DP01

Monetary Economics and the Malaysian Financial System

8 MAY 2000

1.	Time allowed	: Three (3) hours
2.	Total number of questions	: Six (6) questions
3.	Number of questions to be answered	: Four (4) questions Part A : Compulsory question [40 marks] Part B : Three (3) questions [20 marks each]

4. Candidates must obtain a minimum of 20 marks in Part A as well as pass the paper as a whole.

5. Begin each answer to a new question on a fresh page.

6. Answer **all** questions in **English**.

PART A

COMPULSORY QUESTION

1. (a) (i) Explain the term "financial intermediation" and briefly discuss the advantages and disadvantages of the financial intermediation process. [4]

(ii) Briefly outline **four** types of potential risks in the financial market. [2]

(iii) Briefly describe the present structure of the Malaysian financial system. [4]

(b) (i) Discuss the key features and functions of the money market. [4]

(ii) Does the capital market contribute to economic development? Explain. [2]

(iii) List the instruments traded in both the capital market and the money market. [2]

(c) (i) Bank Negara Malaysia (BNM) has implemented several monetary measures in 1998 to expedite economic recovery. Discuss any **two** of these measures. [4]

(ii) Briefly explain the monetary stance of BNM in 1999. [4]

(d) Describe briefly any **three** of the following:

(i) The advantages of "selective credit controls" in the banking system. [2]

(ii) The "flow of funds" in the financial system. [2]

(iii) The CAMEL rating framework [2]

(iv) Currency-deposit ratio [2]

(e) (i) Using a schematic diagram, explain the impact of a contractionary monetary policy on the economy. [4]

(ii) Does the targeting of interest rates help to reduce the impact of an economic downturn? Explain. [4]

(Total:40 marks)

PART B

ANSWER THREE (3) QUESTIONS ONLY

2. (a) Distinguish the type of utilisation of funds by commercial banks, finance companies and merchant banks. [5]

(b) (i) What do banks do when they observe that some of their borrowers may default? [2]

(ii) Do banks usually welcome a reduction in reserve requirements? [2]

(c) Briefly explain the functions of asset and liability management in commercial banks. [5]

(d) Answer any **three** of the following:

(i) Briefly describe the strategies taken by commercial banks to mitigate credit and liquidity risks. [2]

(ii) Explain **two** advantages of investing in unit trusts. [2]

(iii) Describe **one** major difference between Islamic Banking and conventional banking in Malaysia. [2]

(iv) Explain **two** objectives of establishing the International Offshore Financial Centre. [2]

(Total:20 marks)

3. (a) Discuss **two** key functions of a central bank and list **three** broad macroeconomic objectives of a central bank. [5]

(b) Explain why a central bank imposes a minimum liquid assets requirement for financial institutions. [5]

(c) Briefly explain the type of assistance that can be rendered by a central bank to "troubled" financial institutions. [2]

(d) How does a central bank influence the supply of money in the economy? [3]

(e) State and explain the new framework for the computation of the Base Lending Rate (BLR) for commercial banks and finance companies in Malaysia. Explain briefly why the BLR of commercial banks is lower than that of finance companies. [5]

(Total:20 marks)

4. (a) Discuss on how the net operations of the government, lending operations of a central bank and the external sector determine money supply in the economy. [6]

(b) Answer any **three** of the following:

(i) Why do households shift money from "non-interest bearing deposits" to "interest bearing deposits"? [3]

(ii) Define the terms "monetary base" and "money multiplier". [3]

(iii) Define the terms "narrow" and "broad" money. [3]

(iv) Explain the reasons why a central bank cannot control both the interest rates and money supply at the same time. [3]

(c) Compute the following:

(i) Given a statutory reserve ratio of 0.8 and a ratio of currency to demand deposits of 0.2, compute the size of the money multiplier. What happens to the money multiplier if there is an increase in both the statutory reserve ratio and the ratio of currency to demand deposits?

(ii) Compute the net impact on money supply in the economy if the external reserves of Bank Negara Malaysia increase by RM40billion, while the banking system records a decline in the net external assets by RM10billion. [5]

(Total:20 marks)

5. (a) Briefly outline **three** key objectives of monetary policy. [5]

(b) Monetary policy is conducted mainly through the money market. Discuss. [5]

(c) Briefly discuss **five** factors that could undermine the effectiveness of a central bank's monetary policy. [5]

(d) Explain the differences between "intermediate" and "operating" targets of a monetary policy. [5]

(Total:20 marks)

6. (a) Discuss **two** similarities and **three** differences between the World Bank and the International Monetary Fund. [5]

(b) In response to the Asian financial crisis, Malaysia adopted selective capital control measures in 1998.

(i) Explain **two** reasons why Malaysia adopted the selective capital control measures in 1998. [2]

(ii) Outline any **two** of the selective capital control measures adopted by Malaysia in 1998. [2]

(iii) Describe **two** major impacts of the selective capital control measures on the economy. [2]

(c) Explain the differences between:

(i) "Appreciation" and "depreciation" of the currency. [3]

(ii) "Devaluation" and "revaluation" of the exchange rate. [3]

(iii) "Short-term" and "long-term" capital flows of the balance of payments. [3]

(Total:20 marks)

- END OF QUESTION PAPER -

OUTLINE ANSWERS

PART A

Question 1

This compulsory question which focused on various areas such as financial intermediation, capital and money market and monetary policies, was the best attempted question. Those candidates who scored above 70% of the allocated marks had a sound knowledge of the various areas examined.

1. (a) (i) Financial intermediation is the process by which a financial intermediary plays the role of an ultimate borrower and an ultimate lender. It primarily operates in the savings market and the credit market. However, in the present situation, financial intermediaries will operate in various markets, transacting their own instruments not only directly with the economic units in an economy, but also among themselves. These markets are broadly identified as:

- money market
- foreign exchange market
- capital market
- financial futures and options market

Advantages

- Allow savers to purchase assets that are relatively safe and more liquid. These assets earn interest rates.
- Advantages of economies of pooling saver's funds to reduce the cost of transactions. Individual savers are able to earn higher returns on their savings and borrowers realize a lower cost of funds.
- Offer savers a well-diversified portfolio of assets and this will reduce the risks involved in investing in a single asset. A limited number of assets will increase the risk of default and risk loosing the entire asset portfolio. Hence, financial intermediary can offer the small saver a reduction in risk through diversification of their portfolio.

Disadvantages

- Several costs are involved in the process of intermediation, namely, expenses of servicing deposits and loans, return to capital, the intermediary business and reserve requirement.
- Regulations imposed will affect the ability of financial markets and institutions to provide risk-sharing, liquidity and information services. Restrictions on type of instruments that can be traded in markets affect liquidity. Regulations limiting the ability of financial institutions to hold certain types of assets or to operate in various geographic locations affect risk sharing and the potential for diversification.

(ii) The potential financial market risks: *(Select any **four** risks)*

- The potential of **credit risks** that the counter party will fail to fulfill (credit) the contract.
- **Liquidity risks** associated with losses from forced sales when there is insufficient liquidity to meet contractual obligations.
- **Operational risks** as a result of failure of internal controls, procedures and operating equipment, software and systems.

- **Political risks** due to losses attributed to changes that affect public confidence.
- **Systematic risks** as a result of a failure of one party, which triggers a failure elsewhere in the system (e.g. contagion).

(iii) Basically, the structure of the Malaysian financial system comprises the following institutions:

Financial Institutions
The banking system is the key component, and comprises the Central Bank, commercial banks, Bank Islam Malaysia Berhad, finance companies, merchant banks, discount houses and foreign banks' representative offices.

Non-banking Institutions
Supervised by the government including development finance institutions, savings institutions, provident and pension funds, insurance companies and a group of other financial intermediaries.

Capital Market
Refers to the market in longer-term financial assets. This comprises all public and private debt instruments with maturity exceeding one year.

(b) (i) The features of the money market are as follows:

- The money market comprises the interbank market where lending and borrowing of short-term funds will take place.
- The money market is an integral part of the financial system and the money market instruments are generally more liquid compared to the capital market.

The functions of the money market are:

- To reconcile the interest of both the lenders and borrowers, that is, institutions and individuals with temporary surplus funds and institutions and individuals who are in need of funds immediately for a short period.
- To provide financial institutions with the facilities for adjusting their portfolios over a short period. Indeed, money market is an important market for the transmission of monetary policies of a central bank.

(ii) There are many benefits of having a strong capital market. Thus, many measures have been taken by the government to strengthen the capital market. The roles of the capital market in economic development are as follows:

- It will assist the process of economic growth. The presence of the capital market will mobilize medium-term funds as well as long-term funds from a wide-spectrum of the population to finance public development programs as well as private investments.
- The presence of the capital market will provide the needed intermediary services to raise funds for investments by the private sector as well as other productive business activities.
- It promotes private enterprise and economic activity by providing intermediary services to raise funds for corporate investment and expansion.

(iii) The instruments traded are as follows:

Capital Market

- Government securities (including Malaysian Government Securities (MGS), Khazanah bonds, and Malaysia savings bonds)
- Private sector shares (ordinary shares and new issues of shares)
- Debt securities (including straight bonds, convertible bonds, bonds with warrants, Islamic bonds, Cagamas bonds)
- Short-term securities (commercial papers and Cagamas notes)

Money Market

- Treasury bills, MGS, Bankers Acceptances', Negotiable Instruments of Deposits and Bank Negara Bills

(c) (i) Monetary measures taken by Bank Negara Malaysia (BNM) were categorised in two phases, namely, the Adjustment and Stabilisation measures (January-July 1998) and Economic Recovery Plan (from August 1998). During the first seven months, the measures were aimed at enhancing the efficiency of the money market, to allow interest rates to reflect the underlying liquidity conditions. From early August, the measures reflected the easing of monetary policy to support economic recovery and strengthen the financial system.

The monetary measures are as follows: *(Select any **two** measures)*

- Banking institutions were allowed to *continue to provide bridging finance to housing developers* to start new projects for residential properties costing RM150,000 and below.
- To ensure that *there were sufficient funds to finance the economic recovery process*, banking institutions with the capacity to lend were encouraged to achieve a minimum annual loan growth of 8%.
- Selective exchange controls were introduced on 1 September 1998 to insulate the Malaysian economy from the prospects of further deterioration in the world economic and financial environment and to regain monetary independence. On 2 September 1998, the exchange rate for the ringgit was fixed at RM3.8 against the US dollar.

(ii) The monetary stance of BNM in 1999:

- The overall policy was directed at supporting economic recovery. The focus was to create a favorable environment that will support economic recovery while preserving price stability.
- The policy stance was to ensure that there are adequate funds at reasonable cost to support activities in the private sector.
- Interest rates were kept competitive to promote investments in the real sector and also to provide a positive real rate of return on savings. It was maintained as long as there are no build up in inflation.
- Monetary policy was managed with flexibility and a close watch on prospective developments in the economic and financial environment.

(d) (i) The advantages of selective credit control for the banking system are as follows:

- It is among the most effective measures available to a central bank in regulating the volume and direction of credit.
- It will ensure the fulfillment of its economic and social goals.

- By holding down the demand for credit without limiting supply of funds, this will not increase interest rates.
- It assists to reduce conspicuous spending and therefore will accord priority to domestic financing for productive investments.
- Overall, the selective credit control will contain the rate of credit growth and monetary expansion. Thus, this contributes to dampen potential inflationary pressures, which is due to excess liquidity in the banking system.

(ii) The flow of funds in an economy evolved basically in four phases. The first phase is the movement from barter trade to the monetary system. The second phase involves the practice of borrowing. Here, the economic units in need of funds, also called the "deficit" units come to terms with those who have excess funds to be lent out, also called "surplus" units. The third phase, witnessed the setting up of financial intermediaries to overcome the problem of primary debt in the direct borrowing-lending process. The last phase, involves the setting up of financial intermediaries to form a financial system, which provides a variety of financial instruments as savings media for the surplus units, and also various ranges of credit and investment facilities to meet the demand by the deficit units.

Another important feature of the flow of funds is their sources of funds that emanate from private savings, long-term capital from abroad, and public savings. These funds are used for financing investments and are placed abroad, including portfolio investment.

(iii) The features of the CAMEL Rating Framework are as follows:

- Under this framework, an institution's Capital Adequacy (C), Asset Quality (A), Management Efficiency (M), Earnings Performance (E) and Liquidity Position (L) are assessed.
- Capital Adequacy: The capital adequacy ensures to support the fluctuation of business and to finance fixed assets. It provides a cushion against unexpected losses and ensures continuing commitment of the shareholders to the long-term viability of financial institutions. The larger the capital base, the greater the capacity the financial institution has to cushion itself against contingent losses and to ride out temporary periods of low earnings.
- Asset Quality: Asset quality is directly related to the market value of the assets of a financial institution and the adequacy of provisions against losses in assets.
- Management: Bank management must show the highest standard of integrity, professional competence and qualities of service.
- Earnings Capacity: Refers to whether the interest income in the balance sheet can be earned. A bank must take full recognition of interest-in-suspense and adequate provision must be made against non-performing loans to reflect the true earnings capability of its assets.
- Liquidity: There must be sufficient liquid assets to meet depositors' withdrawals. Must have sufficient cash balance and liquid assets. This contributes to dampen potential inflationary pressures that are due to excess liquidity in the banking system.

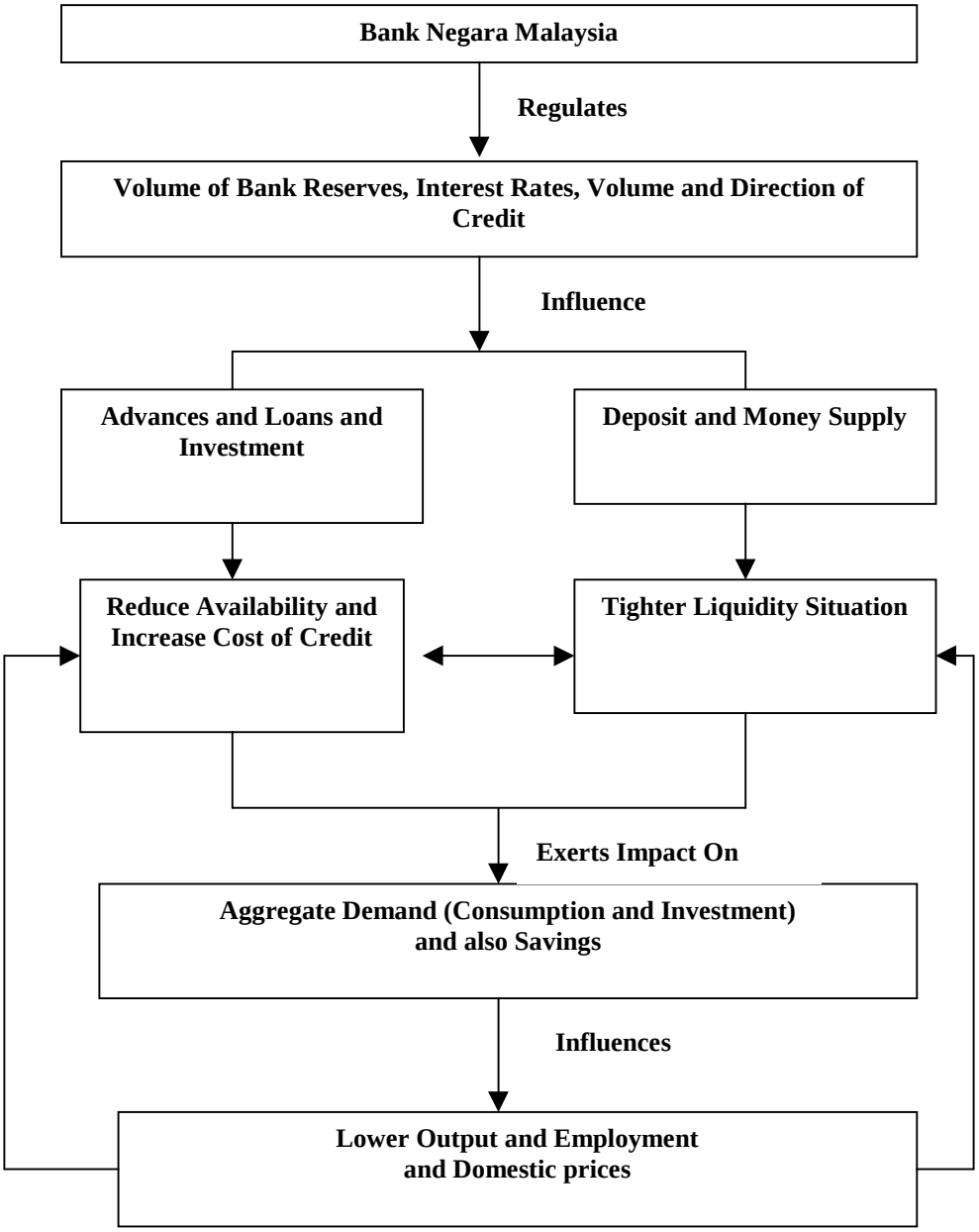
(iii) The currency-deposit ratio is derived by dividing currency held by the public with the public's deposits in banks. The ratio is determined by the public and depends on the amount of money the public wants to hold as currencies versus the amount it wants to hold as deposits. The public can raise the ratio to any level that it wants by withdrawing currency from banks. This will increase the currency held and reduce deposits. Likewise, the public can deposit currency in

banks and by doing so will lower the currency-deposit ratio. The size of the currency-deposit ratio will have influence on the value of the money multiplier. If the value of the currency-deposit ratio increases given that the reserve-deposit ratio remains unchanged, then the value of the multiplier will decrease.

(e) (i) The impact of a **contractionary monetary policy** on the economy:

- A central bank regulates reserves, interest rates and the volume and direction of credit.
- This will reduce the volume of advances and loans for business activities. The level of money supply is lowered and thus, resulting in a tighter liquidity condition in the economy.
- As a result, the higher cost of credit will affect the interest sensitive expenditure and thus, dampen aggregate demand, aggregate supply and employment in the economy.

Impact of Contractionary Monetary Policy on the Economy



(ii) Interest rates are determined by the forces of supply and demand. Changing the level of interest rates will affect expenditures that are sensitive to changes in the cost of funds. Both private consumption and rate of private investment are sensitive to the level of interest rates, although there are other determinants such as income levels, investment sentiments and economic performance. The impact of higher interest rates on consumption and the rate of investment will affect economic growth, as they are important determinants of the growth of income. Thus, a targeting of the interest rate is important if the higher interest rate dampens consumption and investments, thus affecting economic growth.

Question 2

Many candidates attempted the question relating to utilisation of funds, functions of asset and liability management, advantages of investing in unit trusts and objectives of establishing the International Offshore Financial Centres. Some candidates lost marks when they were unable to elaborate on the functions of asset and liability management. Most candidates were only familiar with the functions of commercial banks and not of other financial institutions.

2. (a) Uses of funds are as follows:

Commercial Banks	Cash, balances with BNM, statutory reserves with BNM, call money, amounts due from financial institutions (FIs) in Malaysia and abroad, Negotiable Instruments of Deposits (NIDs) held, investment in Malaysian securities, loans and advances (overdraft, trade bills and term loans), fixed assets in Malaysia and other assets
Finance Companies	Cash, statutory reserves with BNM, call money, deposits with FIs, investment in government securities, loans to FIs, hire purchase, leasing, housing, fixed and other assets
Merchant Banks	Cash and bank balance, reserves with BNM, fixed deposits, government securities, loans to FIs, loans to other customers, bills discounted/purchased, fixed and other assets

(b) (i) Bankers understand that their loans entail default risk or the risk that borrowers will not repay the loan in full, with interest. When a loan is unpaid, the bank's net worth suffers. During the term of the loan, if the bank decides that the borrower is likely to default, the bank will write-off the loan. In other words, the value of the loan is removed, entirely or in part from the assets on the balance sheet.

(ii) Yes, banks do welcome a reduction in reserve requirements. The reduction will reduce the implicit tax on reserves, as reserves pay no interest. Banks can lend the money at a positive interest rate.

(c) The functions of asset and liability management are to address **the exposure of the banks to liquidity risks** by lending money to other banks. It also lends repurchase agreements (REPOs) for government securities and lends securities to business and other banks overnight. Usually, the longer-maturity government securities will involve some risks since interest rates will fluctuate.

The function of liability management is to **manage liquidity** since the bank's liabilities are usually of shorter-term compared with their assets. Thus, banks have to keep sufficient cash or assets on hand that is readily converted to cash to meet depositors withdrawals. But this must be done without sacrificing too much operating income by holding cash instead of loans or securities. When banks have more loans than depositors do, they may decide how to borrow additional funds to make new loans. Among the options include certificates of deposits, and REPOs.

(d) (i) Credit Risks

Banks face risks or the risk that borrowers might not repay their loan principal and interest rates. When this occurs, the bank would suffer a loss due to bad loans. In order to deal with the problems of bad loans and its associated risks these measures are taken by the banks:

- Gathering of information about borrowers, monitoring them and diversifying their loan portfolio.
- Adopt credit rationing. This means denying borrowers a loan at the prevailing market interest rates. Moreover, the bank may either grant a borrower's loan application but limit the size of the loan. Credit rationing may take place when borrowers have little or no collateral to offer the banks.
- However, when interest rates are raised to compensate for high-risk borrowers, then the low-risk borrowers would drop out. This means the bank will have a pool of high-risk borrowers. This is a disadvantage to the economy since low-risk borrowers are denied access to credit for productive purposes.

Liquidity Risks

Banks face liquidity risk since bank loans are less liquid compared with bank liabilities. When banks are forced to liquidate their relatively illiquid loans, they are forced to receive less than their full value. Thus, the bank must reduce the risk exposure without sacrificing too much profitability. Among the strategies adopted are the following:

- Holding of reserves in the form of cash and/or short-term marketable securities.
- Use various techniques of asset and liability management to reduce liquidity risks.

(ii) The unit trusts is an investment that will enable an investor, corporations and institutions having common investment objectives to pool their money. The **two** benefits of investing in unit trusts are as follows:

- Investors with a small amount of funds can enjoy the advantages of diversification of their funds.
- Investors benefit from the professional selection and management of investments through which they can hope to obtain better yields and capital appreciation.

(iii) **One** difference between Islamic banking and conventional banking in Malaysia is as follows:

In the operations of Islamic banking in Malaysia, various Syariah principles have been applied in place of interest charges and various banking services. Among the principles are Al-Wadiah (trusteeship), Al-Mudharabah (trustee profit-sharing) and Al-Mushyarakah. In the case of conventional banking, these principles are not applicable and interest charges depend on the liquidity conditions in the economy.

(iv) The objectives for establishing the IOFC are: *(Select any **two** objectives)*

- The IOFC will enhance the attractiveness of Malaysia as an investment center.
- The IOFC will supplement the present onshore financial located in Kuala Lumpur. It will tap the increasing demand for customized financial and related services.

- The IOFC will facilitate the contribution of the financial sector to the progress of diversified economic development.
- The IOFC will form part of the national goals to diversify the growth potential of the nation.
- The IOFC provides a range of services, including offshore banking operations, offshore insurance and offshore insurance-related business, corporate funding, investments and trusts management and others.

Question 3

Another popular question amongst candidates was on the various functions of a central bank. Candidates, however, were unable to explain how a central bank influences the supply of money satisfactorily.

3. (a) **Two** key functions of a central bank are:

(i) Promoting monetary policy and sound financial structure

A central bank will influence the credit situation to help achieve the nation's overall economic objectives. A central bank will ensure that the supply of money and the volume of credit are sufficiently elastic to demands in the domestic economy, without creating undue pressure on resources. It regulates the volume of money and the generation of credit by the banking system through a wide range of instruments, including quantitative and qualitative.

(ii) Management of the banking system

A central bank will manage the banking system in a manner that would ward off the possibility of systematic failure. This is crucial to maintain public confidence in the banking system. Major legislative amendments have enabled a central bank to institute prompt measures in the face of developments and, also take effective remedial actions. In Malaysia, the introduction of BAFIA in 1989 was a key measure by Bank Negara Malaysia (BNM) to modernise and streamline the laws relating to banking and financial institutions.

The broad macroeconomic objectives are as follows:

- Stable and sustainable economic growth path
- High level of employment
- Stability in the purchasing power of the ringgit
- Stable prices/ low inflation
- To achieve a reasonable balance of payments position

(b) Under Section 38 (1) of the BAFIA 1989, banking institutions are required to observe a minimum liquidity ratio (LR).

The LR is expressed as a percentage of the eligible liabilities (EL) base. The LR operates in very much the same manner as the SRR, in that when the LR is raised, the amount of deposits and loans a given supply of reserves can support is much less. The impact is expansionary when the LR is reduced and vice-versa.

In 1989 and 1990, the two-tier structure for the LR comprising the primary and secondary LR for commercial banks and finance companies were removed. The purpose was to enable these institutions to compete on a more equal footing with the merchant banks, which were never required to observe the two-tier ratio.

The LR now plays a less important role in the conduct of monetary policy. The ratio for commercial banks remained at 17% of EL and at 10% for finance companies and merchant banks.

The reasons for the imposition of the LR are:

- As a prudential measure to ensure that banking institutions are liquid at all times, to meet customers' deposit withdrawals.
- As a selective credit policy to accord "liquid assets" status to encourage direct credit to desired areas.
- As a means to ensure continuous and ready financing of the government's development projects.
- As a monetary instrument to influence the liquidity situation of the banking system.

(c) The bank will act as the lender of last resort. The key forms of assistance include, rediscounting of eligible bills and borrowing from a central bank against collateral. When a financial institution is short of funds, a central bank stands ready to extend credit to temporarily tide the institution over its temporary difficulty. Assistance could also be in the form of placing short-term deposits with the institutions on a roll-over basis. When the institutions are unable to meet the required working capital, the following measures are adopted:

- Grant loans against the security of shares.
- Purchase any shares for the purpose of controlling the business of the ailing financial institution.
- Inject capital into the financial institution in the event that shareholders are not in a position to do so.

(d) A central bank through its monetary policy will influence the level of money supply. This will have an impact on production, employment and the price level. A central bank conducts monetary policy and affects the volume of reserves, level of interest, volume of credit and the direction of bank credit. The monetary instruments that a central bank adopts include the traditional open market operations and changes to the reserve requirements.

These instruments are used to influence the credit and pace of money creation through the impact on the availability of bank reserves or high-powered money.

- Commercial banks respond to changes in the availability of reserve funds or the variations of interest rates by adjusting their investment portfolios.
- The monetary measures will also exert an impact on the supply of currency and deposits, the availability of credit as well as the cost of money and credit in the various markets.

(e) The new framework for the computation of the base lending rate (BLR) was adjusted on 6 August 1998 in the face of the economic slowdown. As a result, this has lowered the BLR for both commercial banks and finance companies. The new formula is as follows:

- **Commercial banks**:

$$\frac{\text{BNM intervention rate} \times 80\%}{(1 - \text{SRR})} + 2.25\%^*$$

- **Finance companies:**

$$\frac{\text{BNM intervention rate}}{(1 - \text{SRR})} + 2.25\%^*$$

* prior to September 1998: 2.5%

The BNM intervention is now referred to as the current rate. This is in contrast with the previous use of an adjusted KLIBOR, which was the weighted-average of the preceding 3-month interbank rate.

The BLR is lower for commercial banks as reflected by the framework for computation. For the commercial banks, the value is allowed to be lower by 20% to reflect the overall cost of funding (no interest on current accounting).

Question 4

Generally candidates did not provide good answers for the question on determinants of money supply, despite the fact that this has been a popular question in almost every sitting.

4. (a) The rate of growth in the money supply is an important indicator to a central bank due to its likely impact on its monetary policy. The credit creation process will determine the level of expansion of money supply in the economy. Whenever a loan is made by a financial institution, a deposit of equal amount is being created in the deposits of financial institutions and these in turn can affect the level of money supply in the economy.

In Malaysia money supply is determined by these factors:

Net government operations

Financing a budget deficit through borrowings from the private sector, financial institutions, central bank and even sources from abroad is another determinant of money supply.

Financing the government's overall deficit by the banking system will have the same effect on money supply as the banking sector's loan to the non-banking private system.

The government's operations are reflected by the average differences over time between the level of government's debt by the banking sector, mainly in government's paper. A higher government's deposits with the banking system compared with holdings of government's debt by the banking system will have a contractionary impact on the level of money supply and vice-versa.

Bank credit to private sectors

Loans by the banking system to the private sectors are a major source of liquidity. Every loan will create a deposit and therefore, expand money supply. The limit to which banks may extend credit will depend on the size of the statutory reserves at a central bank. In the Malaysian economy over the past years, credit to private sectors has always been expansionary and has even exceeded that of money supply (M3). On the other hand, a restrictive monetary policy will slow down lending to the private sectors.

External Sector

This is another major determinant of money supply. Any excess of foreign exchange receipts over payments will raise money supply and vice-versa. In the event of a large flow of external funds into the domestic economy than outflows, the central bank and the banking system will be receiving foreign currency. This will increase domestic deposits and therefore money supply in the economy. In other words, a surplus balance of payments position will result in an inflow of funds and vice-versa when there is a deficit.

(b) (i) Households will shift money from "non-interest bearing deposits" to "interest bearing deposits", reflecting the changes in liquidity preference to movements in interest rates. Another reason is that it reflects the growing tendency towards income maximisation or the shifting attitudes of households and businesses.

(iii) The monetary base is defined as follows:

The part of the money supply, which is the liability of the central bank is called "base money" or reserve money or "monetary base". The monetary base comprises all reserves held by banks and currency in circulation. Another name is "high-powered money" because a given amount of the base allows the creation of a multiple amount of money. The liabilities of the central bank must be balanced by assets which comprises net foreign assets and stocks of domestic credit. The most important factor that influences the monetary base is the actions of the central bank through open market operations. Basically, changes in the net foreign assets and stocks of domestic credit of the central bank will change the monetary base. While a surplus balance of payments raises the monetary base, a deficit will shrink it. The monetary base is linked to money supply by the money multiplier.

The definition of the money multiplier is as follows:

In simple terms, the money multiplier is the number of times the money supply will change in response to a given change of the monetary base. Given a monetary aggregate (M), the money multiplier (k) is the direct link between the monetary aggregate and the supply of reserve money (R).

$M=kR$

As an example, a multiplier of 5 and a monetary base of RM50billion will generate money supply of RM250billion.

The central bank influences the money supply by initiating changes in the supply of reserves or through policy actions that alter reserve demand and thereby, change in the money multiplier.

(iii) Narrow and broad money are defined as follows:

Narrow money or M1 refers to the total supply of money available for the public to spend. The supply of money is basically for payment purposes. M1 comprises currency holdings and demand-deposits held by the private sector.

Broad money refers to M2 (private sector liquidity) and comprises M1 and private sector holdings of fixed and savings deposits with the commercial banks and the central bank. The even broader money or M3 comprises M2 and all private sector deposits including repurchase agreements (REPOs), placed with finance companies, merchant banks, discount houses and Bank Islam or M2 plus broad quasi money.

Indeed, the categories of money supply can be summarized as follows:

M1 = coin and currency notes + demand-deposits

M2 = M1 + quasi money (savings deposits + fixed deposits + NIDs issued + REPOs) of private sector at commercial banks)

M3 = M2 + broad quasi money (savings deposits + fixed deposits + NIDs issued + REPOs) of private sector at finance companies, merchant banks, discount houses and Bank Islam Berhad)

(iv) We cannot expect a central bank to control both money supply and interest rates at the same time because when a central bank targets money supply then interest rates become volatile. On the other hand, when the target is interest rates, then money supply becomes volatile. A central bank will enter the open markets and buy or sell specific amount of securities needed to achieve the targeted interest rates. A central bank will buy securities and vice versa when the target is to prevent interest rates from falling.

A central bank will loose its control on money supply when it chooses interest rates as the intermediate target. Indeed, money supply will increase or lower depending on whether a central bank is acting to prevent interest rates from falling below or rising above its target.

(c) Calculations

(i) The money multiplier can be expressed as k=(c+1)/(b+c), where b is the statutory reserve ratio and c the ratio of currency holding to demand-deposits. Calculate the multiplier if b=0.8 and c=0.2

Answer: k= (1.2)/1=1.2

The money multiplier decreases when both statutory reserve ratio and the ratio of currency to demand-deposits increases.

(ii) The net impact is **RM30billion**.

Question 5

The weakest attempted question was on monetary policies. Candidates lost marks when they failed to provide appropriate answers for questions on "effectiveness of monetary policy", "differences between intermediate and operational targets" and the "conduct of monetary policy in the money market".

5. (a) Policy makers have used monetary policy for macroeconomic management to promote monetary stability and a sound financial system. The objectives of a monetary policy are summarised as follows: (*Select any **three** objectives)*

(i) To achieve price stability

Inflation erodes the value of money as a medium of exchange and a unit of account. Thus, policy makers have emphasised price stability as a policy goal. In a market economy where prices contain information about costs and demand, inflation would make prices less useful as signals for resources allocation. It would also make decisions more difficult for households and firms.

(ii) To achieve high employment

An important monetary objective is to maintain a low rate of unemployment. The reasons being, unemployment leads to excess productive capacity, financial stress and low-esteem for those who are unemployed. Indeed, excess production capacity is evident during an economic slow down.

(iii) To achieve real economic growth

To promote the highest sustainable rate of real economic growth that is consistent with domestic prices and exchange rate stability. A steady economic growth and increase in the output of an economy leads to higher revenue for the government. Moreover, economic growth policies would induce savings and ensure that a large pool of investment funds is created in the economy. Stability of economic growth is crucial as it allows for precise planning and promotes long-term investment in the economy.

(iv) To achieve financial market and institutional stability

This ensures that funds are channeled from savers to borrowers. Moreover, this would also involve growth in bank credit and money supply is adequate to accommodate and fuel economic growth without causing inflationary pressures.

(v) To maintain interest rate stability

Any volatility of the interest rate makes planning and investment decisions a difficult exercise for investors and households. A desire for a stable interest rate could motivate rate-saving and investment environment.

(vi) To achieve stability of the exchange rate market

A stable foreign exchange market would make planning easier for both commercial and business transactions. A fluctuation in the domestic exchange market would make domestic goods less competitive in the international market. Therefore, it has been argued that policy makers should intervene to offset significant fluctuations in the foreign exchange market.

(b) Monetary policy is transmitted through the financial market mainly through the money market and facilitated by the presence of financial infrastructure.

It is transmitted through the money market to the financial system by price and quantity effects. The change in relative prices and real assets lead to adjustments in portfolio holdings and therefore, change spending and income.

The development of financial infrastructure provides the necessary framework for implementation of monetary policy. More importantly, the financial institutions and markets should be soundly based and efficiently managed.

Among the key policies implemented are deregulation of interest rates and the introduction of new financial instruments. Market-oriented instruments are used in the money market to conduct monetary policy. It is important that the money market remains stable for an effective transmission of monetary policy. Interbank rates are important signaling devices to market monetary policy intentions.

(c) The factors that could undermine the effectiveness of a central bank's monetary policy are as follows: *(Select any **five** factors)*

- The presence of information lags or the inability to note any changes in economic growth, inflation and other macroeconomic parameters instantaneously.
- Impact lag or the time required for monetary policy changes to affect economic growth, employment levels, or inflation. Indeed, any changes in the money supply affect the economy over time and the impact is not immediate. Overall, both information and impact lags make effective policy making a rather difficult exercise.
- Private sector expenditure may not be responsive to interest rate changes.
- Business reactions to a credit squeeze by increasing borrowings for fear of future credit ceiling.
- Expectation that monetary is transitory in nature.
- Prevailing excess production capacity.
- Overall business sentiment and confidence is eroding.
- Adverse movements of the domestic exchange rate.
- Disintermediation when providers and borrowers of funds will attempt to transact between themselves outside the regulated market.

(d) The differences between an intermediate and an operating target are:

The intermediate targets are the objectives for financial variables, including money supply and short-term interest rates. A central bank is of the view that these targets are needed to help it to achieve its monetary goals. This includes money supply and short-term interest rates and these targets are required to help a central bank to achieve its monetary goals.

Several conditions must be fulfilled in order to achieve an effective intermediate target for monetary policy:

- The variables must be measurable over time such as money supply and interest rates (measurability).
- A central bank should be able to control these targets which are also responsive to the course of action taken by a central bank (controllability).

On the other hand, the operating targets can be directly controlled by a central bank. These targets are closely associated with the intermediate targets. Examples of operating targets are non-borrowed reserves and federal funds as in the case of the Federal Reserves in the United States.

Question 6

The least attempted questions were on the similarities and differences between the World Bank and the International Monetary Fund and selective capital control measures adopted in 1998. Only a few candidates secured a pass for this question. Generally, candidates were weak in understanding the roles of capital control measures.

6. (a) **Two** common features of the IMF and the World Bank are as follows:

- Both are in a sense owned and directed by the governments of member nations.
- Both institutions concern themselves with economic issues and concentrate their efforts on broadening and strengthening the economies of their member nations.

However, the differences between the two institutions are as follows: *(Select any **three** differences)*

- The World Bank is primarily a development institution but the IMF is a cooperative institution that seeks to maintain an orderly system of payments and receipts between nations. The differences are related to their structure, purpose, source of funding, membership and goals.
- The World Bank's central purpose is to promote economic and social progress in developing countries in order to raise productivity. The IMF was set up in the midst of unresolved financial problems that was instrumental in initiating and protracting the Great Depression of the 1930s. While it is not primarily a lending institution, it is an overseer of the members' monetary and exchange rate policies and a guardian of the code of conduct.
- The World Bank has a much complex structure compared with the IMF.
- The World Bank is an investment bank that intermediates between investors and recipients. The funding comes mainly from market borrowing through the issue of bonds to individuals and private institutions in more than 100 countries. On the other hand, the IMF is not a bank and does not intermediate between investors and recipients. The funding comes mainly from quota subscriptions or membership fees paid by the 182 members. The IMF is like a credit union whose members have access to a common pool of resources.
- The World Bank only lends to creditworthy governments of developing countries. In contrast, all member countries have the right to financial assistance of the IMF.

(b) (i) Malaysia has introduced a comprehensive set of exchange control measures to restrict speculative movements. The controls have been adopted after considering the following: *(Select any **two** reasons)*

- Evident that the contagion effects of the regional financial crisis were intensified and spread across the other continents.
- On the potential of the capital control measures, it will provide breathing space for the economy and not substituting exchange control measures for appropriate macroeconomic policies.
- To redress market failures given the macroeconomic and financial risks arising from the free markets and the flow of capital. Economies are not spared from pressures on their currencies and stock markets.
- While strong macroeconomic fundamentals are necessary, they are not sufficient for financial stability. The latter needs sound financial sector policies.
- In times of crisis, it has been observed that markets do not behave rationally, causing overreactions to any market developments. To ensure on-going macroeconomic and structural policies to continue uninhibited external development. The capital control would preserve the gains that have been made such as the improvement in the balance of payments and keeping inflation under control.
- It will allow the economy to pursue more aggressive policies including interest rate policy, injecting more liquidity into the banking system and enhancing the intermediation process to support economic recovery.

(ii) Capital control measures are as follows: *(Select any **two** measures)*

- Reducing the ability of non-residents to engage in ringgit transactions among themselves. This was effected via limits on the use of ringgit external accounts held by non-residents, mainly corporate customers.
- Requiring imports and exports of goods and services to be settled in foreign currencies.
- Moved away from the withholding period to an exit tax system.
- Tightening the rules on investment abroad by Malaysia.
- Ringgit is no longer a legal tender abroad.

(ii) The impacts of the selective capital control measures on the economy are as follows: *(Select any **two** impacts)*

- This will lower the net inflows of short-term capital in the beginning of the imposition. With the imposition of the levy on the outflow of capital since February, this has encouraged a net inflow of short-term capital.
- On the negative side, the imposition of the capital controls has led to a higher risk premium paid for funds raised abroad. This increased the cost of raising funds (only a temporary phenomenon). Secondly, the controls led to a temporary loss in confidence of investors. Thirdly, there was a decline in the activity in spot, forward and futures markets that may limit hedging and risk management capabilities of market participants. There could also be some burden (in the form of compliant) due to the imposition of the controls.
- Impact on economic recovery - After recording a decline of 1.3% in the 1st quarter of 1999, real GDP expanded since the 2nd quarter of 1999 (2nd Quarter: 4.1%; 3rd Quarter: 10.6%; 4th Quarter: 10.6%) and depicted somewhat a V-shape recovery.

(c) (i) Differences between an appreciation and a depreciation of a currency are as follows: (movement of foreign exchange under a flexible exchange rate system)

With an appreciation of the ringgit against the US dollar, the value of ringgit becomes more expensive in terms of the US dollar. In this case, the ringgit exchange rate moves to RM2.5 per US dollar from RM2.75 per US dollar, implying an appreciation of the ringgit by 10% against the US dollar.

With a depreciation, the ringgit becomes less expensive in terms of foreign currencies. When the ringgit changes from RM2.5 per US dollar to RM2.75 per US dollar, then the ringgit has depreciated by 9.1%. Thus, it is now cheaper to convert foreign currencies to ringgit.

(ii) The difference between devaluation and revaluation of an exchange rate is as follows: (under a fixed exchange rate system)

Devaluation takes place when the price of foreign currencies under the fixed rate regime is raised due to official intervention. Hence, the domestic currency will be cheaper compared with foreign currencies. A foreigner will pay less for the devalued currency while the residents of the affected country will pay more for foreign currencies.

Countries will devalue their domestic currency as a policy instrument to improve a deteriorating balance of payments position. The impact is the increase in prices tradable. This raises the prices and profitability of tradable relative to non-tradable. Devaluation will permit the government to improve aggregate demand in the economy but the adverse impact is reflected by increase in inflationary pressures in the economy.

The opposite of devaluation is revaluation.

(iii) The differences between short-term and long-term capital flows are as follows:

Short-term capital: Refers to capital movements with a maturity of less than a year. It is also known as "hot money" and is very volatile in nature. A major component of short-term capital flows comprises the sub-account for net external assets and liabilities of the banking system and portfolio flows. This reflects the changes in the international indebtedness of domestic banking institutions.

Long-term capital: Has a maturity of more than a year and comprises official long-term capital and foreign direct investments. Details of long-term capital are:

- Official capital flows: This flow relates to official sources. Takes the form of aid from other governments or development of technical assistance. Official flows are driven by the financing requirements of the recipient countries, which cannot be met by domestic savings. In general, it represents borrowings abroad to finance deficit of the current account and it entails an increase in external debt servicing obligations.
- Private capital flows: Private capital flows are mainly owned by private institutions such as financial institutions and multinationals. Components of private capital flows include foreign direct investment and portfolio investment. Hence, this involves both short and long-term capital flows.
- Loans: Refers to the extension of credit either from official or private sources. In the case of official loans, this can be disaggregated into concessional loans and non-concessional loans. Moreover, loans can be offered in the form of publicly guaranteed debt which refers to loans guaranteed by a public entity in the debtor country.