

DP01

Monetary Economics and the Malaysian Financial System

11 OCTOBER 1999

1. Time allowed : Three (3) hours
2. Total number of questions : Six (6) questions on 2 pages
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) Highlight **three** advantages and **one** disadvantage of the financial intermediation process. [4]
 - (ii) Briefly describe the structure of the Malaysian financial system. [4]
 - (b) (i) Highlight the main components of a capital market. [4]
 - (ii) Discuss the contributions of the capital market to economic development. [4]
 - (c) Briefly discuss **three** monetary measures taken by Bank Negara Malaysia (BNM) in 1998 to expedite economic recovery. [8]
 - (d) Briefly describe any **three** of the following:
 - (i) **One** banking measure introduced by BNM in 1998. [4]
 - (ii) The new Base Lending Rate framework for commercial banks and finance companies. [4]
 - (iii) The CAMEL rating framework. [4]
 - (iv) The excess reserve ratio. [4]
 - (e) Using a schematic diagram, illustrate the impact of monetary policy on the economy. [4]
- (Total:40 marks)

PART B**ANSWER THREE (3) QUESTIONS ONLY**

2. (a) Distinguish between the sources and uses of funds of a commercial bank and a finance company. [5]
 - (b) Highlight **two** statutory requirements of a commercial bank and a finance company. [5]
 - (c) Highlight **two** recent directives on lending to special groups by commercial banks. [5]
 - (d) Answer any **two** of the following:
 - (i) Differences between a “bank panic” and a “bank failure”. [2.5]
 - (ii) Strategies to mitigate credit risk and liquidity risk faced by commercial banks. [2.5]
 - (iii) **Two** recent measures introduced to further promote Islamic banking in Malaysia. [2.5]

(Total:20 marks)
3. (a) Discuss **one** major function of the Central Bank. [3]
 - (b) Briefly describe the major type of assistance that can be rendered by a Central Bank to “troubled” financial institutions. [4]
 - (c) Why does a Central Bank impose liquid assets requirements for financial institutions? [5]
 - (d) (i) How can a Central Bank influence the money supply in the economy? [4]
 - (ii) “Changes in a Central Bank’s assets cause the money supply to change in the same direction”. Explain this statement. [4]

(Total:20 marks)

4. (a) What is the definition of money supply in the Malaysian economy? [5]
- (b) Briefly describe **three** key determinants of money supply in Malaysia. [5]
- (c) (i) Give **two** instances when money is converted from M1 to M3. [1]
- (ii) Define the term “monetary base” and explain whether a Central Bank can control the “monetary base”. [4]
- (d) (i) Define the term “money multiplier” and explain the factors that can reduce the size of the “money multiplier”. [3]
- (ii) Compute the size of the money multiplier if the statutory reserve ratio is 0.9 and the ratio of currency to demand deposits is 0.1. What happens to the money multiplier if there is an increase in the statutory reserve ratio and the ratio of currency to demand deposits? [2]
- (Total:20 marks)
5. (a) Briefly outline **three** main objectives of monetary policy. [5]
- (b) Briefly describe how monetary policy is transmitted through the financial market. [5]
- (c) (i) List the general and specific instruments of monetary control. [2]
- (ii) Explain **either** the general instruments or specific instruments of monetary control. [3]
- (d) List **five** factors that could undermine the effectiveness of monetary policy of a Central Bank. [5]
- (Total:20 marks)
6. (a) The World Bank and the International Monetary Fund (IMF) are **two** important international financial institutions.
- Briefly outline their common characteristics and differences. [4]
- (b) (i) Outline any **four** selective capital control measures adopted by Malaysia in 1998. [2]
- (ii) Give **two** main reasons why Malaysia adopted the selective capital control measures in 1998. [2]
- (c) Explain any **four** of the following:
- (i) Differences between the “floating” exchange rate regime and the “fixed” exchange rate regime. [3]
- (ii) “Depreciation” and “devaluation” of the currency. [3]
- (iii) The key components of capital flows of the balance of payments. [3]
- (iv) Circumstances when the overall balance of payments is in a surplus, deficit or balanced position. [3]
- (v) Offshore currency trading. [3]
- (Total:20 marks)

OUTLINE ANSWERS

PART A

Question 1

The questions relating to “financial intermediation process”, “capital market”, “CAMEL rating framework” and “excess reserve ratio” were well answered by a majority of the candidates. However, some candidates were unable to provide good answers for the question on the “measures for economic recovery”.

- (a) (i) Financial intermediation is the process by which a financial intermediary plays the role of an ultimate borrower and an ultimate lender.

Advantages

- Allows savers to purchase assets that are relatively safe and more liquid. The assets earn interest rates.
- Pools saver’s funds to reduce the cost of transactions. Individual savers are able to earn higher returns on their savings and borrowers realise a lower cost of funds.
- Offers 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 of losing the entire asset portfolio. Hence, financial intermediary can offer the small saver a reduction in risk through diversification of his portfolio.

Disadvantages

- There are costs involved in the process of intermediation. The costs are expenses of servicing deposits and loans, return to capital, the intermediary business and reserve requirement.

- (ii) Basically, the financial system comprises the following institutions:

Financial Institutions

- The banking system is the key component and comprises the Central Bank, 35 commercial banks, Bank Islam Malaysia Berhad, 39 finance companies, 12 merchant banks, 7 discount houses and 38 foreign banks’ representative offices.

Non-bank Institutions

- Supervised by the government and comprises 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 maturities exceeding one year, corporate stocks and shares and commodity futures.

- (b) (i) The capital market basically is a market in which securities with a maturity of one year or more are exchanged. The activities are mainly of raising long-term funds in the primary market. In addition, the other activities include the trading of funds raised in the form of securities in the secondary markets. The capital market in Malaysia comprises a primary market in which new

issues of the Government and corporate securities are offered to public and institutions. There is also a secondary market in which existing Government and corporate securities are transacted.

The components of the capital market are as follows:

- The equity market: trading in corporate stocks and shares for which there is no maturity. The holdings are mainly centered on both individuals and institutions.
 - Government securities markets are held mainly by institutions, including the provident and pension funds and trust funds.
 - Corporate bond markets are dominated by institutions and determined by a number of factors, including marketability, stability of returns, prospects for capital gains.
 - Financial futures and options markets.
- (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 follow:
- The presence of the capital market will mobilise medium as well as long-term funds from a wide-spectrum of the population to finance public development programmes as well as private investments. This will assist the process of economic growth.
 - 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.
- (c) Monetary measures taken by the Central Bank were categorised into two phases, namely, (a) 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 strengthening the financial system.

The three monetary measures are as follows:

- (i) 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.
 - (ii) 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%.
 - (iii) 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.
- (d) (i) Against the background of changing external and domestic conditions in the 1990's, the Central Bank continued with efforts to develop and reform the banking system. This was needed to ensure that the banking system was well-placed to meet the challenges arising from the challenging environment.

In general, banking policies have been directed at:

- Creating a core of domestic banking institutions which are well managed and highly capitalised.
- Broadening and deepening the financial markets as well as strengthening the financial infrastructure.

- Improving the overall level of efficiency and competitiveness of the sector.
- Accelerating the development of the bond market.

One banking measure taken in 1998 is as follows:

New Liquidity Framework

- Introduced in July 1998 to replace the old liquid asset ratio requirement.
- Given up to 1 January 2000 to migrate to the new framework.
- The liquidity needs will be assessed based on ability to match short-term liquidity requirements arising from maturing obligations with maturing assets.
- Required to maintain as a minimum requirement adequate liquidity surplus not only to meet expected obligations but also to sustain unexpected heavy withdrawals for at least one month.
- This new framework will create awareness among the banks with regards to their funding structure and ability to handle short to medium-term liquidity problems.
- Will encourage a more efficient and proactive management of liquidity among banking institutions.
- Those banks that manage their liquidity profile prudently and efficiently will no longer be required to hold high amounts of liquid assets.
- The new framework will also help to reduce the existing price distortion on liquid assets.

(ii) The new framework is as follows:

- Adjusted on 6 August 1998 which led to the lowering of the base lending rate (BLR) for both the commercial banks and financial companies.

- **Commercial banks:**

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

- **Finance companies:**

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

- The BNM intervention is now called the current rate. The BLR is lower for commercial banks as reflected by the framework for computation. The reason is the higher overall funding costs for finance companies.

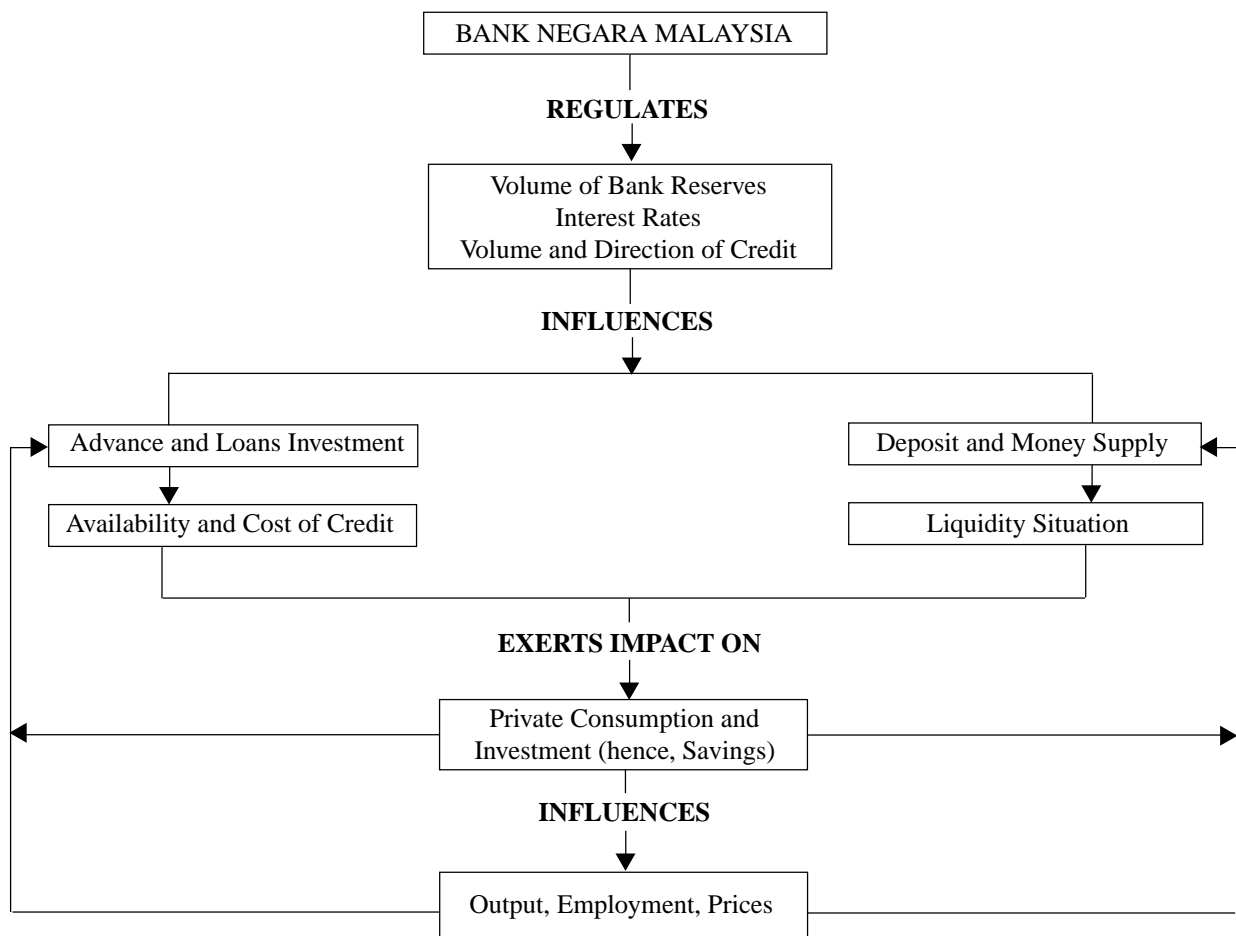
(iii) The features of the CAMEL Rating Framework is as follows:

- 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 capital support in the fluctuation of business and finance fixed assets, provides a cushion against unexpected losses, and continues commitment of shareholders to long-term viability of financial institutions. The larger the capital base, the greater the capacity of the financial institution 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 standards of integrity, professional competence and qualities of service.
 - Earnings Capacity: Refers to whether the interest income 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 earning capability of its assets.
 - Liquidity: There must be sufficient liquid assets to meet depositors' withdrawals. Must have sufficient cash balance and liquid assets.
- (iv) Excess reserves refer to reserves that financial institutions hold in excess than required by the Central Bank.
- The opportunity cost of holding excess reserves is the market interest rate. As such, a high interest will discourage the holding of excess reserves and therefore, is inversely related to interest rates.
 - Holding excess reserves serves as a cushion against expected outflows of deposits or significant variability in deposit outflows.
 - The theory of portfolio allocation predicts that an increase in the expected level or variability of deposit outflows increase excess reserves and vice-versa.

(e)

IMPACT OF MONETARY POLICY ON THE ECONOMY



PART B

Question 2

Candidates displayed weakness in explaining the “measures to promote Islamic Banking”. Candidates should attempt to try out mock examinations using past year questions.

(a) **Sources of Fund**

Commercial Banks

Capital and reserves, Deposits (demand, fixed, savings), Negotiable Instruments of Deposits (NIDs) issued, Amount due to financial institutions in Malaysia and abroad, Bankers Acceptances and Other liabilities.

Finance Companies

Capital and reserves, Deposits (fixed and savings), Amount due to financial institutions and Other liabilities.

Uses of Funds

Commercial Banks

Cash, Balances with Bank Negara, Statutory Reserves with Bank Negara, Call money, Amounts due from financial institutions in Malaysia and abroad, 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 Bank Negara, Call money, Deposits with financial institutions, Investment in government securities, Loans to financial institutions, Hire purchase, Leasing, Housing, Fixed and other assets.

(b) The statutory requirements are:

<p style="text-align: center;"><u>Statutory Reserves (SRR)</u></p> <p><u>Commercial Banks</u></p> <ul style="list-style-type: none"> • An instrument to control the volume of liquidity in the banking system. • Reserves earn no interest rates. An increase in reserves will effectively lock in with the Central Bank a large proportion of the resources of the commercial bank. • Is one of the most effective instrument of monetary and credit control. • The statutory ratio has been changed over time. With effect from February 16 and July 2, 1998, the SRR was reduced from 13.5% to 10% and 8% of the eligible liability. <p><u>Finance Companies</u></p> <ul style="list-style-type: none"> • Finance companies have to observe the SRR. • Since 1989 there have been 10 instances of upward revisions of the SRR. • More recently, the SRR was revised downwards by 3.5 and 2 percentage points to 10% and 8% with effect from 16 February and July 2, 1998. • Finance companies are also required to hold on average at least 10% of their eligible liabilities in liquid assets. 	<p style="text-align: center;"><u>Liquidity Ratio (LR)</u></p> <p><u>Commercial Banks</u></p> <p>Prior to June 1990, the requirement is a minimum liquidity ratio and a primary liquid asset ratio set at 17% and 5% of the eligible liabilities.</p> <p>This arrangement was abolished in June 1990 and commercial banks only need to observe an overall LR of 17%.</p> <p><u>Finance Companies</u></p> <ul style="list-style-type: none"> • Finance companies are required to hold at least 10% of the eligible liabilities in liquid assets.
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(c) The lending to the special groups are as follows:

(i) Loans to Bumiputera Community

The quota under the 1998 Guideline was set at 30% of the loan base outstanding as at end-December 1996.

(ii) Housing Loans Compliance

As a group, commercial banks must make firm commitments to finance purchases or construction of at least 100,000 units and 40,000 units of houses costing RM100,000 and below. The compliance deadline for housing commitments is 31 March 2000 and one half of the minimum requirement to be complied by 31 March 1999.

(d) (i) The differences are as follows:

Bank Panic

- Bank responds by temporarily suspending the privilege of converting deposits into currency.
- Central Bank to act as lender of last resort to the affected institutions at discount rate.

Bank Failure

- Close the institution if the net worth is too low.

(ii) At the macro level there are several risks facing the banking sector. As an example, the marked slow down in economic and business activities would raise concerns over the soundness of the banking system as well as the quality of assets. The strength of the banking system and the quality of its assets depend critically on the quality of bank management, its internal credit evaluation, supervision and control procedures and effective monitoring systems.

The two risks faced by the banking institutions are:

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.

(iii) Two recent measures to develop Islamic Banking are as follows:

Islamic Repurchase Agreements

- The objective is to further strengthen the Islamic money market. Banking institutions participating in Skim Perbankan Islam are allowed to accept funds of less than one-month maturity from non-interbank customers with immediate effect. The funds received through REPOs shall be utilised solely for Islamic banking purposes only.

Islamic Negotiable Instruments

- The new products to be marketed are Negotiable Islamic Certificate and Islamic Debt Certificate.
- The products are created to provide additional avenue for the Islamic bank and banking institutions participating in Skim Perbankan Islam to mobilise savings from the public. This will also promote the development of the Islamic money market.

Question 3

Candidates are advised to read in more detail the topics on monetary policy and creation of money. They should emphasise on key topics rather than on “less” important topics.

(a) One key function of the Central Bank is its responsibility for monetary policy.

(i) Promoting Monetary Policy and Sound Financial Structure

- The Central Bank will influence the credit situation to help achieve the nation’s overall economic objectives. The 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

- The 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 the Central Bank to institute prompt measures in the face of developments and also take effective remedial actions.

- The introduction of BAFIA in 1989 was a key measure by the Central Bank to modernise and streamline the laws relating to banking and financial institutions.
- (b) Basically the Bank will act as the lender of last resort:
- The key forms of assistance include rediscounting of eligible bills and borrowing from the Central Bank against collateral.
 - When the financial institution is short of funds, the Central Bank stands ready to extend credit to assist temporarily the institution over its 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.
- (c) 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 (given a 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 has never been 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 remains 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 deposit withdrawals of the customers.
 - As a selective credit policy by according “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.
- (d) (i) The Central Bank through its monetary policy will influence the level of money supply. This will have impact on production, employment and the price level. The 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 the 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.

- (ii) Changes in the assets of the Central Bank will cause money supply to change in the same direction. When the Central Bank buys an asset from the public, the payment whether cash or cheque will directly affect the money supply. Any increase in the liabilities of the Central Bank associated with purchases of assets will lead to an expansion of money supply. Likewise, there will be a contraction of money supply when the Central Bank sells its assets to the public. The reason is that the cash or cheque the Central Bank receives in payment goes out in circulation.

Hence, changes in the level of the Central Bank asset holdings would lead to a change in money supply in the same direction since they require equal changes in the liabilities of the Central Bank.

In conclusion, any Central Bank's purchase of assets cause an increase in the money supply, while any Central Bank's sale of assets will automatically cause a decline in money supply.

Question 4

A significant number of candidates were confused between the “definitions” and the “determinants” of money supply, while others faced difficulty in computing the money multiplier.

- (a) Money supply (M0) is defined as the amount of financial liabilities issued by banking institutions. This comprises coins and bank notes in the hand of the public and of deposits held by private sectors with banking institutions. The narrowest definition of money, M1, comprises currency in circulation, travellers cheque, demand deposits and other chequeable deposits. A broader definition is M2 and comprises M1 and other short-term investments, including small denominations time deposits, saving deposits, money market deposit accounts and overnight REPOs. The even broader money or M3 includes M2 and large denomination time deposits, institutional money market balances, term purchase agreement and even Euro dollars (as in the case of the Federal Reserve Bank).

The categories of money supply can be summarised as follows:

M1	=	coin and currency notes + demand deposits
M2	=	M1 + quasi money
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)

- (b) Money plays a vital role in an economy as the quantity of money and credit affects the level of output and prices of goods and services. In the presence of the banking system, society can change the amount of money supply because the existence of a banking system provides the possibility of shifting financial assets between the banking system and non-bank public.

The rate of growth in the money supply is an important indicator to the 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 financial system. A large portion of money supply comprises deposits of financial institutions and these in turn can affect the level of money supply in the economy.

In Malaysia, three main determinants of money supply are as follows:

Bank Credit to Private Sector

- Loans by the banking system to the private sector 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 the Central Bank. In the Malaysian, economy over the past years, credit to the private sector 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 sector.

- In 1997, M3 rose by RM61.1 billion while credit to the private sector increased by RM90.1 billion.

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 inflow of external funds into the domestic economy, 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.

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-bank 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.
- (c) (i) Money shifts or converted from M1 to M3 reflects 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.

(ii) Monetary Base

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 comprise 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 surplus balance of payments raise the monetary base, a deficit will shrink it. The monetary base is linked to money supply by the money multiple.

- The Central Bank does not have direct control over the factors that affect the monetary base. As part of monetary management, the Central Bank affects the level of monetary to keep it consistent with the policy objectives for growth.
- The Central Bank's action will offset influences on monetary base that originates from private and public sector decisions that affect these determinants:
 - * Central Bank international reserves
 - * Central Bank net lending to government
 - * Central Bank net lending to private non-bank sector
 - * Other factors
- The Central Bank affects the monetary base by manipulating its balance sheet. This can be achieved by selling and buying securities and also making discounted loans to banks. The most direct route that the Central Bank can use to change the monetary base is through open market operations.

- An open market purchase will raise the monetary base while an open market sales will reduce the monetary base.
- The Central Bank can also increase monetary base by placement of some of its government deposits with commercial banks. This recycling of government deposits coupled with coordination of government receipt-expenditure flows, is another means by which the amount of reserve money in the financial system can be influenced.
- Among the other factors are rediscounting of Bankers Acceptances, lending to commercial banks and foreign exchange swaps, the balance of payments position (affects the net assets of the Central bank and hence, the monetary base).
- While the Central Bank can control the volume of open market operations, the control over discount lending is much less complete since banks will decide whether to borrow from the Central Bank.

(d) (i) Money Multiplier

Definition

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.

$$M=kR$$

As an example, a multiplier of 3 and a monetary base of RM50 billion will generate money supply of RM150 billion.

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.

Factors

- Non-bank private sector demand for currency relative to demand deposits.
- Banking system demand for reserves to meet statutory reserves requirements.
- Banking system demand for excess reserves or reserve holdings in excess of reserves required by the Central Bank.
- The size of the multiplier will be reduced by an increase in demand for currency, statutory reserves, or excess reserves represent a leakage from the money expansion potential of given supply of reserve money and therefore reduces the money multiplier

(ii) Calculations

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 $b=0.9$ and $c=0.10$

Answer: $k= (1.1)/1=1.1$.

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

Question 5

Candidates showed a weak understanding on the factors that influence the effectiveness of monetary policy. Candidates are once again advised to read more about monetary policy.

- (a) The principal objective is to promote monetary stability and a sound financial system. Policy makers have used monetary policy for macroeconomic management. The objectives of monetary policy are summarised as follows:
- (i) 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) 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 have lost their jobs. Indeed, excess production capacity is evident during an economic slow down.
 - (iii) 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 fund 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) 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) Interest Rate Stability
Any volatility of the interest rate make planning and investment decisions a difficult exercise for investors and households. Both political pressure and a desire for a stable economy could motivate saving and investment.
 - (vi) 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 in this form:
- 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 money market are soundly based and efficiently managed.

- Among the key policies implemented include 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) (i) General instruments of monetary policy are those that operate to influence the level of bank reserves or high-powered money. The general instruments are summarised as follows:
- Variations in the statutory reserve requirements (SRR)
 - Adjustment in the liquidity ratio
 - Money market instruments

Selective instruments are used to influence credit to a particular sub-sector or type of lending. Selective instruments are considered more of a set of complementary instruments rather than as alternatives or substitutes for general instruments. The selective instruments are:

- Priority sector lending guidelines
- Hire-purchase guidelines on motor vehicles
- Guidelines on credit card operations
- Credit limit for purchase of stocks and shares and units of unit trust funds
- Credit limit for financing specific property
- Moral Suasion

(ii) Statutory Reserve Requirement

The SRR is one of the oldest monetary instruments deployed by the Central Bank to control liquidity situation in the banking system. Banking institutions are required to maintain a certain percentage of their reserves with the Central Bank. The SRR is defined in terms of a bank's eligible liabilities (EL). The EL base comprises deposits and net interbank borrowings. The SRR affects the level of deposits and loans that a bank can support given the size of its reserves.

Increasing the SRR ratio will lower the level of reserves of the banks and has the impact of contracting loans and deposits and vice-versa. Unfortunately, the reserves earn no interest rates. As such, the costs are usually passed on to customers through higher rates of lending. Overall, the SRR serves as a safety net for the protection of depositors.

In Malaysia, the SRR is still a potent instrument for monetary policy but it has several negative effects as follows:

- It raises the costs of funds to the banking institutions.
- It is inequitable since it affects some institutions more than others in terms of relative burden shouldered by the smaller ones.
- The announcement of the SRR adjustments is very powerful. It influences the psychology of economic agents and market participants in making decisions.
- The recent adjustments to the SRR are:

On February 16, 1998, the SRR was adjusted downwards by 3.5 and 2.0 percentage points to 10% and 8% of eligible liability. Some RM4 billion and RM8 billion of funds was released back to the banking system.

Moral Suasion

It is a traditional approach of the Central Bank to induce voluntary response from financial institutions to its policy initiatives. The philosophy underlying moral suasion rests on the premise that the implementation of policies could be more effective if financial institutions take the necessary action on their own accord to fulfil the roles required of them.

An effective implementation must consider these factors:

- The Prestige and standing of the monetary authorities in the eyes of the public.
- The Degree in which the financial institutions are convinced that the actions to be taken are in their interest.

A successful moral suasion should be complemented by the specific measures. Moral suasion will fail in the absence of specific policy measures.

(d) The factors that could undermine the effectiveness of monetary policy are as follows:

- 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.

Question 6

As in the previous sitting, most candidates displayed sound understanding on exchange rate regimes, but had difficulty in outlining the common characteristics and differences of the World Bank and the International Monetary Fund.

(a) The common characteristics of the IMF and the World Bank are as follows:

Common Characteristics

- 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.

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, sources 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) The selective measures are as follows:
- 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.
 - Discouraging short-term capital flows by requiring inflows of capital to remain in the country for 12 months.
 - Tightening the rules on investment abroad by Malaysia.
- (ii) The move by Malaysia to introduce a more comprehensive set of exchange control measures to restrict speculative movements was only taken in response to the following:
- Evidence that the contagion effects of the regional financial crisis were intensified and spread across the other continents.
 - 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 an overreaction to any market developments.
 - To ensure on-going macroeconomic and structural policies to continue uninhibited by 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.

(c) (i) Fixed exchange rate

- The exchange rates are determined and maintained by the government. Thus, the Central Bank will intervene in the foreign exchange market to buy or sell foreign currencies to maintain the exchange rate at a predetermined level.
- It has been argued that the fixed exchange rate nurtures international trade through the lowering of transaction costs for foreign currencies.
- An example of a fixed exchange rate regime was the Bretton Woods Agreement's adjustable peg system that was in operation from 1945-72. A more recent example is the European Monetary Systems European Currency.
- An excellent example of successes and failures of a fixed exchange rate is the classical gold standard that supported the international economy and financial system before World War II.

Floating exchange rate

- The Central Bank allows the exchange rate to adjust to equate the supply and demand for foreign currencies. For illustration, when the ringgit depreciates against the US\$, Malaysian exports settled in US\$ will be cheaper and this will increase exports and the demand for ringgit. However, the Central Bank will not intervene but to allow the exchange rate to adjust itself over time.
- The exchange rate is not predetermined but is also not left to fluctuate freely. The regime is commonly known as the "dirty float" to distinguish it from a "clean float".
- Industrial countries operate a hybrid system of managed floating exchange rates, that is, a system where the Central Bank may attempt to moderate exchange rate movements without keeping the exchange rate rigidly fixed.

(ii) Depreciation

- Depreciation of the domestic currency under the flexible exchange rate regime refers to the changes in the price of foreign exchange. When the currency depreciates, it becomes less expensive in terms of foreign currencies. It will be cheaper for foreigners to purchase the domestic currency. This will promote exports and reduce imports in the economy in the short-term.
- An example of depreciation is when the ringgit changes from RM2.2 per US dollar to RM2.5 per US dollar, implying that ringgit depreciated by 14%.
- The opposite is an appreciation of the domestic currency.

Devaluation

- A devaluation takes place when the price of foreign currencies under a fixed rate regime is increased by official interventions.
- As a result, foreigners will pay less for the devalued currency. On the other hand, residents of the devaluating country pay more for foreign currencies.

- The opposite is a revaluation of the currency.
- (iii) The components of capital flows are categorised into the following groups according to maturity structure, ownership and the nature of the flows:
- **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.
 - **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 FDI 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 debts which refer to loans guaranteed by a public entity in the debtor country.
 - **Portfolio Investment:** Refers to the purchase of shares and bonds by foreign entities. Since, the flow is short-term in nature, it does not lead to direct management of the firm. Portfolio investment is usually easily reversible and volatile in nature.
- (iv) The balance of payments is the record of the transactions of the residents of a country with the rest of the world. It comprises the current account, capital account and the item errors and omissions. As such the overall balance of payments is the sum of the current and capital accounts.

Example :

Balance of Payments Position (RM billion)			
	Balanced	Surplus	Deficit
Merchandise Account	20	20	20
Services Account	-18	-18	-22
Transfer	0	0	0
Current Account	+2	+2	-2
Capital Account	-2	+2	-2
Error and Omissions	0	0	0
Overall Balance of Payment (Surplus+/-Deficit-)	0	+4	-4

- When both the current account and the capital account are in deficit, the overall balance of payments is in deficit.
- When one account is in surplus and the other is in deficit to about the same size, there is a balanced balance of payments.

- When both accounts are in surplus, the overall balance of payments is in surplus, resulting in an increase in net external reserves.

(v) Offshore Currency Trading

- One of the most pervasive features of the commercial banking system in the 1980s is that the banking system has become globalised, as banks have branched out from their home countries into financial centers.
- The growth of offshore currency banking trading has gone hand in hand with that of offshore banking.
- An offshore deposit is simply a bank deposit nominated in a currency other than that of the country in which the bank resides, example, yen deposits in a London bank.
- Offshore currency is often referred to as Euro Currencies.
- One motivation for the rapid growth of offshore currency trading has been the growth of international trade and increasing multinational nature of corporate.