

Ch 13

Short Answer

1. What forms of protection and regulation are imposed by regulators of CBs to ensure their safety and soundness?
2. How has the separation of commercial banking and investment banking activities evolved through time? How does this differ from banking activities in other countries?
3. A Section 20 subsidiary of a major U.S. bank is planning to underwrite corporate securities and expects to generate \$5 million in revenues. It currently underwrites U.S. Treasury securities and general obligation municipal bonds, and earns annual fees of \$40 million.
 - a. Is the bank in compliance with the laws regulating the turnover of Section 20 subsidiaries?
 - b. If it plans to increase underwriting of corporate securities and generate \$11 million in revenues, is it in compliance? Would it have been in compliance prior to passage of the Financial Services Modernization Act of 1999?
4. What insurance activities are permitted for U.S. commercial bank holding companies?
5. How did the absence of any U.S. commercial banks from the top 20 world banks likely affect bank industry reform in Congress?
6. What are the new provisions on interstate banking in the Riegle-Neal Interstate Banking and Branching Efficiency Act of 1994?

7. What is the difference between an MBHC and an OBHC? What are the implications of the difference for bank expansion?
8. Why is the market value of equity a better measure of a bank's ability to absorb losses than book value of equity?
9. How is the leverage ratio for a bank defined?
10. What is the significance of prompt corrective action as specified by the FDICIA legislation?
11. Identify and discuss the weaknesses of the leverage ratio as a measure of capital adequacy.
12. What is the Basel Agreement?
13. What is the major feature in the estimation of credit risk under the 1988 Basel capital requirements?
14. What is the total risk-based capital ratio?
15. Identify the five zones of capital adequacy and explain the mandatory regulatory actions corresponding to each zone.

16. What are the definitional differences between Tier I and Tier II capital?
17. What components are used in the calculation of credit risk-adjusted assets?
18. How have the International Banking Act of 1978 and FDICIA of 1991 been detrimental to foreign banks in the United States?
19. What are some of the main features of the Foreign Bank Supervision Enhancement Act of 1991?
20. What changes did the Federal Deposit Insurance Reform Act of 2005 make to the deposit insurance assessment scheme for DIs?
21. Under the Federal Deposit Insurance Reform Act of 2005, how is a Category I deposit insurance premium determined?
22. Guernsey Bank has a composite CAMELS rating of 2, a total risk-based capital ratio of 10.2 percent, a Tier I risk based capital ratio of 5.2 percent, and a Tier I leverage ratio of 4.8 percent. What deposit insurance risk category does the bank fall into, and what is the bank's deposit insurance assessment rate?

Numeric Response

23. Two depository institutions have composite CAMELS ratings of 1 or 2 and are 'well capitalized.' Thus, each institution falls into the FDIC Risk Category I deposit insurance assessment scheme. Further, the institutions have the following financial ratios and CAMELS ratings:

	Institution 1	Institution 2
Tier I leverage ratio (%)	8.62	7.75
Loans past due 30-89 days/gross assets (%)	0.45	0.56
Nonperforming assets/gross assets (%)	0.35	0.50
Net loan charge-offs/gross assets (%)	0.28	0.32
Net income before taxes/risk-weighted assets (%)	2.15	1.86
CAMELS components:		
C	1	1
A	2	2
M	1	2
E	2	3
L	1	1
S	2	1

Calculate the deposit insurance assessment for each institution.

To determine the deposit insurance assessment for each institution, we set up the following tables:

24. Two depository institutions have composite CAMELS ratings of 1 or 2 and are "well capitalized." Thus, each institution falls into the FDIC Risk Category I deposit insurance assessment scheme. Further, the institutions have the following financial ratios and CAMELS ratings:

	Institution 1	Institution 2
Tier I leverage ratio (%)	10.25	7.00
Loans past due 30-89 days/gross assets (%)	0.60	0.82
Nonperforming assets/gross assets (%)	0.45	0.90
Net loan charge-offs/gross assets (%)	0.08	0.25
Net income before taxes/risk-weighted assets (%)	2.40	1.65
CAMELS components:		
C	1	2
A	1	1
M	1	1
E	2	1
L	1	3
S	2	3

Calculate the deposit insurance assessment for each institution.

25. BIG Bank has total assets of \$20 billion, a composite CAMELS rating of I, a weighted average CAMELS rating of 1.25, an S&P bond rating of AA, a Moody's bond rating of Aa3, and a Fitch bond rating of A+. Calculate the bank's deposit insurance assessment rate?
26. If the reserve computation period extends from May 18 through May 31, what is the corresponding reserve maintenance period? What accounts for the difference?

27. The average demand deposits of a bank during the most recent reserve computation period has been estimated at \$225 million over a 14-day period (Tuesday to Monday) and the corresponding daily vault cash during this period was \$4 million. The average daily reserves at the Fed during the 14-day reserve maintenance period has been \$16 million.
- What are the average daily required reserves to be held by the bank during the maintenance period?
 - Is the bank in compliance with the requirements?

28. The following net transaction accounts have been documented by a bank for the computation of its reserve requirements (in millions).

	Tuesday 11th	Wednesday 12th	Thursday 13 th	Friday 14th	Monday 17th
Demand deposits	\$300	\$250	\$280	\$260	\$280
	Tuesday 18th	Wednesday 19th	Thursday 20 th	Friday 21th	Monday 24th
Demand deposits	\$300	\$270	\$260	\$250	\$240

The average daily reserves at the Fed for the 14-day reserve maintenance period have been \$22.7 million per day, and the average vault cash for the computation period has been estimated to be \$2 million per day.

- What is the amount of the average daily required reserves to be held by the bank during the maintenance period?
- Is the bank in compliance with the requirements?

29. What is the contribution to the asset base of the following items under the Basel II requirements?
Under the U.S. capital-to-assets rule?
- a. \$10 million cash reserves.
 - b. \$50 million 91-day U.S. Treasury bills.
 - c. \$5 million U.K. government bonds, AAA rated.
 - d. \$1 million general obligation municipal bonds.
 - e. \$40 million repurchase agreements (against U.S. Treasuries).
 - f. \$500 million one-to four-family home mortgages.
 - g. \$500 million commercial and industrial loans, BBB rated.
 - h. \$100,000 performance-related standby letters of credit to a blue chip corporation.
 - i. \$7 million commercial letter of credit to a foreign, A rated corporation.
 - j. \$8 million bankers acceptance conveyed to a U.S., AA rated corporation.
 - k. \$17 million three-year loan commitment to a private agent.
 - l. \$17 million three-month loan commitment to a private agent.
 - m. \$30 million standby letter of credit to back a corporate issue of commercial paper.
 - n. \$4 million five-year interest rate swap with no current exposure (the counterparty is a private agent).
 - o. \$6 million two-year currency swap with \$500,000 current exposure (the counterparty is a private agent).

Scenario 13-1. Use the information to answer the following questions. Consider a bank's balance sheet as follows.

On-Balance-Sheet Items	Category	Face Value
Cash	1	\$121,600
Short-term government securities (<92 days)	1	5,400
Long-term government securities (> 92 days)	1	414,400
Federal reserve stock	1	9,800
Repos secured by federal agencies	2	159,000
Claims on U.S. depository institutions	2	937,900
Short-term (<1 year) claims on foreign banks	2	1,640,000
General obligations municipals	2	170,000
Claims on or guaranteed by federal agencies	2	26,500
Municipal revenue bonds	3	112,900
Commercial loans, BB + rated	4	6,645,700
Claims on foreign banks(>1 year)	4	5,800

Off-Balance-Sheet Items	Conversion Factor	Face Value
Guaranteed by U.S. Government:		
Loan commitments, AAA rated		
<1 year	0%	300
1-5 year	50%	1,140
Standby letters of credit, AA rated		
Performance related	50%	200
Other	100%	100

Backed by Domestic Depository Institution:

Loan commitments, BBB + rated		
<1 year	20%	\$ 1,000
>1 year	50%	3,000
Standby letters of credit, AA-rated		
Performance related	50%	200
Other	100%	56,400
Commercial letters of credit, BBB+ rated	20%	400

Backed by State or Local Government Revenues:

Loan commitments, BBB -rated		
>1 year	50%	\$ 100
Standby letters of credit, BBB rated		
Performance related	50%	135,400

Off-Balance-Sheet Items	Conversion Factor	Face Value
Extended to Corporate Customers:		
Loan commitments, CCC rated		
<1 year	0%	\$2,980,000
>1 year	50%	3,046,278
Standby letters of credit, BBB rated		
Performance related	50%	101,543
Direct credit substitute	100%	490,900
Commercial letters of credit, BB-rated	20%	78,978

Category II Interest Rate Market Contracts:
(current exposure assumed to be zero)

<1 year (notional amount)	0%	2,000
>1-5 year (notional amount)	.5%	5,000

30. Refer to Scenario 13-1. What is the bank's risk-adjusted asset base under Basel II?
31. Refer to Scenario 13-1. What are the bank's Tier I and total risk-based capital requirements?
32. Refer to Scenario 13-1. Using the leverage-ratio requirement, what is the U.S. bank's minimum regulatory capital requirement to keep it in the well-capitalized zone?
33. What is the bank's capital level if the par value of its equity is \$225,000; surplus value of equity is \$200,000; and qualifying perpetual preferred stock is \$50,000? Does the bank meet Basel (Tier I) adequate capital standards? Does the bank comply with the well-capitalized leverage-ratio requirement?

Ch 13

Answer Section

SHORT ANSWER

1. ANS:
Regulators have issued several guidelines to insure the safety and soundness of CBs:
 - i. CBs are required to diversify their assets and not concentrate their holdings of assets. For example, banks cannot lend more than 10% of their equity to a single borrower.
 - ii. CBs are required to maintain minimum amounts of capital to cushion any unexpected losses. In the case of banks, the Basle standards require a minimum core and supplementary capital of 8% of their risk-adjusted assets.
 - iii. Regulators have set up guaranty funds such as BIF for commercial banks, SIPC for securities firms, and state guaranty funds for insurance firms to protect individual investors.
 - iv. Regulators also engage in periodic monitoring and surveillance, such as on-site examinations, and request periodic information from the firms.

PTS: 10

BNK: Chapter 13 – Bank Regulation, EOC

2. ANS:

Since 1863, the United States has experienced several phases of regulating the links between the commercial and investment banking industries. Early legislation, such as the 1863 National Bank Act, prohibited nationally chartered commercial banks from engaging in corporate securities activities such as underwriting and distributing of corporate bonds and equities. As the United States industrialized and the demand for corporate finance increased, however, the largest banks found ways around this restriction by establishing state-chartered affiliates to do the underwriting.

After the 1929 stock market crash, the United States entered a major recession and approximately 10,000 banks failed between 1930 and 1933. A commission of inquiry (the Pecora Commission) established in 1931 began investigating the causes of the crash. Its findings resulted in new legislation, the 1933 Banking Act, or the Glass-Steagall Act. The Glass-Steagall Act sought to impose a rigid separation between commercial banking (taking deposits and making commercial loans) and investment banking (underwriting, issuing, and distributing stocks, bonds, and other securities). The act defined three major securities underwriting exemptions. First, banks were to continue to underwrite new issues of Treasury bills, notes, and bonds. Second, banks were allowed to continue underwriting municipal general obligation (GO) bonds. Third, banks were allowed to continue engaging in private placements of all types of bonds and equities, corporate and noncorporate.

For most of the 1933-1963 period, commercial banks and investment banks generally appeared to be willing to abide by the letter and spirit of the Glass-Steagall Act. Between 1963 and 1987, however, banks challenged restrictions on municipal revenue bond underwriting, commercial paper underwriting, discount brokerage, managing and advising open- and closed-end mutual funds, underwriting mortgage-backed securities, and selling annuities. In most cases, the courts eventually permitted these activities for commercial banks.

With this onslaught and the de facto erosion of the Glass-Steagall Act by legal interpretation, the Federal Reserve Board in April 1987 allowed commercial bank holding companies to establish separate Section 20 securities affiliates. Through these Section 20 affiliates, banks can conduct all their "ineligible" or gray area securities activities, such as commercial paper underwriting, mortgage-backed securities underwriting, and municipal revenue bond underwriting.

Significant changes occurred in 1997 as the Federal Reserve and the Office of the Comptroller of the Currency (OCC) took action to expand bank holding companies' permitted activities. In particular, the Federal Reserve allowed commercial banks to directly acquire existing investment banks rather than establish completely new investment bank subsidiaries.

The result was a number of mergers and acquisitions between commercial and investment banks in 1997 and 1998. The erosion of the product barriers between the commercial and investment banking industries was not been all one way. Large investment banks such as Merrill Lynch have increasingly sought to offer banking products. For example, in the late 1970s, Merrill Lynch created the cash management account (CMA), which allowed investors to own a money market mutual fund with check-writing privileges into which bond and stock sale proceeds could be swept on a daily basis. This account allows the investor to earn interest on cash held in a brokerage account. In addition, investment banks have been major participants as traders and investors in the secondary market for loans to less-developed countries and other loans.

Finally, after years of ~~homemade~~ deregulation by banks and securities firms, in 1999 regulators passed the Financial Services Modernization Act which eliminated the Glass-Steagall barriers between commercial banks and investment banks (as well as insurance companies). The bill allowed national banks to place certain activities, including securities underwriting, in bank subsidiaries regulated by the Office of the Comptroller of the Currency. Thus, after over 65 years of separation between investment banking and commercial banking the Financial Services Modernization Act of 1999 opened the door for the recreation of the full service financial institution.

PTS: 10 BNK: Chapter 13 – Bank Regulation, EOC

3. ANS:

- a. Yes, the bank is in compliance with the laws. The Financial Services Modernization Bill of 1999 allows commercial banks and investment banks to own each other with no limits on income.
- b. Yes, the bank is in compliance with the laws. The bank would not have been in compliance prior to the Financial Services Modernization Bill of 1999 because its revenues exceed the 25% of total revenues earned from allowable investment banking activities in the Glass-Steagall Act.

PTS: 10 BNK: Chapter 13 – Bank Regulation, EOC

4. ANS:

The Financial Services Modernization Act of 1999 completely changed the landscape for insurance activities as it allowed bank holding companies to open insurance underwriting affiliates and insurance companies to open commercial bank as well as securities firm affiliates through the creation of a financial service holding company. With the passage of this Act banks no longer have to fight legal battles in states such as Texas and Rhode Island to overcome restrictions on their ability to sell insurance in these states. The insurance industry also applauded the Act as it forced banks that underwrite and sell insurance to operate under the same set of state regulations (pertaining to their insurance lines) as insurance companies operating in that state. Under the new Act, a financial services holding company that engages in commercial banking, investment banking, and insurance activities will be functionally regulated. This means that the holding company's banking activities will be regulated by bank regulators (such as the Federal Reserve, FDIC, OCC), its securities activities will be regulated by the SEC, and its insurance activities will be regulated by up to 50 state insurance regulators.

PTS: 10 BNK: Chapter 13 – Bank Regulation, EOC

5. ANS:

The likely effect of this situation is to strengthen the banks' case for deregulation and increased ability of commercial banks to offer more financial services such as investment banking, brokerage, and insurance.

PTS: 10 BNK: Chapter 13 – Bank Regulation, EOC

6. ANS:

The main feature of the Riegle-Neal Act of 1995 is the removal of barriers to interstate banking. In September 1995, bank holding companies will be allowed to acquire banks in other states. In 1997, banks will be allowed to convert out-of-state subsidiaries into branches of a single interstate bank. The act should result in significant consolidations and acquisitions and the emergence of very large banks with branches all over the country, as currently practiced in the rest of the world. The law, as of now, does not allow the establishment of de novo branches unless allowed by the individual states.

PTS: 10

BNK: Chapter 13 – Bank Regulation, EOC

7. ANS:

A multibank holding company (MBHC) is a parent company that acquires more than one bank as a direct subsidiary. An OBHC is a parent bank holding company that has a single bank subsidiary and a number of other nonbank financial subsidiaries. MBHCs were established during the first half of the twentieth century as a response to restrictions on establishing branches across state lines. MBHCs establish subsidiaries across state lines. The Douglas Amendment placed restrictions on new MBHCs. In response to this restriction, one-bank holding companies (OBHC) were established. By creating a OBHC and establishing across state lines various nonbank subsidiaries that sell financial services such as consumer finance, leasing, and data processing, a bank could almost replicate an out-of-state banking presence.

PTS: 10

BNK: Chapter 13 – Bank Regulation, EOC

8. ANS:

The market value of equity is more relevant than book value because in the event of a bankruptcy, the liquidation (market) values will determine the FI's ability to pay the various claimants.

PTS: 10

BNK: Chapter 13 – Bank Regulation, EOC

9. ANS:

The leverage ratio is the ratio of book value of core capital to the book value of total assets, where core capital is book value of equity plus qualifying cumulative perpetual preferred stock plus minority interests in equity accounts of consolidated subsidiaries.

PTS: 10

BNK: Chapter 13 – Bank Regulation, EOC

10. ANS:

The prompt corrective action provision requires regulators to appoint a receiver for the bank when the leverage ratio falls below 2 percent. Thus, even though the bank is technically not insolvent in terms of book value of equity, the institution can be placed into receivership.

PTS: 10

BNK: Chapter 13 – Bank Regulation, EOC

11. ANS:

First, closing a bank when the leverage ratio falls below 2 percent does not guarantee that the depositors are adequately protected. In many cases of financial distress, the actual market value of equity is significantly negative by the time the leverage ratio reaches 2 percent. Second, total assets used as the denominator of the ratio does not consider the different credit and interest rate risks of the individual assets. Third, the ratio does not capture the contingent risk of the off-balance sheet activities of the bank.

PTS: 10 BNK: Chapter 13 – Bank Regulation, EOC

12. ANS:

The Basle Agreement identifies the risk-based capital ratios agreed upon by the member countries of the Bank for International Settlements. The ratios are to be implemented for all commercial banks under their jurisdiction. Further, most countries in the world now have accepted the guidelines of this agreement for measuring capital adequacy.

PTS: 10 BNK: Chapter 13 – Bank Regulation, EOC

13. ANS:

The major feature of the Basle Agreement is that the capital of banks must be measured as an average of credit-risk-adjusted total assets both on and off the balance sheet.

PTS: 10 BNK: Chapter 13 – Bank Regulation, EOC

14. ANS:

The total risk-based capital ratio divides total capital by the total of risk-adjusted assets. This ratio must be at least 8 percent for a bank to be considered adequately capitalized. Further, at least 4 percent of the risk-based assets must be supported by core capital.

PTS: 10 BNK: Chapter 13 – Bank Regulation, EOC

15. ANS:

Zone 1: Well capitalized. The total risk-based capital ratio (RBC) ratio exceeds 10 percent. No regulatory action is required.

Zone 2: Adequately capitalized. The RBC ratio exceeds 8 percent, but is less than 10 percent. Institutions may not use brokered deposits except with the permission of the FDIC.

Zone 3: Undercapitalized. The RBC ratio exceeds 6 percent, but is less than 8 percent. Requires a capital restoration plan, restricts asset growth, requires approval for acquisitions, branching, and new activities, disallows the use of brokered deposits, and suspends dividends and management fees.

Zone 4: Significantly undercapitalized. The RBC ratio exceeds 2 percent, but is less than 6 percent. Same as zone 3 plus recapitalization is mandatory, places restrictions on deposit interest rates, interaffiliate transactions, and the pay level of officers.

Zone 5: Critically undercapitalized. The RBC ratio is less than 2 percent. Places the bank in receivership within 90 days, suspends payment on subordinated debt, and restricts other activities at the discretion of the regulator.

The mandatory provisions for each of the zones described above include the penalties for any of the zones prior to the specific zone.

PTS: 10 BNK: Chapter 13 – Bank Regulation, EOC

16. ANS:

Tier I capital is comprised of the most junior (subordinated) securities issued by the firm. These include equity and qualifying perpetual preferred stock. Tier II capital is senior to Tier I, but subordinated to deposits and the deposit insurer's claims. These include preferred stock with fixed maturities and long-term debt with minimum maturities over 5 years. Tier II capital often is called supplementary or secondary capital.

PTS: 10 BNK: Chapter 13 – Bank Regulation, EOC

17. ANS:

The two components are credit risk-adjusted on-balance-sheet assets and credit risk-adjusted off-balance-sheet assets.

PTS: 10 BNK: Chapter 13 – Bank Regulation, EOC

18. ANS:

Foreign banking activities have been hampered by both pieces of legislation. Since U.S. banking legislation is, in many instances, stricter than regulations abroad, this reduces the attractiveness of opening full scale branches of foreign banks in the U.S. Foreign banks will have to justify continued activity in the U.S. market on the grounds of return to the entry. Since the U.S. banking market can be accessed in ways short of full scale bank branches, the ultimate impact may be a larger foreign bank presence in the U.S., utilizing less regulated representative offices or joint ventures. This will reduce the regulatory scrutiny over foreign banking activities in the U.S. rather than increase it, as was the intended goal of the legislation.

PTS: 10 BNK: Chapter 13 – Bank Regulation, EOC

19. ANS:

The main features of the Foreign Bank Supervision Enhancement Act of 1991 are:

- i. All foreign banks need the approval of the Fed to open new branches or subsidiaries. At the minimum, they need to satisfy two criteria: first, the regulator of the home country must supervise its activities on a consolidated basis, and second, the regulator must provide the information to the Fed for its review.
- ii. It gives the Fed the power to close down foreign banks if any local laws are violated.
- iii. The Fed has the power to examine the books of each branch and agency and is expected to examine them at least once a year.

The following questions are related to Appendix 13A, 13B, and 13D material.

PTS: 10

BNK: Chapter 13 – Bank Regulation, EOC

20. ANS:

The Federal Deposit Insurance Reform Act of 2005 instituted a deposit insurance premium scheme, effective January 1, 2007 that combined examination ratings, financial ratios, and for large banks (with total assets greater than \$10 billion) long term debt issuer ratings. The new rules consolidate the existing nine risk categories into four, named Risk Categories I through IV. Risk Category I contains all well-capitalized institutions in Supervisory Group A (generally those with CAMELS composite ratings of 1 or 2). Risk Category II contains all institutions in Supervisory Groups A and B (generally those with CAMELS composite ratings of 1, 2 or 3), except those in Risk Category I and undercapitalized institutions. Risk Category III contains all undercapitalized institutions in Supervisory Groups A and B, and institutions in Supervisory Group C (generally those with CAMELS composite ratings of 4 or 5) that are not undercapitalized. Risk Category IV contains all undercapitalized institutions in Supervisory Group C.

PTS: 10

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21. ANS:

Within Risk Category I, the final rule combines CAMELS component ratings with financial ratios to determine an institution's assessment rate. For large institutions that have long term debt issuer ratings, the final rule differentiates risk by combining CAMELS component ratings with these debt ratings. For Risk Category I institutions, each of five financial ratios component ratings will be multiplied by a corresponding pricing multiplier, as listed in Table 19-4. The five financial ratios are: Tier 1 Leverage Ratio; Loans past due 30-89 days/gross assets; Nonperforming assets/gross assets; Net loan charge-offs/gross assets; and Net income before taxes/risk-weighted assets. The weighted average of CAMELS component ratings is created by multiplying each component by a stated percentage and adding the products. The sum of these products will be added to or subtracted from a uniform amount, set at 4.954 as of January 1, 2007. The resulting sum will equal an institution's assessment rate.

Large insured depository institutions in Risk Category I that have at least one long-term debt issuer rating shall have their assessment rates determined using the supervisory and debt ratings method. Specifically, the CAMELS component ratings is weighted using the same weights. Long-term debt issuer ratings are converted to numerical values between 1 and 3 and the converted values are averaged. The weighted average CAMELS rating and the average of converted long-term debt issuer ratings each will be multiplied by 1.176 and the products are summed. Finally, -1.882 is added to this result. The resulting sum is the institution's assessment rate.

PTS: 10

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22. ANS:

With this CAMELS rating and capital ratios, Guernsey Bank falls into the Category II risk category and has a deposit insurance assessment rate of 10 cents per \$100 of deposits.

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NUMERIC RESPONSE

23. ANS:

<u>CAMELS Components:</u>		
C	1x.25=.25	1x.25=.25
A	2x.20=.40	2x.20=.40
M	1x.25=.25	2x.25=.50
E	2x.10=.20	3x.10=.30
L	1x.10=.10	1x.10=.10
S	2x.10=.20	1x.10=.10
Weighted Average CAMELS <u>Component</u>	<u>1.40</u>	<u>1.65</u>

Base Assessment Rates for Two Institutions					
A	B	C	D	E	F
		Institution 1	Institution 2		
	Pricing multiplier	Risk measure value	Contribution to Assessment rate	Risk Measure Value	Contribution to Assessment Rate
Uniform Amount	4.954		4.954		4.954
Tier I Leverage Ratio (%)	(0.042)	8.62	(0.362)	7.75	(0.326)
Loans Past Due 30-89 Days/Gross Assets (%)	0.372	0.45	0.167	0.56	0.208
Nonperforming Assets/Gross Assets (%)	0.719	0.35	0.252	0.50	0.360
Net Loan Charge-Offs/Gross Assets (%)	0.841	0.28	0.235	0.32	0.269
Net Income before Taxes/Risk-Weighted Assets (%)	(0.420)	2.15	(0.903)	1.86	(0.781)
Weighted Average CAMELS Component Ratings	0.534	1.40	0.748	1.65	0.881
Sum of Contributions			5.091		5.565
Assessment Rate		5.091		5.565	

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24. ANS:

To determine the deposit insurance assessment for each institution, we set up the following tables:

<u>CAMELS Components:</u>		
C	1x.25=.25	2x.25=.50
A	1x.20=.20	1x.20=.20
M	1x.25=.25	1x.25=.25
E	2x.10=.20	1x.10=.10
L	1x.10=.10	3x.10=.30
S	2x.10=.20	3x.10=.30
Weighted Average CAMELS Component	<u>1.20</u>	<u>1.65</u>

Base Assessment Rates for Two Institutions

<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>	<u>F</u>
	<u>Institution</u> <u>1</u>	-	<u>Institution</u> <u>2</u>		
	Pricing Multiplier	Risk Measure Value	Contributio n to Assessment Rate	Risk Measure Value	Contribution to Assessment Rate
Uniform Amount	4.954		4.954		4.954
Tier I Leverage Ratio (%)	(0.042)	10.25	(0.430)	7.00	(0.294)
Loans Past Due 30-89 Days/Gross Assets (%)	0.372	0.60	0.223	0.82	0.305
Nonperforming Assets/Gross Assets (%)	0.719	0.45	0.323	0.90	0.647
Net Loan Charge-Offs /Gross Assets (%)	0.841	0.08	0.067	0.25	0.210
Net Income before Taxes/Risk-Weight ed Assets (%)	(0.420)	2.40	(1.008)	1.65	(0.693)
Weighted Average CAMELS Component <u>Ratings</u>	<u>0.534</u>	<u>.20</u>	<u>0.641</u>	<u>1.65</u>	<u>0.881</u>
<u>Sum of</u> <u>Contributions</u>		<u>4.770</u>	-	<u>6.010</u>	
<u>Assessment Rate</u>		<u>5.000</u>		<u>6.010</u>	

For Institution 1, the sum is 4.770. However, the minimum assessment rate for Category I banks is 5 basis points.

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25. ANS:

The deposit assessment rate is calculated as:

$$\begin{aligned} \text{S\&P } 1.15 \quad \text{Moody's } 1.30 \quad \text{Fitch } 1.50 \Rightarrow \text{Average} &= 1.3167 \\ \text{Assessment rate} &= (1.25 + 1.3167) \times 1.176 - 1.882 + 3 = 6.018 \end{aligned}$$

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26. ANS: The reserve maintenance period would extend from June 17 through June 30. It starts 30 days later than the start of the reserve computation period. This makes it easier for bank managers to calculate and meet their reserve requirements and increases the accuracy of information on aggregate required reserve balances.

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27. ANS:

a. Minimum average daily required reserves:

$$\begin{aligned} &= (\$7.0 \text{ million} \times 0) + (\$47.6 \text{ million} - \$7.0 \text{ million}) \times (0.03) + (\$225 - \$47.6 \text{ million}) \times (0.10) \\ &= \$0\text{m} + \$1.218\text{m} + \$17.74\text{m} = \$18.958 \text{ million} \end{aligned}$$

b. The average reserves maintained during this period is \$20 million. This is more than the required amount.

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28. ANS:

$$\begin{aligned} \text{Average daily net transaction accounts} &= (300\text{m} + 250\text{m} + 280\text{m} + 260\text{m} + 260\text{m} + 260\text{m} + 280\text{m} \\ &+ 300\text{m} + 270\text{m} + 260\text{m} + 250\text{m} + 250\text{m} + 250\text{m} + 240\text{m}) / 14 = 3,710\text{m} / 14 = 265\text{m} \end{aligned}$$

$$\begin{aligned} \text{Reserve requirement} &= (7.0\text{m} - 0)(0) + (47.6\text{m} - 7.0\text{m})(0.03) + (265\text{m} - 47.6\text{m})(0.10) = 1.218\text{m} + \\ &21.74\text{m} = \$22.958\text{m} \end{aligned}$$

$$\text{b. Average vault cash and reserves maintained} = \$22.7\text{m} + \$2\text{m} = \$24.7\text{m}$$

$$\text{Excess over required reserves} = \$24.7\text{m} - \$22.958\text{m} = \$1.742\text{m}$$

The bank is in compliance with required reserves.

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29. ANS:

	<u>Basel II Asset Base</u>	<u>Capital-Assets Base</u>
--	----------------------------	----------------------------

- | | | |
|----|---------------|---------------|
| a. | \$0 | \$10 million |
| b. | \$0 | \$50 million |
| c. | \$0 | \$5 million |
| d. | \$200,000 | \$1 million |
| e. | \$8 million | \$40 million |
| f. | \$250 million | \$500 million |
| g. | \$500 million | \$500 million |
| h. | \$10,000 | \$0 |
| i. | \$700,000 | \$0 |
| j. | \$320,000 | \$0 |
| k. | \$8.5 million | \$0 |
| l. | \$3.4 million | \$0 |
| m. | \$15 million | \$0 |
| n. | \$20,000 | \$0 |
| o. | \$800,000 | \$0 |

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30. ANS:

<u>On-Balance-Sheet Items</u>	<u>Category (weight)</u>	Face Value	Value Adj.Amt.
Cash	1(0%)	\$121,600	0
Short-term government securities (< 92 days)	1 (0%)	5,400	0
Long-term government securities (> 92 days)	1 (0%)	414,400	0
Federal Reserve Stock	1 (0%)	9,800	0
Repos secured by Federal Agencies	2 (20%)	159,000	31,800
Claims on U.S. Depository Institutions	2 (20%)	937,900	187,580
Short-term (< 1 yr.) claims on foreign banks	2 (20%)	1,640,000	328,000
General obligations municipals	2 (20%)	170,000	34,000
Claims on or guaranteed by federal agencies	2 (20%)	26,500	5,300
Municipal revenue bonds	3 (50%)	112,900	56,450
Commercial loans, BB+ rated	4 (100%)	6,645,700	6,645,700
Claims on foreign banks (> 1 yr.)	4 (100%)	<u>5,800</u>	<u>5,800</u>
On Balance Sheet Risk Adjusted Base:	\$10,249,000	\$7,294,630	

Off-Balance-Sheet Items

	Face Value	Conversion Factor	Credit-Equivalent Amount	Risk Adj. Amount
Guaranteed by U.S. government:				
Loan commitments, AAA rated:				
< 1 year	20%	300	60	0
1 - 5 years	50%	1,140	570	0
Standby letters of credit, AA rated:				
Performance related	50%	200	100	0
Other	100%	100	100	0
Backed by domestic depository institution:				
Loan commitments, BBB+ rated:				
< 1 year	20%	1,000	20	20
> 1 year	100%	3,000	1,500	1,500
Standby letters of credit, AA- rated:				
Performance related	50%	200	100	20
Other	100%	56,400	56,400	11,280
Commercial letters of credit	20%	400	80	80
Backed by state or local government revenues:				
Loan commitments, BBB- rated:				
> 1 year	50%	100	50	25
Standby letters of credit, AAA rated				
Performance related	50%	135,400	67,700	33,850
Extended to corporate customers:				
Loan commitments, CCC rated:				
< 1 year	20%	2,980,000	596,000	894,000
> 1 year	50%	3,046,278	1,523,139	2,284,708
Standby letters of credit, BBB rated:				
Performance related	50%	101,543	50,772	50,772
Direct credit substitute	100%	485,000	485,000	485,000
Commercial letters of credit, AA- rated	20%	78,978	15,796	15,796

Forward agreements	100%	5,900	5,900	5,900
Category II interest rate market contracts: (current exposure assumed to be zero.)				
< 1 year (notional amount)	0%	2,000	0	0
1 - 5 years (notional amount)	0.5%	5,000	25	25

The risk-adjusted asset base under Basel II is:

	<u>Basel II</u>
On-balance-sheet risk-adjusted asset base	\$7,294,630
Off-balance-sheet risk-adjusted asset base	<u>\$3,782,976</u>
Total risk-adjusted asset base	\$11,077,606

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31. ANS: Basle II: Tier I: 4% Capital requirement x 11,077,609 = \$443,104
Total: 8% Capital requirement x 11,077,609 = \$886,208

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32. ANS: 5% Capital Requirement x \$10,249,000 (Book value of assets) = \$512,450

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33. ANS: Tier I capital = \$475,000

The bank meets the Basel II standards for adequate capital because Tier I capital is above 4%, i.e., $\$475,000/\$11,077,606 = 4.29$. The bank does not comply with the well-capitalized leverage ratio because the bank's leverage ratio is only $\$475,000/\$10,249,000 = 4.63\% < 5\%$. The bank does meet the adequately capitalized leverage ratio requirement.

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