Kenya School of Monetary Studies

POSTGRADUATE DIPLOMA IN FAINANICAL MANAGEMENT
FIRST TERM EXAMINATIONS, 1999/2000

FM 508: BANKING THEORY AND PRACTICE

DATE: 25 AUGUST 1999 TIME: 9:00-12:00

Answer <u>four questions</u>, at least <u>one from each section</u>. Each question carries equal marks.

Section A: Banking Behavior

1. As the traditional banking activities become less profitable, the banks have begun to engage in riskier activities such as trading derivatives. Discuss this trend in the behavior of the banks and suggest ways of minimizing this type of risk.

(Marking Scheme) (1) To identify a trader's moral hazard issue (10 points), (2) to show at least three internal control mechanisms (9 points), and (3) to pay attention to off-balance sheet activities (6 points).

(Answer) If a trader (the agent)'s strategy leads to large profits, he is likely to receive a high salary and bonuses, but if he makes large losses, the bank (the principal) will cover them. From a trader's point of view, it is their benefits to take excess risks. Obviously this is the principal-agent problem.

To reduce the principal-agent problem, managers of the banks must set up internal controls to prevent such debacles. Such controls include the complete separation of the people in charge of trading activities and those in charge of bookkeeping for trades. In addition, managers must set limits on the total amount of traders' transactions and on the bank's risk exposure. Managers must also scrutinize risk assessment procedures using the latest computer technology. One such method involves so called value-at-risk approach. In this approach, the bank develops a statistical model with which it can calculate the maximum loss that its portfolio is likely to sustain over a given time interval. In this approach, a manager asks models what would happen if a doomsday scenario occurs, that is, he looks at the losses the bank would sustain if an unusual combination of bad events occurred. With the value-at-risk approach and stress tests, a bank can assess its risk exposure and take steps to reduce it.

Because of the increased risk that banks are facing from their off-balance-sheet activities, the bank regulators in many countries become concerned about increased risk from banks' off-balance-sheet activities and are encouraging banks to pay increased attention to risk management. In addition, the Bank for International Settlement is developing additional bank capital requirements based on value-at-risk calculations for a bank's trading activities.

When the bank capital begins to fall, it is recommendable in many cases for the regulatory authority to intervene management of the bank as the prompt corrective action. This action reduces the principal-agent problem and eliminates the option of regulatory forbearance which can increase the moral hazard incentives for banks.

2. Accounting standards differ across countries. The most notable example is in evaluation of assets in terms of book and market values. Rationalize this valuation in each standard and explain the preference for market-value-based accounting among the professions in recent years.

(Marking Scheme) (1) To identify at least two reasons why the market values of assets and liabilities do not equal its book values (20 points), (2) to understand why the market value is more relevant information for decision makers (5 points).

(Answer) There are essentially two reasons why the market values of a company's assets and liabilities do not necessarily equal its book values.

First, the book value does not include all of a company's assets and liabilities. For example, if a firm builds up a good reputation for the quality and reliability of its products, this will not appear as an asset on the balance sheet. Similarly, if a firm builds up a knowledge base as the result of past research and development spending or as the result of training its work force, these too will not appear as assets. These intangible assets add to the company's market value and are relevant in decision-making. Although accountants do report some intangible assets such as goodwill on the balance sheet, but at their acquisition cost. Many other intangible assets are not recorded on the accounting balance sheet.

Second, the accounting balance sheet also omits some economically significant liabilities. For example, if the company has costly lawsuits pending against it, these will not appear on the balance sheet. The existence and amount of such contingent liabilities will at best only be disclosed in the footnotes to the financial statements.

The difference in value between the book and market measures can vary drastically depending upon the situation. For example, in the case of cash there is literally no difference between book value and market value. In the case of fixed assets such as specialized plant and equipment, the difference can be huge.

For decision-making purposes, the correct value to use is usually the market value whenever available.

Suppose you are considering replacing the equipment with more modern equipment. The relevant value to use to compare the alternatives is the opportunity cost, which is the asset's value in the best alternative use. This must be measured in the market value.

Recently the accounting profession has moved toward market-value-based accounting in an effort to be more relevant to decision-makers.

Section B: Bank Regulations

3. The economic concepts of adverse selection and moral hazard provide the monetary authorities for means of setting up bank regulations and analyzing some problems created by deposit insurance. Suggest and discuss ways of minimizing the moral hazard problem created by the deposit insurance.

(Marking Scheme) (1) To identify the adverse selection and moral hazard problems (5 points), (2) to identify some regulatory framework for these problems (10 points), (3) to identify to what extent the moral hazard problem created by deposit insurance and to show some measures to eliminate this problem (10 points).

(Answer) Regulations that restrict banks from holding risky assets directly decrease the moral hazard of risk taking by the bank. Requirements that force banks to have a large amount of capital also decrease the bank's incentives for risk taking because banks now have more to lose if they fail. Such regulations will not completely eliminate the moral hazard problem because bankers have incentives to hide their holdings of risky assets from the regulators and to overstate the amount of their capital.

4. The Bank Supervision Annual Report of the Central Bank of Kenya in recent years places corporate governance as the highest priority among supervisory issues. In your view, what measures and regulations can improve corporate governance of the commercial banks in Kenya?

(Marking Scheme) (1) To identify the differences between internal and external governance schemes (10 points), (2) to identify at least three internal monitoring mechanisms (9 points), (3) to point out the external governance schemes by shareholder and creditors (6 points).

(Answer) After many bank failures and corporate bankruptcy, corporate governance became the hot issue in recent policy discussion. Kenya is no exception. For example, the 1997 Bank Supervision Annual Report of the Central Bank of Kenya argues the way in which bank's corporate governance should work. The report says, first of all, that the Board of Directors has the responsibility for the level of risk taken by their banks and is responsible for appreciating risks and ensuring that management is taking steps to identify, measure, monitor and control risks. Secondly, senior management assumes the responsibility of managing the day-to-day affairs of the bank by, implementing policies and objectives established by the Board of Directors and employing, training and retaining qualified staff. The senior management must ensure that the bank is operating in compliance with the banking laws and regulations and the prudential guidelines given by the central bank. Third, internal auditor's main focus is the compliance with the Board's policies including accounting systems and operational efficiency. A sound internal control mechanism is critical to bank's ability to meet its set goals and objectives and maintenance of its financial viability. Fourth, the role of the external auditor is to evaluate the bank's policy and risk management systems. The Banking Act and the Central Bank of Kenya Prudential Guidelines set out the duties of the external auditors in relation to the supervisory authority.

Except the fourth element, the Kenyan authority seems to stress the importance of internal discipline to carry out the proper corporate governance. In the developed countries, on the other hand, corporate governance is usually the issue of external monitoring and control of the bank. The shareholders as the principal of the bank have strong incentive to monitor behavior and management of the bank carefully. The creditors (companies and individuals) are also very keen to know the conduct of management of the bank in detail. They are quite likely to intervene the management of the bank when the bank has difficulties in paying interest and principle back.

Without external monitoring and intervention mechanism, the principal-agent problem cannot be solved properly. So the Kenya banking supervisory authority stresses more emphases on external monitoring and control of the commercial banks. At the same time, they should prepare for the guidelines of shareholders' and creditors' rights and obligations in corporate governance of the commercial banks so that the external governance structure becomes transparent and functions properly.

Section C: Central Banking

5. A recent trend worldwide is for central banks to be independent from any political pressure. Justify this trend and indicate the extent to which your country's central bank is free from such a pressure.

(Marking Scheme) (1) To identify the issues of central bank independence (10 points), (2) to understand a cohesive program with other policies conducted by the government (5 points), and (3) to understand the legal and institutional framework of the Central Bank of Kenya (10 points).

(Answer) The strongest argument for an independent central bank rests on the view that subjecting the central bank to more political pressures would impact an inflationary bias to monetary policy. In a democratic society, politicians in a democratic society are shortsighted because they are driven by the need to win their next election. With this as the primary goal, they are unlikely to focus on long-run objectives, such as promoting a stable price level. Instead, they will seek short-run solutions to problems, like high unemployment and high interest rates, even if the short-run solutions have undesirable long-run consequences.

Another argument for the central bank independence is that control of monetary policy is too important to leave to politicians, a group that has repeatedly demonstrated a lack of expertise at making hard decisions on issues of great economic importance, such as reducing the budget deficit or reforming the banking system.

Proponents of the central bank under the control of the president or the Parliament argue that it is undemocratic to have monetary policy controlled by an elite group responsible to no one. The current lack of accountability of the central bank has serious consequences: If the central bank performs badly, there is no provision for replacing members (as there is with politicians). True, the central bank needs to pursue long-run objectives, but elected official of the Parliament vote on long-run issues also.

To achieve a cohesive program that will promote economic stability, monetary policy must be coordinated with fiscal policy. Only by placing monetary policy under the control of the politicians who also control fiscal policy can these two policies be prevented from working at cross-purposes.

Another argument against the central bank independence is that an independent central bank has not always used its freedom successfully. Its independence certainly didn't prevent it from pursuing policy mistakes such as causing high inflation.

Overall there is yet no consensus on whether the central bank independence is a good thing, although public support for independence of the central bank seems to have been growing around the world.

6. Discuss determinants of money supply and give indications of the extent to which the central bank can control the money supply.

(Marking Scheme) (1) To identify money supply mechanism which shows the relationship between monetary base, money multiplier and money supply (10 points), (2) to clearly understand the degree of controllability of money supply (5 points), (3) to show the sources and consequences of the central bank independence issue (10 points).

(Answer) As the relationship MS= $m \nabla$ MB indicates, money supply is affected by either money multiplier, m, or monetary base MB. In other words, the money multiplier tells how much money supply changes for a given change in the monetary base. The money multiplier reflects the effect on the money supply of other factors besides the monetary base.

In theory, the money multiplier is defined as $m = (1+\{C/D\})/(r_D+\{ER/D\}+\{C/D\})$ in case of M1, and $m = (1+\{C/D\}+\{T/D\}+\{MMF/D\})/(r_D+\{ER/D\}+\{C/D\})$ in case of M2, where C = currency in circulation, D = checkable deposits, r_D = the required reserve ratio, ER = excess reserves, T = time and saving deposits, and MMF = money market mutual funds shares, money market deposit accounts and other assets included in this category.

Let us look at factors that determine the money multiplier in turn. First, changes in the required reserve ratio r_D are negatively related to the money multiplier. Second, changes in the currency ratio $\{C/D\}$ are also negatively related to the money multiplier. Third, changes in the excess reserve ratio $\{ER/D\}$ are also negatively related to the money multiplier. As is easily imagine, the excess reserve ratio is, in turn, negatively related to the market interest rate and positively related to expected deposit outflows which might happen in the financial crisis. Fourth, changes in the time deposit ratio $\{T/D\}$ are positively related to the M2 money multiplier. Fifth, changes in money market fund ratio $\{MMF/D\}$ are also positively related to the M2 money multiplier. Both time deposits and money market mutual fund shares undergo more multiple expansion than checkable deposits. Thus a shift out of checkable deposits into time deposits or money market mutual funds implies a higher money multiplier effect.

The monetary base is defined as a sum of currency in circulation and reserves. The central bank lacks complete control over the monetary base because it cannot unilaterally determine, and therefore perfectly predict, the amount of borrowing by the banks from the central bank. The central bank sets the discount rate and then banks make decisions about whether to borrow. The amount of discount loans is not controlled by the central bank.

We can split the monetary base into two components: one under the full control of the central bank and another under the less perfect control by the central bank. The latter is the discount loans from the central bank and the former is the non-borrowed monetary base that results from open market operations. Changes in the non-borrowed monetary base and discount loans from the central bank are positively related to the money supply. The amount of discount loans is positively related to the market interest rate and negatively related to the central bank's discount rate.

As is obvious from the above discussion, the central bank can control the money supply only partially. Many factors affecting the money supply are market driven, thus out of control by the central bank. It is therefore important for the central bank to use multiple policy instruments and targets to achieve their policy goals.