CF01

Introduction to Monetary Economics and the Malaysian Financial System

11 APRIL 2005

1.	Time allowed	: Three (3) hours
2.	Total number of questions	: Seven (7) questions
3.	Number of questions to be answered	: Five (5) questions Part A : Two (2) questions [20 marks each] Part B : Three (3) questions [20 marks each]

4. Candidates must obtain a minimum of 30 marks in Part B 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

ANSWER TWO (2) QUESTIONS ONLY

1. (a) (i) Why do economists prefer real Gross Domestic Product (GDP) to nominal GDP as a measure of output growth? [4]

(ii) Some countries emphasise on Gross National Product rather than GDP as a measure of economic well-being.

(aa) Which one of these measures should a government take if it is concerned about the total income of the citizens? Explain your answer. [3½]

(bb) Which one of these measures should a government take if it is concerned about the total amount of economic activity occurring in the country? Explain your answer. [3½]

(b) Consider a hypothetical economy that only produces milk and honey. The information on the quantities and prices of these two items from 2001 to 2003 is as follows:

Year	Milk		Honey	
	Quantity (units)	Price (RM)	Quantity (units)	Price (RM)
2001	100	1	50	2
2002	200	1	100	2
2003	200	2	100	4

(i) Assume that the base year is 2001. Calculate the following:

(aa) The nominal GDP growth rate between 2002 and 2003. [3]

(bb) The real GDP growth rate between 2002 and 2003. [3]

(ii) Is the nominal GDP growth rate higher or lower than the real GDP growth rate between 2002 and 2003? Explain your answer. [3]

(Total:20 marks)

2. (a) How will an increase in income affect the demand curve for a normal good and an inferior good?

Explain your answer using appropriate examples. [6]

(b) Using the demand-supply diagram, describe the effects on the equilibrium price and equilibrium quantity of bread when the price of:

(i) jam increases. [7]

(ii) flour increases. [7]

(Total:20 marks)

3. (a) Explain **three** determinants of money supply in an economy. [9]

(b) What is the relationship between inflation and interest rates (real and nominal)? [5]

(c) Explain **three** motives for holding money. [6]

(Total:20 marks)

PART B

ANSWER THREE (3) QUESTIONS ONLY

4. (a) Financial markets are divided into primary and secondary markets.

Briefly explain the activities of these **two** markets. [6]

(b) State **four** advantages and **four** disadvantages of a company raising funds through the equity market. [8]

(c) A new monetary interest rate framework was introduced by Bank Negara Malaysia in April 2004.

Describe **three** main features of the new monetary interest rate framework. [6]

(Total:20 marks)

5. (a) Briefly explain each of the following monetary policy instruments used by Bank Negara Malaysia (BNM) to achieve its monetary objectives:

(i) Open market operations [2]

(ii) Direct intervention by BNM to borrow or lend in the interbank money market [2]

(iii) Variations in the statutory reserve requirement [2]

(iv) Centralisation of the Federal Government's surplus balances and the Employees Provident Fund's excess funds at BNM [2]

(v) Guidelines on lending to priority sectors and selective credit and administrative measures [2]

(b) State **one** advantage and **one** disadvantage of using each of the monetary policy instruments in (a) above. [10]

6. (a) State **four** functions of Bank Negara Malaysia (BNM). [4]

(b) What is a Monetary Policy Statement? [6]

(c) Explain how the changes in BNM's overnight policy rate can affect domestic aggregate demand and inflation. [5]

(d) (i) What are derivatives? [2]

(ii) Why are derivatives important? [3]

(Total:20 marks)

7. (a) (i) Briefly describe the activities of the following types of financial institutions:

(aa) Development financial institutions [2]

(bb) Savings institutions [2]

(ii) Name **two** institutions under each type of financial institution mentioned in (a)(i) above. [4]

(b) Explain the fee-based activities of merchant banks. [4]

(c) State **four** financial instruments traded in each of the following financial markets:

(i) Money market [4]

(ii) Capital market [4]

(Total:20 marks)

- END OF QUESTION PAPER -

OUTLINE ANSWERS

The comments given in the boxes below indicate the areas of weaknesses the examiners have identified and their advice to future candidates.

PART A

Question 1

- Candidates could not differentiate between real and nominal Gross Domestic Product (GDP). They were also unable to calculate the GDP growth rate.
- Understanding of the concepts of nominal and real GDP is important in order to answer this question.

1. (a) (i) Nominal Gross Domestic Product (GDP) is the sum of the quantities of final goods and services produced times their current prices. An increase in nominal GDP is caused by two reasons:

- Increase in the total production
- Increase in prices

Therefore, we do not know whether nominal GDP is changing because of changes in the amount of goods produced and services offered or because of changes in prices. Real GDP is calculated using market price from a base year, therefore it will not bring about problems like the nominal GDP.

(ii) (aa) If a government is concerned about the total income of the citizens, it should emphasise the Gross National Product, since this measure includes the income of citizens earned abroad.

(bb) If a government is concerned about the total amount of economic activity occurring in the country, it should emphasise the GDP, which measures production in the country, whether produced by domestic citizens or foreigners.

(b) (i) (aa)

Nominal GDP in 2002 = (200 milk x RM1) + (100 honey x RM2)
= RM400
Nominal GDP in 2003 = (200 milk x RM2) + (100 honey x RM4)
= RM800
Growth rate = (RM800 - RM400)/400 x 100% = 100%

(bb)

Real GDP in 2002 = (200 milk x RM1) + (100 honey x RM2)
= RM400
Real GDP in 2003 = (200 milk x RM1) + (100 honey x RM2)
= RM400
Growth rate = (RM400 - RM400)/400 x 100% = 0

(ii) Based on the answer from part (i)(aa) and (i)(bb), the growth rate for nominal GDP is higher than that of real GDP since there is no change in the production but prices have doubled. Changes in prices are reflected in nominal GDP, but not real GDP.

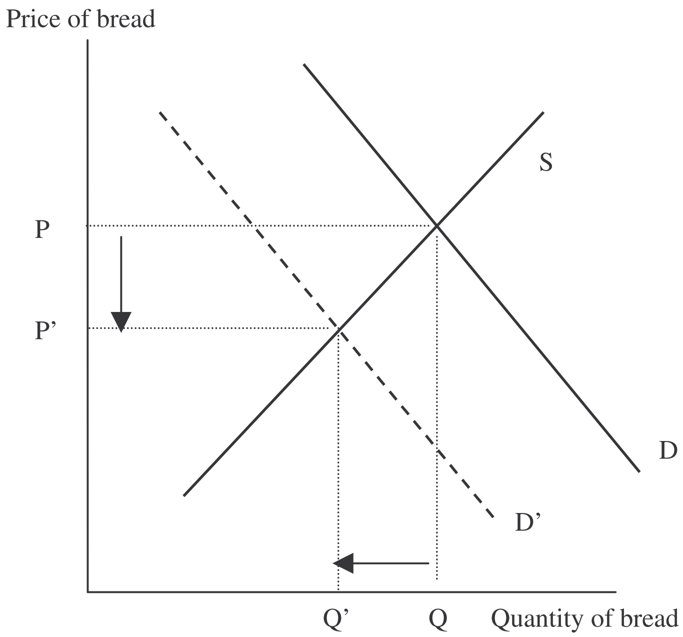
Question 2

- Candidates showed poor understanding of the demand-supply model. They were confused as when to shift the demand/supply curves.

- Understanding the difference between a change in demand/supply and a change in quantity demanded/supplied is important.

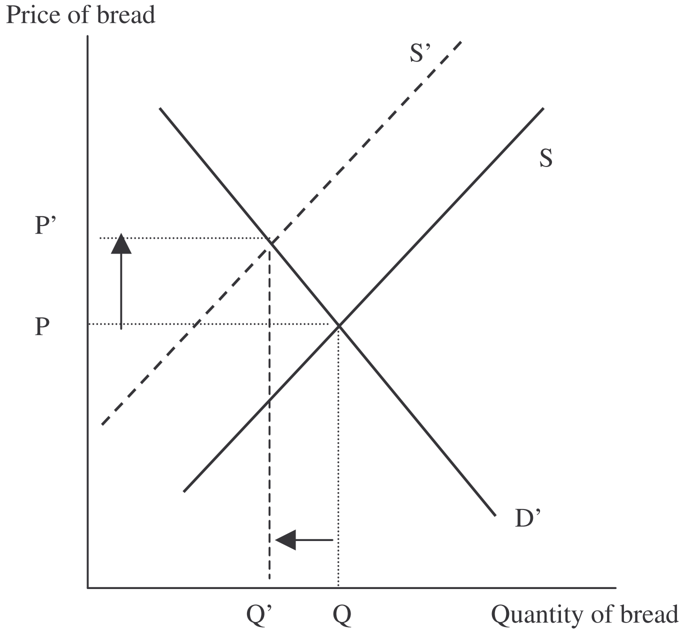
2. (a) An increase in income will shift the demand curve for a normal good to the right (increase in demand for a normal good) and will shift the demand curve for an inferior good to the left (decrease in demand for an inferior good). For instance, when income increases, people will buy more new clothes (normal goods) and reduce the purchase of second-hand clothes (inferior goods).

(b) (i)



As shown in the diagram, an increase in the price of jam (a complement) induces a downward shift in the demand for bread. As the consumption of jam is lower, the demand for bread will be reduced too. Both the equilibrium price and quantity of bread will fall, as determined by the intersection of D' and S.

(ii)



When the price of flour increases, the supply curve shifts to S’. Suppliers will reduce the supply of bread. The new equilibrium price is higher at P’ but the equilibrium quantity falls from Q to Q’.

Question 3

- Candidates could not state the determinants of money supply in an economy and answers given were brief and insufficient.
- These topics’ concepts must be clear and points given must be elaborated on effectively with appropriate examples.

3. (a) The determinants of money supply in an economy are:

- **Net Government operations**
  This is the amount lent to the Government by the banking system less the Government deposits with the banking system. If Government deposits with the banking system are larger than the banking system’s holdings of Government debt, then public sector financial operations have effected a contractionary impact on money supply and vice versa.

- **Bank credit to private sector**
  Loans by the banking system to the private sector are a major source of liquidity for the private sector. The limits to extending credit will depend on the banks’ statutory reserves maintained at the central bank.

- **Balance of payments**
  The foreign exchange reserves in the balance of payments can influence the money supply in the system, i.e., an increase in reserves can raise the volume of money and vice-versa.

(b) Whenever inflation occurs, the real rate of interest will drop. Whenever deflation occurs, the real rate of interest will increase.

Real rate of interest = nominal rate of interest – rate of inflation

(c) Motives for holding money:

- **Transaction motive**
  The true pattern of income and receipts rarely matches that of expenditures. Most people hold some funds in a convenient form for transaction purposes. For the same reason, businesses also maintain cash balances to meet operating expenses.

- **Precautionary motive**
  Given the element of uncertainty in life, money is held for unexpected reasons, e.g. expenses for sudden illness.

- **Speculative motive**
  The force of the speculative motive for holding money varies, e.g. businesses may switch to other liquid assets when the rate of return is high enough to offset the cost and inconvenience involved in switching.

PART B

Question 4

- Candidates were unable to state the disadvantages of a company raising funds through the equity market.
- Candidates showed poor understanding of the new monetary interest rate framework.
- Candidates are advised to follow new policy developments announced by Bank Negara Malaysia (BNM) via annual reports or press announcements made by BNM. This can be done by browsing BNM's website for changes in the policy.

4. (a) The term primary market is used to describe new lending or borrowing arrangements (new issuance and subscription in the case of shares), facilitating the raising of fresh capital funds for new investments from those accumulated with savings. One of the primary market activity is the issuance of shares by corporations in the share market or Malaysian Government Securities (MGS) by the Government in the debt market. In the case of new shares, investors provide a company with funds which are used to develop and grow the business. In return, investors expect to receive a portion of the profits which are paid in the form of dividends.

The term secondary market is used to represent the subsequent buying and selling of existing securities. Following through the MGS illustration, the original buyers of the bonds may decide to sell them before they mature (i.e. before they are due to be paid out by the Government). In order to sell their bonds, original holders may approach stockbrokers to offer the bonds for sale via the share market or money brokers. The buyers of the bonds may in turn sell them, and the bonds may be bought and sold many times before they mature. Similarly, investors in shares may not want to hold their shares indefinitely. They too can liquidate their investments by selling their shares on the secondary market. A primary market cannot operate effectively unless there is an efficiently operating secondary market.

(b) Advantages

- Access to additional capital
- Increased liquidity of capital through the listing of the company
- Enhancement of corporate image
- Attracting and keeping key personnel

Disadvantages

- Dilution of control of the existing owners
- Additional responsibilities on directors
- Greater disclosure of information
- Cost – more expensive to run a public company than a private company, such as the costs of investor relations, share registry, share certificates, listing fees and the cost of annual reports.

(c) Three main features of the new interest rate framework.

- **The Overnight Policy Rate (OPR)**
  The OPR will be the indicator of the monetary policy stance. The OPR will have a dual role – as a signalling device to indicate the monetary policy stance and as a target rate for the day-to-day liquidity operations of the central bank. Any change in the monetary policy stance would be signalled by a change in the OPR. It will serve as the primary reference rate in determining other market rates. To reflect the unchanged stance of monetary policy, the OPR will be set at the current interbank overnight rate of 2.70%.

- **Overnight rate as the sole operating target**
  Monetary operations of Bank Negara Malaysia (BNM) will target the overnight interbank rate. Liquidity management will aim at ensuring the appropriate level of liquidity that would influence the overnight interbank rate to move close to the OPR. Liquidity operations will also be conducted at other maturities but without targeting a specific interest rate level. Therefore, interbank interest rates at other maturities would be market determined, reflecting overall demand and supply conditions in the money market as well as interest rate expectations.

- **Introduction of Overnight Operating Corridor and Standing Facilities**
  To minimise excessive volatility in the overnight rate, BNM will specify a corridor around the OPR. The corridor is set at ± 25 basis points around the OPR. Day-to-day liquidity operations will aim to hold the overnight rate close to the announced OPR. A standing facility is introduced to ensure that the overnight interbank rate fluctuates within this corridor by providing a lending facility at the upper limit of the operating band and a deposit facility at the lower limit of the operating band. Market participants will transact among interbank institutions at a rate within the operating band to meet their short-term liquidity needs before utilising the standing facility.

  Residual overnight liquidity surplus or shortage positions will be met by the standing facilities from the central bank. With the OPR set at 2.70%, the upper limit will be 2.95% and lower limit will be 2.45%. The standing facilities are available to all interbank institutions at their request.

Question 5
• Candidates could not state the advantages and disadvantages of using monetary policy instruments.

5. (a) (i) **Open market operations (OMO)**

This instrument involves the purchase and sale of Government papers by Bank Negara Malaysia (BNM) in the money market, with the intention to directly affect banks' reserves and thereby, bank credit and money flow. These operations are conducted either outright or through repurchase agreements. A distinctive characteristic of open market operations is that the initiatives are taken solely by BNM.

(ii) **Direct borrowing or lending in the interbank money market**

The absence of a well developed securities market has constrained the more active use of open market operations. For example, in the 1990s, with issues of Government papers, BNM resorted to direct borrowing/lending as the main instrument to influence the level of interest rates. As the name implies, these operations were undertaken in short-term maturity periods of one to three months, and at times up to six months.

(iii) **Variations in the statutory reserve requirement (SRR)**

The SRR is one of the oldest monetary instruments deployed by BNM to control the liquidity situation in the banking system. Under the BNM Ordinance, banking institutions are required to maintain a certain percentage of their reserves with BNM. SRR is defined in terms of a bank's Eligible Liability (EL). The EL base comprises deposits (including negotiable certificates of deposit and repurchase agreements) and net interbank borrowings. All banking institutions are required to place a certain percentage of their EL as cash reserves with BNM.

(iv) **Centralisation of the Government and Employees Provident Fund's (EPF) excess funds at BNM**

The Accountant-General's money market operations account provides BNM with an effective instrument for monetary management, not only to control liquidity at source but more importantly, to ensure that Government operations are consistent with the objectives of monetary policy. Under this arrangement, BNM will manage the Government's funds, consistent with the desired interest rate level and underlying liquidity condition. A similar arrangement has also been made with the EPF. In line with a more market-oriented approach to monetary policy, interest paid on both accounts is based on market rates.

(iv) **Guidelines on lending to priority sectors and selective credit and administrative measures**

The imposition of lending guidelines to the priority sectors and selective administrative measures are meant to target only specific sectors of the economy. In the case of the guidelines on lending to the priority sectors, this is necessary to ensure that the economic and social objectives are met, consistent with national objectives. In the case of selective credit measures, such credit controls are imposed to influence the direction of lending activities to specific sectors without affecting the availability of funds in the system and the level of prevailing interest rates.

(b)

- **Open market operations**

  Advantage: Flexible in varying maturity, amount, rate, timing, depending on liquidity condition.

  Disadvantage: Dependent on the supply of Government papers.

- **Direct borrowing or lending in the interbank money market**

  Advantage: Useful in circumstances where OMO are constrained by the lack of papers. Can enhance announcement effect of policy rate through regular tender process. Flexible in terms of maturity, amount, rate, timing, depending on liquidity condition.

  Disadvantage: Banks unable to transact in secondary market in managing their liquidity.

- **Variations in the SRR**

  Advantage: More useful in one-off sterilisation of excess liquidity. Acts as a buffer to reduce volatility in the short-term interest rates caused by external shocks.

  Disadvantage: Ineffective if liquidity is unevenly distributed among banks. A high requirement imposes cost on bank intermediation and could lead to a widening of spreads between lending and deposit rates. Not convenient for short-term liquidity management, as frequent changes disrupt portfolio management.

- **Centralisation of the Government's and EPF's excess funds at BNM**

  Advantage: Ensure consistency with monetary policy stance in operations of the Government's and EPF's excess funds. Reduces liquidity at source.

  Disadvantage: Not convenient for precise liquidity management as withdrawal decisions are made independently to meet respective financing needs.

- **Guidelines on lending to priority sectors and selective credit and administrative measures.**

  Advantage: Direct impact on lending activities of banks. Will not affect overall liquidity and interest rates.

  Disadvantage: If implemented over a protracted period, may affect efficient allocation of resources.

Question 6

- Candidates had poor knowledge of Monetary Policy Statement and derivatives.
- Candidates are advised to follow new policy developments announced by Bank Negara Malaysia (BNM) via annual reports or press announcements made by BNM. This can be done by browsing BNM's website for changes in the policy.

6. (a) Functions of Bank Negara Malaysia (BNM)

- Banker and financial advisor to the Government
- To issue and keep reserves and safeguard the value of the currency
- To promote monetary stability and influence the credit situation to the country's advantage
- To promote a sound financial structure and sound management of the banking system

(b) Monetary Policy Statement (MPS)

The MPS is a forward looking statement, outlining monetary policy stance in the near term and the rationale for the policy thrust. The objective of issuing this statement is part of the overall strategy to provide greater understanding of monetary policy objectives and measures in light of a more complex and dynamic environment. In particular, it would help anchor growth and inflation expectations. Signalling the bank's policy intent through direct communication is aimed at increasing the understanding and appreciation of money market participants, thereby facilitating a more rapid transmission of the policy rate in the pricing of credit and longer-term rates. This would thus enhance the overall efficiency of the monetary transmission mechanism.

(c) Monetary policy operates through short-term interest rates to achieve its ultimate objective of growth with price stability. Liquidity management and its signalling impact will influence the level and direction of interest rates. BNM conveys its policy intention to the market through its overnight policy rate (OPR).

A change in the OPR will trigger a chain of events that affects the whole range of market rates. More specifically, changes in BNM's OPR will have a direct impact on lending rates, which will affect the cost of funds in the system. This in turn will affect the private sector's financial assets, liabilities position and asset prices. It will also affect decisions to consume or save, and invest which involve both domestic and external goods and services.

These factors will ultimately influence aggregate demand and prices. Generally, the objective is to ensure aggregate demand is in line with potential output to contain inflationary pressures. Price stability will lead to efficient resource allocation and improved investment sentiment. It will provide an incentive to save and hence enhance economic welfare. More importantly, price stability will foster sustainable long-term economic growth.

(d) (i) Derivatives are financial instruments which derive their value from an underlying physical commodity or financial instruments. As such, the price of a derivative is based on the price of the instrument on which they are based – i.e. the crude palm oil futures contract is based on the price of palm oil, the 3-month KLIBOR is based on the interbank offer rates traded in the money market, and the KLCI futures contract is based on the Kuala Lumpur Composite Index.

(ii) Derivatives are important because they were developed as a means of transferring risk. Unlike physical securities, the creation of derivatives is not generally intended to raise finance for the issuer, nor is trading in them usually intended to transfer ownership of assets. For example, because they allow future prices to be set in the present, they permit market participants to protect themselves from the risk that market prices might change. Derivatives are also important as they increase liquidity in the capital markets. They may also reduce the cost of capital because liquidity is an important factor in determining the cost of capital.

Question 7

- Candidates were confused between the instruments traded in the money market and the capital market.

- To know the various kinds of financial instruments available in the market, candidates must understand their characteristics and functions to enable them to determine whether a specific instrument is traded in the money market or capital market.

7. (a) (i) (aa) **Development financial institutions (DFIs)**

Established by the Government to promote development programmes in the agricultural, industrial and international trade and export sectors, DFIs continue to play a complementary role to banking institutions in the intermediation process. They maintain their role as niche providers of specialist capital financing for projects which require medium to long-term financing in the agriculture, industrial and manufacturing sectors. DFIs have traditionally relied heavily on borrowings to fund asset growth as they are not licensed to mobilise deposits from the public. These institutions have access to resources at concessionary rates from the Government and foreign and international institutions.

(bb) **Savings institutions**

Savings institutions complement banking institutions in their role as major deposit-taking institutions. These savings institutions play a particularly important role in the promotion and mobilisation of savings among the middle and lower-income groups, especially in areas, which are not adequately served by banking institutions. Funds for tsavings institutions are sourced mainly from deposits and used largely for extension of loans and investments.

(ii) Choose any two of the following DFIs:

- Bank Pertanian Malaysia
- Bank Industri Malaysia Berhad
- Bank Pembangunan & Infrastruktur Malaysia Berhad
- Export-Import Bank of Malaysia Berhad
- Malaysian Industrial Development Finance Berhad
- Sabah Development Bank Berhad
- Malaysian Industrial Estates Berhad
- Borneo Development Corporation (Sabah) Sdn. Bhd.
- Borneo Development Corporation (Sarawak) Sdn. Bhd.

Choose any two of the following savings institutions:

- Bank Simpanan Nasional
- Bank Rakyat
- Any other co-operative societies

(b) Merchant banks primarily complement and supplement the activities of other existing financial institutions. Merchant banks are advisers to and financiers of large companies. They play the role of financial intermediaries specialising in the money and capital markets, offering specialised expertise, especially that which is "fee-based". As they deal primarily with large corporations and cater almost exclusively to their needs, they are often regarded as "wholesale" bankers, as distinct from commercial banks and finance companies that are mostly involved in "retail" banking. The new merchant bank licenses under the Banking and Financial Institutions Act 1989 do not contain the condition stated in the old license (issued under the repealed Banking Act 1973) that at least 30% of a merchant bank's total income should be derived from fee-based activities. Notwithstanding this, all merchant banks are still required, as a matter of policy, to observe the minimum 30% fee income requirement. Some of the fee-based activities of merchant banks are corporate financial and advisory services; investment and fund management services and banking intermediation services (such as loan syndication).

(c) Financial instruments traded in the:

(i) Money market

(Choose any four of the following:)

- Short-term deposits (with maturity of less than a year)
- Treasury bills
- Bank Negara bills
- Commercial papers:
  - revolving underwritten facility
  - notes issuance facility
- Banker's acceptance
- Repurchase agreements
- Negotiable instruments of deposit
- Cagamas notes

(ii) Capital market

(Choose any four of the following:)

- Malaysian Government Securities
- Stocks
  - Ordinary shares
  - Preference shares
- Corporate bonds
  - Floating rate bond
  - Fixed rate bond
  - Convertible bond
  - Cagamas bonds
  - Redeemable and irredeemable bonds
- Government investment certificates
- Khazanah bonds