**Solutions for End-of-Chapter Questions and Problems: Chapter Nineteen**

1. What is a contagious run? What are some of the potentially serious adverse social welfare effects of a contagious run? Do all types of FIs face the same risk of contagious runs?

A contagious run is an unjustified panic condition in which liability holders withdraw funds from an FI without first determining whether the institution is at risk. This action usually occurs at a time that a similar run is occurring at a different institution that is at risk. The contagious run may have an adverse effect on the level of savings that may affect wealth transfers, the supply of credit, and control of the money supply. Depository institutions and insurance companies face the most serious risk of contagious runs.

1. How does federal deposit insurance help mitigate the problem of bank runs. What other elements of the safety net are available to DIs in the United States?

Bank runs are costly to society since they create liquidity problems and can have a contagion effect. Because of the first-come, first-serve nature of deposit liabilities, DI depositors have incentives to run on the DI if they are concerned about solvency. As a result of the external cost of runs on the safety and soundness of the entire banking system, the Federal Reserve has put into place a safety net to remove the incentives to undertake DI runs. The primary pieces of this safety net are deposit insurance and other guaranty programs that provide assurance that funds are safe even in cases when the FI is in financial distress. Other elements of the federal safety net are access to the lender of last resort (discount window borrowing), reserve requirements, and minimum capital guidelines.

1. What major changes did the Financial Institutions Reform, Recovery, and Enforcement Act of 1989 make to the FDIC and the FSLIC?

The FIRREA Act of 1989 closed down the FSLIC, the agency that used to provide deposit insurance to savings associations. The responsibility of providing insurance to these DIs was transferred to the FDIC, which manages it through the Deposit Insurance Fund.

1. Contrast the two views on, or reasons why, depository institution insurance funds can become insolvent.

One view is that insolvency can be explained by external events in the financial environment such as the rise in interest rates and oil prices that took place in the early 1980s or the crash of the housing market in the 2000s. The other view is that deposit insurance brings about the types of behavior that lead to eventual insolvency. In particular, deposit insurance contributes to the moral hazard problem whereby DI owners and managers are induced to take on risky projects because the presence of deposit insurance substantially reduces the adverse consequences to the depositors of such behavior.

1. What is moral hazard? How did the fixed-rate deposit insurance program of the FDIC contribute to the moral hazard problem of the savings association industry? What other changes in the savings association environment during the 1980s encouraged the developing instability of the industry?

Moral hazard occurs in the depository institution industry when the provision of deposit insurance or other liability guarantees encourages the institution to accept asset risks that are greater than the risks that would have been accepted without such liability insurance.

The fixed-rate deposit insurance administered by the FDIC created a moral hazard problem because it did not differentiate between the activities of risky and conservative lending institutions. Consequently, during periods of rising interest rates, savings associations holding fixed-rate assets were finding it increasingly difficult to obtain funds at lower rates. Since the deposits were insured, managers found it easier to engage in risky ventures in order to offset the losses on their fixed-rate loans. In addition, as the number of failures increased in the 1980s, regulators became reluctant to close down savings associations because the fund was being slowly depleted. The combination of excessive risk-taking together with a forbearance policy followed by the regulators led to the savings association industry crisis.

1. How does a risk-based insurance program solve the moral hazard problem of excessive risk taking by FIs? Is an actuarially fair premium for deposit insurance always consistent with a competitive banking system?

A risk-based insurance program should deter FIs from engaging in excessive risk-taking as long as it is priced in an actuarially fair manner. Such pricing currently is being practiced by insurance firms in the property-casualty sector. However, since the failure of commercial banks can have significant social costs, regulators have a special responsibility towards maintaining their solvency, even providing them with some form of subsidies. In a completely free market system, it is possible that DIs located in sparsely populated areas may have to pay extremely high premiums to compensate for a lack of diversification or investment opportunities. These DIs may have to close down unless subsidized by the regulators. Thus, a strictly risk-based insurance system may not be compatible with a truly competitive banking system.

1. What are three suggested ways a deposit insurance contract could be structured to reduce moral hazard behavior?

Deposit insurance contracts could be structured to reduce moral hazard behavior by (1) increasing stockholder discipline, (2) increasing depositor discipline, and (3) increasing regulator discipline.

1. What are some ways of imposing stockholder discipline to prevent FI managers from engaging in excessive risk taking?

Two ways of imposing stockholder discipline to prevent excessive risk taking are (a) through a risk-based deposit insurance program and (b) through increased capital requirements and increased disclosure.

Risk-based deposit insurance premiums ensure that DIs engaging in riskier activities will have to pay higher premiums. One reason for the savings institution crisis was the fixed-rate deposit insurance premiums that did not differentiate between risky and conservative DIs. As a result, stockholders of DIs in financial difficulties had nothing to lose by investing in projects that had high payoffs because depositors were protected by the FDIC insurance program.

Stockholder discipline also is increased if DIs are required to hold more capital as well as required to disclose more financial information. The more capital a DI has, the less likely the failure of a DI in the event of a decline in the market value of assets. This protects not only the depositors but also the FDIC, which provides the insurance. Greater disclosure also allows regulators and outside analysts to make more informed judgments on the viability of the institution, raising the stock prices of better-managed DIs and lowering the stock prices of those that are excessively risky.

9. How is the provision of deposit insurance by the FDIC similar to the FDIC’s writing a put option on the assets of a DI that buys the insurance? What two factors drive the premium of the option?

As long as a DI is profitable, the owners of the DI benefit by maintaining a positive market value of equity. If the DI’s performance falters to the point that net worth becomes negative, the owners can put the assets back to the FDIC who will pay off the insured depositors and sell the assets. The premium on this put option, or deposit insurance, is positively related to the level of risk of the assets and to the amount of leverage maintained by the DI.

10. What four factors were provided by FDICIA as guidelines to assist the FDIC in the establishment of risk-based deposit insurance premiums? What happened to the level of deposit insurance premiums in the late 1990s and early 2000s? Why?

The FDIC must base deposit insurance premiums on (1) different categories and concentrations of assets, (2) different categories and concentrations of liabilities, (3) other factors that affect the probability of loss, and (4) the revenue needs of the insurer. In most cases, the ranking of an institution is based on regulators’ judgments regarding asset quality, loan underwriting standards, and other operating risks.

In the mid-1990s, as the industry risk profile improved and the revenue needs of the FDIC insurance funds decreased and the amount of the minimum risk premium fell to zero for most banks. At the time, regulations restricted the FDIC form charging premiums to well-capitalized and highly rated DIs as long as the insurance fund reserves were above 1.25 percent of insured deposits. As a result over 90 percent of all insured DIs did not pay deposit insurance premiums in the late 1990s and early 2000s. At the time, regulations restricted the FDIC from charging premiums to well-capitalized and highly rated DIs as long as the insurance fund reserves were above 1.25 percent of insured deposits. As a result over 90 percent of all insured DIs did not pay deposit insurance premiums in the late 1990s and early 2000s. In the early 2000s, the FDIC identified several weaknesses with the existing system of deposit insurance that it felt needed to be corrected. Among these was that the system did not effectively price risk. The FDIC argued that it should charge regular premiums for risk regardless of the reserve levels of the fund. Beginning in 2009, the FDIC began calculating deposit insurance premiums based on a more aggressively risk-based system. Under this scheme, the lowest risk DIs paid a minimum of 5 cents per $100 of deposits for deposit insurance, while the highest risk DIs paid 43 cents per $100 of deposits. Under the FDIC Reform Act, if the reserve ratio drops below 1.15 percent─or the FDIC expects it to do so within six months─the FDIC must, within 90 days, establish and implement a plan to restore the DIF to 1.15 percent within five years. Such was the case in March 2008 when the FDIC reserve ratio dropped to 1.19 percent. At this point the FDIC was certain that the reserve ratio would drop below 1.15 by the end of the next quarter. Accordingly, the FDIC developed and implemented (on April 1, 2009) a restoration plan for the DIF. The plan was revised in April 2012 such that the safest DIs pay 0.05 percent and the riskiest Dis pay 0.45 percent of their average total assets less average tangible equity. The assessment rates can be reduced as the FDIC reserve ratio rises above 1.15 percent.

11. What is capital forbearance? How does a policy of forbearance potentially increase the costs of financial distress to the insurance fund as well as the stockholders?

Capital forbearance refers to regulators’ permitting an FI with depleted capital to continue to operate. The primary advantage occurs in the short run through the savings of liquidation costs. In the long run, the likely cost is that the poorly managed FI will become larger, more risky, but no more solvent. Eventually even larger liquidation costs must be incurred.

12. Under what conditions may the implementation of minimum capital guidelines, either risk-based or non-risk-based, fail to impose stockholder discipline as desired by the regulators?

Regulators must be willing to enforce immediately corrective action provisions against DIs that violate the minimum capital guidelines.

13. Why did the fixed-rate deposit insurance system fail to induce insured and uninsured depositors to impose discipline on risky DIs in the United States in the 1980s?

The fixed-rate deposit insurance system understandably provided no incentives to depositors to discipline the actions of DIs since they were completely insured for deposits of up to $100,000 per account per DI. Uninsured depositors also had few incentives to monitor the activities of DIs because regulators had been reluctant to close down failing DIs, especially larger DIs. This is because of the anticipated widespread social implications. As a result, both insured and uninsured depositors were usually protected against DI losses, reducing the incentives to monitor the actions of DIs.

a. How is it possible to structure deposits in a DI to reduce the effects of the insured ceiling?

Deposits are insured by the FDIC up to $250,000 per person account per DI. Therefore, individual depositors could expand coverage beyond $250,000 by placing deposits as joint accounts and by having accounts in many DIs at the same time.

b. What are brokered deposits? Why are brokered deposits considered more risky than nonbrokered deposits by DI regulators?

Individuals and companies who wish to place more than $250,000 of deposits in DIs often will hire brokers to place these deposits in blocks of $250,000 in DIs that pay the highest interest rates. This activity is considered risky by regulators for two reasons. First, DIs willing to pay the highest rates often have the highest need for deposits from a liquidity standpoint. Second, when the deposits mature, the risk of withdrawal may force the DI to pay even higher rates to keep the deposits. As a result, this higher cost of funds may force the DI to engage in even riskier lending activities.

c. What trade-offs were weighed in the decision to leave the deposit insurance ceiling at $100,000 in 2005 and then increase the ceiling to $250,000?

The 2005 decision was based on the idea that lowering the deposit insurance ceiling potentially would give depositors the incentive to better monitor the risk of DIs. However, such monitoring may also allow these depositors to run from DIs that became too risky. Such action would perhaps cause more DIs to fail that would put increased solvency pressure on the insurance fund.

During the financial crisis of 2008-2009, in an attempt to provide stability to the U.S. banking system, the Troubled Asset Relief Program (or TARP) that gave the U.S. Treasury funds to buy “toxic” mortgages and other securities from financial institutions also called for the FDIC to increase the deposit insurance limit to $250,000 from $100,000 per person per institution. At this time, the FDIC was more concerned about the possibility of contagious runs as a few major DIs (e.g., Washington Mutual) failed or nearly failed. The FDIC wanted to instill confidence in the banking system and made the change to avoid massive depositor runs from many of the troubled (and even safer) DIs, more DI failures, and an even larger collapse of the financial system.

14. What changes did the Federal Deposit Insurance Reform Act of 2005 make to the deposit insurance cap?

The Federal Deposit Insurance Reform Act of 2005 left the deposit insurance cap at $100,000 per person per account. The Act also increased deposit insurance coverage for retirement accounts from $100,000 to $250,000. During the financial crisis of 2008-2009, in an attempt to provide stability to the U.S. banking system, the TARP called for the FDIC to increase the deposit insurance limit to $250,000 from $100,000 per person per institution.

15. What is the too-big-to-fail doctrine? What factors caused regulators to act in a way that caused this doctrine to evolve?

Large DIs are not generally allowed to fail because of the draining effects on the resources of the insurance funds and the fear of contagious or systemic runs spreading to other large DIs. Thus, the fear of significant negative effects on the financial system usually meant that both large and small depositors in large DIs are protected. Indeed, during the financial crisis of 2008-2009, the Federal Reserve’s rescue of FIs such as Bear Stearns, AIG, and Citigroup and the $200 billion invested in over 630 banks through the Treasury Department’s Capital Purchase Program demonstrated that the TBTF bailouts reached much further than anyone would have predicted.

16. What are some of the essential features of the FDICIA of 1991 with regard to the resolution of failing DIs?

The FDICIA of 1991 made it very difficult for regulators to delay the closing of failing DIs unless the danger of a systemic risk can be shown. They are expected to use the least cost resolution (LCR) strategy to close down DIs, and shareholders and uninsured depositors are expected to bear the brunt of the loss. Unlike in prior years, the FDIC only subsidizes if the liquidated assets are not sufficient to cover the insured deposits. The General Accounting Office has also been authorized to audit failure resolutions used by regulators to ensure that the least cost strategy has been adopted.

a. What is the least-cost resolution (LCR) strategy?

The LCR requires the cost of each failure resolution alternative to be evaluated on a present value basis.

b. When can the systemic risk exemption be used as an exception to the LCR policy of DI closure methods?

The systemic risk exemption can be used only when it can be shown that the closure of a large DI will cause a significant threat to the entire financial system.

c. What procedural steps must be taken to gain approval for using the systemic risk exemption?

Use of the systemic risk exemption requires the approval of two thirds of the Federal Reserve Board members and the FDIC board as well as the recommendation of the Secretary of Treasury and the President of the United States.

d. What are the implications to the other DIs in the economy of the implementation of this exemption?

The net cost of the bailout of a large DI will be shared by all other DIs by charging them an additional deposit insurance premium based on their size as measured by average total assets minus average tangible (Tier I) equity.

17. What is the primary goal of the FDIC when employing the LCR strategy?

The purpose for implementing this strategy is to pass more of the failure resolution cost to uninsured depositors.

a. How is the insured depositor transfer method implemented in the process of failure resolution?

Upon failure the good assets and the insured deposits are transferred to a takeover DI. In addition an amount of uninsured deposits equal to the remaining amount of uncovered good asset also are transferred to the assuming DI. Uninsured depositors lose a portion of their deposits based on the difference between the estimated value of the assets and the amount of insured deposits in the DI.

b. Why does this method of failure resolution encourage uninsured depositors to more closely monitor the strategies of DI managers?

Uninsured depositors will monitor DI managers more closely because uninsured depositors assume all of the losses. Thus, they have a much stronger incentive to monitor and control the actions of DI owners.

18. The following is a balance sheet of a commercial bank (in millions of dollars).

**Assets Liabilities and Equity**

Cash $ 5 Insured deposits $30

Loans 40 Uninsured deposits 10

Equity 5

Total assets $45 Total liabilities and equity $45

The bank experiences a run on its deposits after it declares it will write off $10 million of its loans as a result of nonpayment. The bank has the option of meeting the withdrawals by first drawing down its cash and then by selling off its loans. A fire sale of the remaining loans in one day can be accomplished at a 10 percent discount. They can be sold at a 5 percent discount if sold in two days. The full market value will be obtained if they are sold after two days.

a. What is the amount of loss to the insured depositors if a run on the bank occurs on the first day? On the second day?

Insured depositors will not lose any money because even if the bank does not make the payment, they will be paid by the FDIC. Further, the value of the loans on the first day is 0.90 x $30 = $27m and their value on the second day is 0.95 x $30 = $28.5m. With its cash reserves, it has a more than adequate amount to pay the insured depositors as long as the uninsured depositors are not given the opportunity to cash in their deposits first.

b. What amount do the uninsured depositors lose if the FDIC uses the insured depositor transfer method to close the bank immediately? The assets will be sold in two days.

The value of the loans on the second day is 0.95 x $30 = $28.5m. With its cash reserves of $5 million, it has a total of $33.5 million to pay the depositors. The first $30 million goes to the insured depositors. So, the uninsured depositors will receive the remaining $3.5 million, and thus they will lose $6.5 million out of their $10 million. The equity holders will lose all of their capital.

19. A bank with insured deposits of $55 million and uninsured deposits of $45 million has assets valued at only $75 million. What is the cost of failure resolution to insured depositors, uninsured depositors, and the FDIC if an insured depositor transfer method is used?

Neither the insured depositors nor the FDIC lose under the insured depositor transfer method. Uninsured depositors receive $20 million (= $75m - $55m) equal to the cash (received from the sale of the bank’s assets) remaining after insured depositors have been paid in full. This results in a loss of $25 million (= $45m - $20m) for the uninsured depositors

20. A commercial bank has $150 million in assets at book value. The insured and uninsured deposits are valued at $75 million and $50 million, respectively, and the book value of equity is $25 million. As a result of loan defaults, the market value of the assets has decreased to $120 million. What is the cost of failure resolution to insured depositors, uninsured depositors, shareholders, and the FDIC if an insured depositor transfer method is used.

Under the insured depositor transfer method, all losses will be borne by shareholders, followed by uninsured depositors, before the FDIC takes any loss. Thus, in this example, neither the insured depositors nor the FDIC lose under the insured depositor transfer method. Uninsured depositors receive $45 million (= $120m - $75m) equal to the cash (received from the sale of the bank’s assets) remaining after insured depositors have been paid in full. This results in a loss of $5 million (= $50m - $45m) for the uninsured depositors. Shareholders will lose $25 million.

21. In what ways did FDICIA enhance the regulatory discipline to help reduce moral hazard behavior? What has the operational impact of these directives been?

FDICIA approached the moral hazard problem in the separate areas of examinations and capital forbearance. In the area of examinations, FDICIA (1) required improved accounting standards that focused on market valuation, (2) required annual on-site examination of every DI, and (3) allowed private accountants a greater role in the auditing of DIs. FDICIA also clarified immediacy and degree of actions in cases where DI capital fell into different rating zones. The effect of these policies is to reduce discretion in the treatment of DIs that have financial distress.

22. Match the following policies with their intended consequences:

*Policies:*

a. Lower FDIC insurance levels

b. Stricter reporting standards

c. Risk-based deposit insurance

*Consequences:*

1. Increased stockholder discipline

2. Increased depositor discipline

3. Increased regulator discipline

Answer: a-2, b-3, c-1

23. How does the Federal Reserve’s discount window serve as an alternative to deposit insurance as a lender of last resort facility to financial institutions? What changes occurred in 2008 that expanded the scope of coverage for the Fed’s discount window?

Traditionally, the Fed has provided a discount window facility to meet the short-term, nonpermanent liquidity needs of DIs. For example, suppose a DI has an unexpected deposit drain close to the end of a reserve requirement period and cannot meet its reserve target. It can seek to borrow from the Fed’s discount window facility. However, in January 2003, the Fed implemented changes to its discount window lending that increased the cost of borrowing but eased the terms. Specifically, three lending programs are now offered through the Feds discount window. Primary credit is available to generally sound depository institutions on a very short-term basis, typically overnight, at a rate above the Federal Open Market Committee's (FOMC) target rate for federal funds. Primary credit may be used for any purpose, including financing the sale of fed funds. Primary credit may be extended for periods of up to a few weeks to depository institutions in generally sound financial condition that cannot obtain temporary funds in the financial markets at reasonable terms. Secondary credit is available to depository institutions that are not eligible for primary credit. It is extended on a very short-term basis, typically overnight, at a rate that is above the primary credit rate. Secondary credit is available to meet backup liquidity needs when its use is consistent with a timely return to a reliance on market sources of funding or the orderly resolution of a troubled institution. Secondary credit may not be used to fund an expansion of the borrower’s assets. The Federal Reserve's seasonal credit program is designed to assist small depository institutions in managing significant seasonal swings in their loans and deposits. Seasonal credit is available to depository institutions that can demonstrate a clear pattern of recurring intra-yearly swings in funding needs. Eligible institutions are usually located in agricultural or tourist areas. Under the seasonal program, borrowers may obtain longer term funds from the discount window during periods of seasonal need so that they can carry fewer liquid assets during the rest of the year and make more funds available for local lending.

With the change, discount window loans to healthy banks would be priced at 1 percent above (rather than below) the fed funds rate. Loans to troubled banks would cost 1.5 percent above the fed funds rate. The changes were not intended to change the Fed’s use of the discount window to implement monetary policy, but significantly increase the discount rate while making it easier to get a discount window loan. By increasing banks’ use of the discount window as a source of funding, the Fed hopes to reduce volatility in the fed funds market as well. The change also allows healthy banks to borrow from the Fed regardless of the availability of private funds. Previously, the Fed required borrowers to prove they could not get funds from the private sector, which put a stigma on discount window borrowing. With the changes, the Fed will lend to all banks, but the subsidy will be gone.

The Fed took additional unprecedented steps, expanding the usual function of the discount window, to address the financial crisis. While the discount window had traditionally been available to DIs, in the spring of 2008 (as Bear Stearns nearly failed) investment banks gained access to the discount window through the Primary Dealer Credit Facility (PDCF). In the first three days, securities firms borrowed an average of $31.3 billion per day from the Fed. The largest expansion of the discount window’s availability to all FIs occurred in the wake of the Lehman Brothers failure, as a series of actions were taken in response to the increasingly fragile state of financial markets. After March, several new broad-based lending programs were implemented, providing funding to a wide array of new parties, including U.S. money market mutual funds, commercial paper issuers, insurance companies, and others. These programs rapidly expanded the current lending programs offered via the Fed.

Over the next 18 months, in response to a weakening economy and a growing financial crisis, the Fed significantly reduced the level of short-term interest rates by lowering its target federal funds rate to near zero. The overall reduction in the target federal funds rate since late 2007 was been dramatic, going from 5.26 percent in September 2007 to a range of 0 percent to 0.25 percent as of December 2008. It also significantly reduced the spread (premium) between the discount rate and the federal funds target to just a quarter of a point, bringing the discount rate down to a half percent. This spread was 100 basis points in August 2007, meaning that in general, banks could borrow much more cheaply from the interbank market (where banks lend to one another) than from the Fed. With lower rates at the Fed's discount window and liquidity scarce as many lenders cut back their lending, more financial institutions chose to borrow at the window. The magnitude and diversity of nontraditional lending programs and initiatives developed during the crisis were unprecedented in Federal Reserve history. The lending programs were all designed to "unfreeze" and stabilize various parts of the credit markets, with the overall goal that parties receiving credit via these new Fed programs would, in turn, provide funding to creditworthy individuals and firms.

24. Why is access to the discount window of the Fed less of a deterrent to bank runs than deposit insurance?

Although banks have access to the discount window in the event of DI runs, this is less effective than deposit insurance because:

a. DIs have to put up collateral in order to borrow from the discount window, and collateral may not be available during DI runs.

b. Access is by no means guaranteed. Loans may be denied by the Fed if it is clear that the DI is insolvent.

c. FDICIA of 1991 has limited the Fed’s ability to lend to undercapitalized DIs to only 60 days in any 120-day period. Extensions require approval by both the FDIC and the primary regulator of the DI to certify that the DI is viable.

d. If the DI ultimately fails, the Fed will have to compensate the FDIC for incremental losses.

25. How do insurance guaranty funds differ from deposit insurance? What impact do these differences have on the incentive for insurance policyholders to engage in a contagious run on an insurance company?

Insurance companies are regulated at the state level. As such, the state guaranty fund programs are administered by the private insurance companies. Further, there is no permanent guaranty reserve fund for the entire industry, and the amount of the required contributions required of surviving insurers to protect policyholders varies widely across the different states. Finally, small policyholders often must wait for an extended period of time before receiving benefits from the guaranty funds. As a result of these reasonable inefficiencies, the incentive for insurance policyholders to engage in a run on the companies is quite strong as compared to the banking industry.

26. What was the purpose of the establishment of the Pension Benefit Guaranty Corporation (PBGC)?

PBGC was established to protect pension benefits from the underfunding of pension plans by corporations.

a. How does the PBGC differ from the FDIC in its ability to control risk?

First, the premium is based on the number of participants, not on the amount of pension contributions or benefits covered. Recently, a variable-rate premium has been applied to those plans that are underfunded. Further, the PBGC has no monitoring power and thus cannot restrict the risk-taking of plan managers in the administration of the portfolios.

b. How were the 1994 Retirement Protection Act and the Deficit Reduction Act of 2005 expected to reduce the deficits experienced by the PBGC?

Although the PBGC has no way of monitoring the pension funds it insures, it was charging $19 per participant for funded plans and $72 for unfunded plans, the maximum allowed by law. The 1994 law phased out this ceiling by 1997 so that unfunded plans could pay more in premiums. The Deficit Reduction Act of 2005 increased the PBGC’s premium of 2006 to $30 per participant for single-employer plans and $8 per participant for multi-employer plans. The Act also called for the 2007 premium for single employers to increase to $31 per participant and for multi-employer plans to remain at $8 participants. By 2012, the inflation adjusted fees were $35 for single employer plans and $9 for multi-employer plans.

Despite these changes, the numerous bankruptcies during the financial crisis took a further toll on the PBGC. By September 2009, the fund’s deficit stood at $21.95 billion, up from $11.15 billlion in September 2008. The agency assumed pension liabilities from collapsed investment bank Lehman Brothers, retailer Circuit City, plastics company Milacron, and auto supplier Delphi Corp. (where it assumed $6.2 billion in pension liabilities, the second largest amount ever behind United Airlines’s $7.5 billion in 2005). However, the PBGC stated that despite the deficit the agency had sufficient funds to meet its obligations for many years because benefits are paid out over the benficiaries’ lifetime and not in one lump sum. The PBGC also recognized that over the long term, the deficit needed to be addressed. However, by year-end 2011 the deficit had grown to $26 billion.

The following questions and problems are based on material in Appendix 19A to the chapter.

27. What changes did the Federal Deposit Insurance Reform Act of 2005 make to the deposit insurance assessment scheme for DIs?

The Federal Deposit Insurance Reform Act of 2005 instituted a deposit insurance premium scheme, effective January 1, 2007 and revised in April 2009 and April 2011, 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.

28. Under the Federal Deposit Insurance Reform Act of 2005, how is a Category I deposit insurance premium determined?

Within Risk Category I, the final rule combines CAMELS component ratings with financial ratios to determine an institution’s assessment rate. For Risk Category I institutions, each of six financial ratios component ratings is multiplied by a corresponding pricing multiplier, as listed in Table 19A-2. The six 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; net income before taxes/risk-weighted assets; and adjusted brokered deposits ratio. 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 4.861 as of April 1, 2011. The uniform amount is set based on the size of the FDIC reserve ratio. When the reserve ratio is equal to or less than 1.15 percent, the uniform amount is set at 4.861. As the reserve ratio increases above 1.15, the uniform amount decreases. The resulting sum will equal an institution’s initial assessment rate. The assessment rate is then multiplied by the institution’s assessment base, defined as average total assets less average tangible equity.

Large and highly complex institutions have a slightly different numeric used to calculate the assessment rates. The score card for these institutions focus more on the risk of the institution and differentiates risk during periods of good economic conditions and during periods of stress and downturns. The models also better take into account the losses the FDIC may incur if a large institution fails. Large institution is an institution with assets of at least $10 billion as of December 2006 and not classified as a highly complex institution (approximately 50 of the over 7,300 institutions in 2012). A highly complex institution (approximately 40 institutions in 2012) is defined by the FDIC as: (1) an insured depository institution (excluding a credit card bank) with greater than $50 billion in total assets that is wholly owned by a parent company with more than $500 billion in total assets, or wholly owned by one or more intermediate parent companies that are wholly owned by a holding company with more than $500 billion in assets; or (2) a processing bank and trust company with greater than $10 billion in total assets, provided that the information required to calculate assessment rates as a highly complex institution is readily available to the FDIC.

After applying all possible adjustments, minimum and maximum total base assessment rates for each risk category are set as listed in Table 19A-5. The unsecured debt adjustment is determined by multiplying an institution’s long term unsecured debt as a percent of domestic deposits. The base assessment may also increase depending on its ratio of securied liabilities to domestic deposits (secured liability adjustment). Finally, for institutions in Categories II, III, and IV the assessment rate may increase based on the amount of brokered deposits to domestic deposits.

29. Webb 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?

With this CAMELS rating and capital ratios, Webb Bank falls into the Category II risk category and has a deposit insurance assessment rate of 14 basis points times the bank’s average total assets less average Tier I equity.

30. Million Bank has a composite CAMELS rating of 2, a total risk-based capital ratio of 9.8 percent, a Tier I risk-based capital ratio of 5.8 percent, and a Tier I leverage ratio of 4.9 percent. The average total assets of the bank equal $500 million and average Tier I equity equal $24.5 million. What deposit insurance risk category does the bank fall into? What is the bank’s deposit insurance assessment rate and the dollar value of deposit insurance premiums?

With this CAMELS rating and capital ratios, Million Bank falls into the Category II risk category. The deposit insurance assessment rate of 14 basis points times the bank’s average total assets less average Tier I equity. The dollar value of the insurance premiums is $665,700 (($500m - $24.5m) x 0.0014).

31. 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 A Institution B

Tier I leverage ratio (%) 8.62 7.75

Loans past due 30-89

pays/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

Adjusted brokered

deposits ratio (%) 0.00 15.56

CAMELS Components:

C 1 1

A 2 2

M 1 2

E 2 3

L 1 1

S 2 1

Calculate the initial deposit insurance assessment for each institution.

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

CAMELS Components:

C 1 x 0.25 = 0.25 1 x 0.25 = 0.25

A 2 x 0.20 = 0.40 2 x 0.20 = 0.40

M 1 x 0.25 = 0.25 2 x 0.25 = 0.50

E 2 x 0.10 = 0.20 3 x 0.10 = 0.30

L 1 x 0.10 = 0.10 1 x 0.10 = 0.10

S 2 x 0.10 = 0.20 1 x 0.10 = 0.10

Weighted Average CAMELS .

Component 1.40 1.65

Base Assessment Rates for Two Institutions

A B C D E F

Institution A Institution B

Contribution Contribution

Risk to Risk to

Pricing Measure Assessment Measure Assessment

Multiplier Value Rate Value Rate

Uniform Amount 4.861 4.861 4.861

Tier I leverage ratio (%) (0.056) 8.62 (0.483) 7.75 (0.434)

Loans past due 30-89

days/gross assets (%) 0.575 0.45 0.259 0.56 0.322

Nonperforming

assets/gross

assets (%) 1.074 0.35 0.376 0.50 0.537

Net loan charge-offs

/gross assets (%) 1.210 0.28 0.339 0.32 0.387

Net income before

taxes/risk-weighted

assets (%) (0.764) 2.15 (1.643) 1.86 (1.421)

Adjusted brokered

deposits ratio (%) 0.065 0.00 0.000 15.56 1.011

Weighted average

CAMELS component

ratings 1.095 1.40 1.533 1.65 1.807

Sum of contributions 5.242 7.070

Initial assessment rate 5.242 7.070

32. 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. Institution A has average total assets of $750 million and average Tier I equity of $75 million. Institution B has average total assets of $1 billion and average Tier I equity of $110 million. Institution A has no unsecured debt or brokered deposits. Institution B has no unsecured debt and an asset growth rate over the last four years of 8 percent. Further, the institutions have the following financial ratios and CAMELS ratings:

Institution A Institution B

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

Adjusted brokered

deposits ratio (%) 0.00 25.89

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 and the dollar value of the deposit insurance premium for each institution.

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

CAMELS Components:

C 1 x 0.25 = 0.25 2 x 0.25 = 0.50

A 1 x 0.20 = 0.20 1 x 0.20 = 0.20

M 1 x 0.25 = 0.25 1 x 0.25 = 0.25

E 2 x 0.10 = 0.20 1 x 0.10 = 0.10

L 1 x 0.10 = 0.10 3 x 0.10 = 0.30

S 2 x 0.10 = 0.20 3 x 0.10 = 0.30

Weighted Average CAMELS .

Component 1.20 1.65

Base Assessment Rates for Two Institutions

A B C D E F

Institution A Institution B

Contribution Contribution

Risk to Risk to

Pricing Measure Assessment Measure Assessment

Multiplier Value Rate Value Rate

Uniform Amount 4.861 4.861 4.861

Tier I leverage ratio (%) (0.056) 10.25 (0.574) 7.00 (0.392)

Loans past due 30-89

days/gross assets (%) 0.575 0.60 0.345 0.82 0.489

Nonperforming

assets/gross

assets (%) 1.074 0.45 0.483 0.90 0.967

Net loan charge-offs

/gross assets (%) 1.210 0.08 0.097 0.25 0.302

Net income before

taxes/risk-weighted

assets (%) (0.764) 2.40 (1.834) 1.65 (1.260)

Adjusted brokered

deposits ratio (%) 0.065 0.00 0.000 25.89 1.683

Weighted average

CAMELS component

ratings 1.095 1.20 1.314 1.65 1.807

Sum of contributions 4.692 8.456

Initial assessment rate 5.000 8.456

For Institution A, the sum is 4.692. However, the minimum assessment rate for Category I banks is 5 basis points. The dollar value of the deposit insurance premium for Institution A is $337,500 (0.0005 x ($750m - $75m)) and for Institution B is $752,584 (0.0008456 x ($1b - $110m)).