |
| Year 2 interest income  = $75m × 0.12 = | $ | 9.0 | m | |  | |
| Year 2 interest expense = $50m × 0.115 = | $ | 8.625 | m | |  | |
| Net interest income | $ | 0.375 | m | |  | |

1.5 − 0.375 = 1.875m decrease.

Difficulty: 3 Hard

Topic: Interest Rate Risk

Bloom's: Apply

AACSB: Analytical Thinking

Learning Goal: 19-01 Describe the major risks faced by financial institutions.

Accessibility: Keyboard Navigation

44) Suppose you purchase a 10-year AAA-rated British bond for par that is paying an annual coupon of 9 percent and has a face value of 1,000 British Pounds (£). The spot rate is US$1.105 for £. At the end of the year, the bond is downgraded to AA and the yield increases to 11 percent. In addition, the new spot rate becomes US$0.985 for £.

What is the loss or gain to a British investor who holds this bond for a year?

A) −11.07% loss

B) −7.14% loss

C) −5.32% loss

D) −2.07% loss

E) −1.08% loss

Answer: D

Explanation: The initial bond value is 1,000 £. In one year, find the value of the bond using a financial calculator: N = 9, PMT = 90, I = 11, FV = 1,000 and solve for PV to get 889.26 £.

The loss for the British investor is (889.26 − 1,000 + 90)/1,000 = −2.07%

Difficulty: 3 Hard

Topic: Interest Rate Risk/Foreign Exchange risk

Bloom's: Apply

AACSB: Analytical Thinking

Learning Goal: 19-01 Describe the major risks faced by financial institutions.

Accessibility: Keyboard Navigation

45) Suppose you purchase a 10-year AAA-rated British bond for par that is paying an annual coupon of 9 percent and has a face value of 1,000 British Pounds (£). The spot rate is US$1.105 for £. At the end of the year, the bond is downgraded to AA and the yield increases to 11 percent. In addition, the new spot rate becomes US$0.985 for £.

What is the loss or gain to a U.S. investor who holds this bond for a year?

A) −11.28% loss

B) −10.14% loss

C) −15.32% loss

D) −8.71% loss

E) −12.71% loss

Answer: E

Explanation: The initial value of the bond to the U.S. investor is 1,000 × 1.105 = $1,105

The price of the bond in 1-year will be: In one year, find the value of the bond using a financial calculator: N = 9, PMT = 90, I = 11, FV = 1,000 and solve for PV to get 889.26 £.

In U.S. dollars the value will be 889.26 × 0.985 = $875.92

The value of the coupon payment received at the end of the year is 90 × 0.985 = $88.65

The loss to the U.S. investor is (875.92 − 1,105 + 88.65)/1,105 = −12.71%

Difficulty: 3 Hard

Topic: Interest Rate Risk/Foreign Exchange risk

Bloom's: Apply

AACSB: Analytical Thinking

Learning Goal: 19-01 Describe the major risks faced by financial institutions.

Accessibility: Keyboard Navigation

46) Why do banks continue to make credit card loans even though credit card default rates are often at least twice as high as other loan types?

Answer: Credit card loss rates are higher than many other loan types, but FIs charge high enough interest rates (and fees) to make them worthwhile. FIs also extend credit card loans to large numbers of borrowers and the ensuing diversification reduces the risk.

Difficulty: 2 Medium

Topic: Credit Risk

Bloom's: Understand; Evaluate

AACSB: Analytical Thinking

Learning Goal: 19-01 Describe the major risks faced by financial institutions.

Accessibility: Keyboard Navigation

47) A bank has $150 million in one-year loans earning a fixed rate equal to 4.75 percent. The assets are funded by $150 million in liabilities that have a cost of 4.25 percent and a maturity of three years. If all interest rates are projected to fall 100 basis points by next year, by how much will the bank's profits and loan NIM change in year 2? Does this bank face refinancing risk or reinvestment risk? Explain.

Answer:

Year 1 profits = (4.75% − 4.25%) × $150 million = $750,000;

NIMyr1 = $750,000/$150 million = 0.50%

Year 2 profits = (3.75% − 4.25%) × $150 million = −$750,000

Change in profits = −$1,500,000

NIMyr2 = −$1,500,000/$150 million = −0.50%, so NIM decreases by 100 basis points.

This bank faces reinvestment risk. When interest rates fall, the NIM and profits fall because the asset return decreases and the liability cost stays the same due to the shorter maturity of the assets.

Difficulty: 2 Medium

Topic: Interest Rate Risk

Bloom's: Understand; Analyze; Apply

AACSB: Analytical Thinking

Learning Goal: 19-01 Describe the major risks faced by financial institutions.

Accessibility: Keyboard Navigation

48) In general terms explain why certain types of derivatives such as options, futures, swaps, and other exotic contracts can generate such catastrophically large losses and even insolvency for users at times. Does this mean that corporate or institutional use of derivatives should be limited or otherwise regulated? Explain.

Answer: Derivatives are complex instruments that can be difficult to price and difficult to estimate the payouts that can occur if market conditions change. The user has the responsibility to understand the risks involved. They also involve large amounts of leverage. This means that a small investment can give the user the gains or losses of a much larger investment. It is debatable whether derivatives usage should be limited to certain parties. One could make a case for limiting derivatives usage to those who have demonstrated the knowledge, skill, and financial resources needed to be able to take on the risks associated with these contracts. In fact, we already do this for individual investors. More disclosure of the risks involved in certain OTC derivatives is probably needed because in many cases the bank sellers know more about the risks than the buyers of these contracts. Former Fed Chairman Alan Greenspan has argued that derivatives help complete the market (i.e., allow better hedging) and that their usage should not be burdened with excessive regulations.

Difficulty: 3 Hard

Topic: Off-Balance-Sheet Risk

Bloom's: Understand; Evaluate

AACSB: Analytical Thinking

Learning Goal: 19-01 Describe the major risks faced by financial institutions.

Accessibility: Keyboard Navigation

49) Should regulators of FIs be concerned about the increased trading activity of FIs?

Answer: Yes. Trading is generally a riskier activity than normal lines of business of FIs. Regulators of depository institutions should be especially concerned because deposit insurance subsidizes the risk-taking activities of these institutions as insured depositors do not require a risk premium commensurate with the riskiness of the bank's risk.

Difficulty: 2 Medium

Topic: Market Risk

Bloom's: Evaluate

AACSB: Analytical Thinking

Learning Goal: 19-01 Describe the major risks faced by financial institutions.

Accessibility: Keyboard Navigation

50) Why would an FI be willing to issue a letter of credit guarantee to a municipal bond issuer?

Answer: Most guarantees are not used and the FI charges a fee for the service. The fee is commensurate with the risk the FI faces. Granting the letter may also lead to additional business with the bond issuer.

Difficulty: 1 Easy

Topic: Off-Balance-Sheet Risk

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 19-01 Describe the major risks faced by financial institutions.

Accessibility: Keyboard Navigation

51) How does foreign exchange risk arise for an FI?

Answer: Trading in foreign currencies; making foreign currency loans; buying foreign currency securities; and borrowing foreign currencies.

Difficulty: 1 Easy

Topic: Foreign Exchange Risk

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 19-01 Describe the major risks faced by financial institutions.

Accessibility: Keyboard Navigation

52) What is sovereign risk? How is this different from credit risk on a domestic loan? How can sovereign risk be limited?

Answer: Sovereign risk is the risk that loan repayments from foreign borrowers may be interrupted by the foreign government. This differs from credit risk on a domestic loan in that legal recourse in the event of nonrepayment of principal or interest is generally less in many developing countries. Even in more developed countries collection will normally be more complex and expensive with longer delays than would be experienced in the United States. Moreover, the borrower may wish to repay, but may be prevented from repaying the loan by the local government.

Sovereign risk is difficult to eliminate but it can be limited by not lending to foreign governments, only to foreign private interests, and by threatening to not make any new loans to entities in that country, including the foreign government.

Difficulty: 1 Easy

Topic: Country or Sovereign Risk

Bloom's: Remember; Understand

AACSB: Reflective Thinking

Learning Goal: 19-01 Describe the major risks faced by financial institutions.

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53) What are the three major objectives of technological investments at FIs? What are the major risks involved with these investments?

Answer:

1. Lower operating costs via exploiting economies of scale and scope.

2. Increase profits.

3. Capture new markets/customers.

The major risks include failures in technology, increased opportunities for fraud using the technology, and failure to generate additional business that utilizes the technology.

Difficulty: 2 Medium

Topic: Technology and Operational Risk

Bloom's: Remember

AACSB: Reflective Thinking

Learning Goal: 19-01 Describe the major risks faced by financial institutions.

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54) What is insolvency risk? How can liquidity risk and credit risk cause insolvency? What are the two best protections against insolvency at an FI?

Answer: Insolvency occurs when equity becomes zero or negative. Hence, one of the best protections against insolvency is equity capital. The more equity an FI has, the lower the insolvency risk. The second-best protection is prudent management. The job of an FI manager is to decide how much risk is appropriate. Too much risk can cause an institution to fail. Liquidity risk can cause insolvency when a bank's creditors refuse to renew deposits or other borrowings; this may force the bank to have to liquidate assets at fire-sale prices. The loss in value of the assets sold would reduce equity and could cause insolvency. Credit risk occurs when money invested in loans or securities is not paid back to the lending institution. These losses reduce equity capital and can lead to insolvency.

Difficulty: 2 Medium

Topic: Insolvency Risk

Bloom's: Remember; Understand

AACSB: Reflective Thinking

Learning Goal: 19-02 Recognize that insolvency risk is a consequence of the other types of risk.

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55) Characterize each of the following according to the type of risk it primarily represents:

I. Loan default

II. Unexpected deposit withdrawals

III. Losses on foreign currency holdings

IV. Losses on standby letters of credit

V. Reduction in earnings after an interest rate increase

Indicate which of the risks could cause insolvency of the FI.

Answer:

I. Credit risk

II. Liquidity risk

III. Market risk

IV. Off-balance-sheet risk

V. Interest rate risk

All five could cause insolvency.

Difficulty: 1 Easy

Topic: Insolvency Risk

Bloom's: Understand

AACSB: Reflective Thinking

Learning Goal: 19-02 Recognize that insolvency risk is a consequence of the other types of risk.

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