

CF01

# Introduction to Monetary Economics and the Malaysian Financial System

6 OCTOBER 2003

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) Define cross-elasticity of demand and explain how it is measured. [5]  
(ii) What are substitute goods? [2]  
(iii) What can you say when the cross price elasticity between substitutes is positive? Give an example. [3]
- (b) (i) Using diagrams, explain the typical demand curve and the typical supply curve of a product. [5]  
(ii) Explain how the equilibrium price and quantity of a product can be determined using the demand and supply curves. [5]
- (Total:20 marks)

2. (a) What do you understand by the Phillips Curve? [10]
- (b) Explain the following:
- (i) Cost-push inflation [5]  
(ii) Demand-pull inflation [5]
- (Total:20 marks)

3. (a) Using examples, explain the barter trade system and **three** problems associated with this system. [10]
- (b) What is the relationship between inflation, real interest rate and nominal interest rate? [4]
- (c) Briefly explain the **three** motives for holding money. [6]
- (Total:20 marks)

## PART B

### ANSWER THREE (3) QUESTIONS ONLY

4. (a) What is monetary policy? [5]
- (b) Explain the objectives of monetary policy. [5]
- (c) Explain the various types of monetary policy instruments. [5]
- (d) How do monetary policy instruments work? [5]
- (Total:20 marks)

5. (a) Assuming that Bank Negara Malaysia's 3-month intervention rate is reduced by 50 basis points from 5.00% to 4.50%, answer the following questions:
- (i) Using a formula, show the base lending rate (BLR) of commercial banks and finance companies before and after the reduction in the intervention rate. [6]
  - (ii) Provide a reason for the difference in the level of BLR between a commercial bank and a finance company. [2]
- (b) (i) What are development finance institutions (DFIs)? [3]
- (ii) What are the general functions of DFIs? [7]
- (c) State **two** major services provided by merchant banks. [2]
- (Total:20 marks)
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6. (a) Define and briefly explain the following financial markets:
- (i) Money market [4]
  - (ii) Capital market [4]
  - (iii) Foreign exchange market [4]
- (b) Briefly explain the following financial instruments:
- (i) Malaysian Government Securities (MGS) [2]
  - (ii) Government Investment Certificates (GIC) [2]
  - (iii) Bank Negara Bills (BNB) [2]
  - (iv) Corporate bonds [2]
- (Total:20 marks)
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7. (a) Briefly explain the following Islamic banking principles:
- (i) Al-Wadiah (safekeeping with guarantee) [2]
  - (ii) Al-Mudharabah (profit sharing) [2]
  - (iii) Al-Musyarakah (joint venture) [2]
  - (iv) Al-Murabahah (cost-plus financing) [2]
- (b) (i) What are the objectives of the Financial Sector Masterplan 2001-2010? [4]
- (ii) What are the objectives and functions of Bank Negara Malaysia? [8]
- (Total:20 marks)

**- END OF QUESTION PAPER -**

## OUTLINE ANSWERS

### PART A

#### Question 1

Many candidates were not able to define and explain cross-elasticity of demand. Some of these candidates mistook it for its own-price elasticity. Candidates should be able to differentiate between the different measurement of elasticity, for example, own-price elasticity, cross price elasticity, income elasticity, etc.

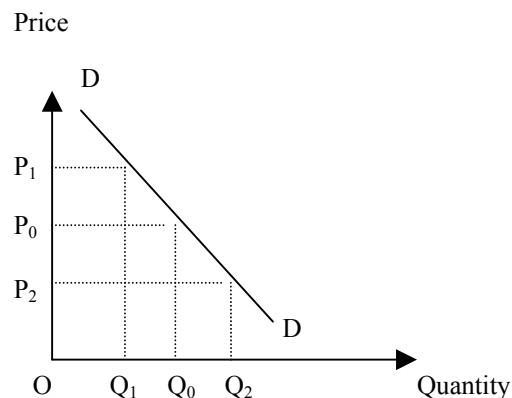
Most candidates were able to provide the definition and examples of substitute goods.

Many candidates were unable to explain the typical demand and supply curves. They also failed to explain the process that brings price and quantity of a product into equilibrium. Candidates should be able to clearly state the concept of a “Change in demand” and a “Change in quantity demanded”. The former will cause a shift in demand curve while the latter merely causes a movement along the curve. The same applies to the supply curve.

1. (a) (i) Cross-elasticity of demand measures how the quantity demanded of one good changes as the price of another good changes. It is calculated as the percentage change in quantity demanded of good X divided by the percentage change in the price of good Y.

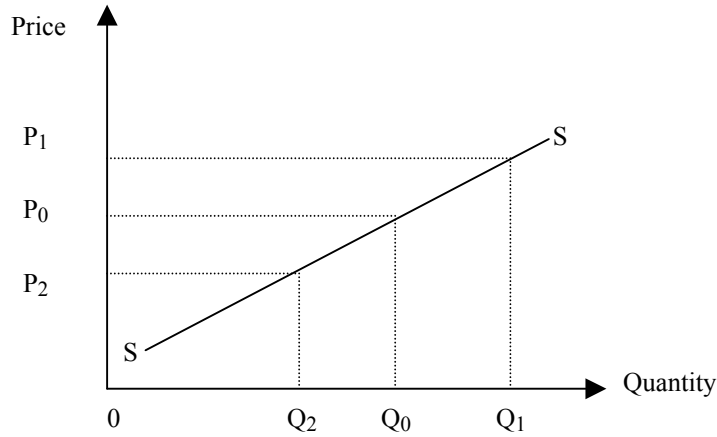
$$C_d = \frac{\% \text{ change in demand for good X}}{\% \text{ change in price of good Y}}$$

- (ii) Substitutes are goods that can be supplemented or used in place of each other.
- (iii) When the cross price elasticity is positive, an increase in the price of good will lead to an increase in the quantity demanded of the substitute good. For example, when the price of the beverage Milo increases, the sale of Milo may fall because some of the Milo drinkers may switch to another beverage like Ovaltine.
- (b) (i) The demand curve of a product shows the relationship between price and quantity demanded. In a normal demand curve, there is an inverse relationship between price and quantity demanded as shown by DD below:

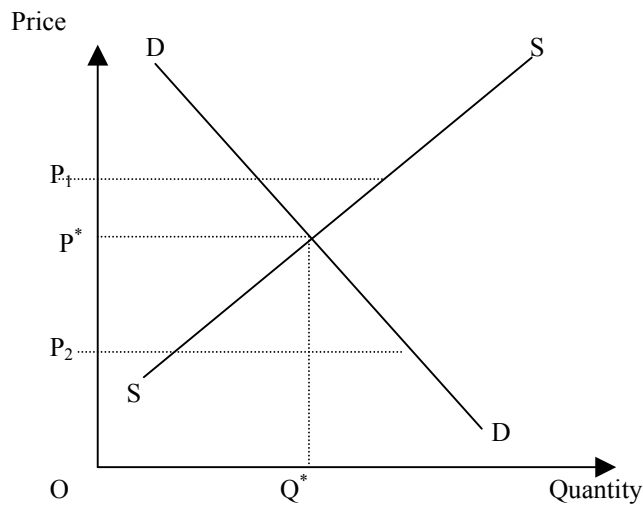


At the price of OP<sub>0</sub>, quantity demanded is OQ<sub>0</sub>. If the price falls to OP<sub>2</sub>, quantity demanded will increase to OQ<sub>2</sub>. If the price rises to OP<sub>1</sub>, quantity demanded will decrease to OQ<sub>1</sub>.

The supply curve of a product shows the relationship between price and quantity supplied. In a normal supply curve, there is a positive relationship between price and quantity supplied as shown by SS below. At the price of  $OP_0$ , quantity supplied is at  $OQ_0$ . When price falls to  $OP_2$ , quantity supplied will fall to  $OQ_2$ . If price rises to  $OP_1$ , quantity supplied will increase to  $OQ_1$ .



- (ii) The equilibrium is found where the supply and demand curves intersect. At the equilibrium price, quantity demanded equals quantity supplied.



In the above diagram,  $P^*$  is the equilibrium price while the quantity of the good that buyers are willing and able to buy ( $Q^*$ ) exactly balances the quantity that sellers are willing and able to sell ( $Q^*$ ). Suppose that the market price is above the equilibrium price at  $P_1$ , the quantity of the good supplied exceeds the quantity demanded. There is a surplus of the good. Suppliers will respond to the surplus by cutting their prices. Prices will continue to drop until the market reaches the equilibrium. Suppose now that the market price is below the equilibrium price at  $P_2$ , the quantity of the good demanded exceeds the quantity supplied. There will be a shortage of the good. In this situation, sellers can respond to the shortage by raising their prices without losing sales. As prices rise, the market once again moves toward the equilibrium.

### Question 2

Most candidates could not explain the Phillips Curve; those who could did not explain the intuition behind the theory. Candidates should be able to explain why there is an inverse relationship between inflation and unemployment as postulated by the Phillips curve.

Candidates' answers to part (b) of the question were satisfactory.

2. (a) The Phillips curve postulates an inverse relationship between inflation and unemployment. When the unemployment rate is high, more people are unemployed and the aggregate demand for goods and services will be low. In this situation, the inflation rate is low. On the other hand, if the unemployment rate is low, most people are employed and the aggregate demand for goods and services will be increased, leading to an increase in the inflation rate.
- (b) (i) *Cost-push inflation* refers to the general increase in the price of goods and services due to an increase in the costs of the factors of production. Such an increase in suppliers' costs that pushes up the prices can be due to:
- an increase in the price of raw materials used in the production,
  - an increase in the price of labour (wages),
  - unavailability of raw materials that can cause the price of the goods or services produced to be more expensive.
- (ii) *Demand-pull inflation* refers to the increase in the prices of goods and services due to an increase in demand. For instance, a change in taste or fashion may increase the demand for goods and services. Such an increase in demand therefore pulls prices up.

### Question 3

Most candidates did not attempt part (b) of the question while those who did only provided general definitions instead of explaining the relationship between inflation, real interest rate and nominal interest rate.

3. (a) The barter system is the direct exchange of goods and services between two willing parties. For example, Mr X exchanges his cattle for two horses with Mr Y.
- Problems associated with barter trade (Choose, explain and illustrate any three of the following):
- Lack of double coincidence of wants
  - Problem of divisibility of goods
  - Portability
  - Durability
- (b) Real rate of interest = nominal rate of interest – rate of inflation.
- Whenever the price level rises and inflation occurs, the real rate of interest will drop. Whenever inflation drops, the real rate of interest will rise.
- (c) The three motives for holding money:
- **Transaction motive:** Most people hold some form of funds in a convenient form for transaction purposes because the true pattern of income and receipts rarely matches that of expenditure. Businesses also hold cash balances to meet operating expenses.
  - **Precautionary motive:** Money is held for unexpected reasons because of the element of uncertainty in life.
  - **Speculative motive:** The force of the speculative motive for holding money varies. 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 able to describe the objectives of monetary policy and its instruments. However, they were not able to define what monetary policy means and explain how it works. As a result, many candidates repeated their answers in different parts of the question. Candidates must be clear on each of the issue and not to use common or interchangeable answers.

When discussing monetary policy, candidates must relate to the regulation of the volume of money supply and credit, and the authority responsible for managing money supply and bank credit. They should explain why money supply and bank credit should be managed, and the implications if these are not managed properly. Candidates can mention inflation, price stability, economic growth, employment and the instruments available to the monetary authority to manage money supply and bank liquidity. They should also mention the transmission mechanism, namely the management of bank reserves and how the process affects the variables.

4. (a) Monetary policy dictates or regulates the volume of money supply and credit in the economy. As the nation's monetary authority, Bank Negara Malaysia (BNM) is responsible to the Government for promoting monetary stability and a sound financial system, and to help influence the credit situation to achieve the nation's overall economic objectives. BNM ensures that over the long term there is sufficient money supply and credit to meet the Government's objective of sustained growth with price stability. In the short term BNM must ensure that the growth of money supply is sufficiently elastic to counter any inflationary situation that may arise without exerting undue pressure on resources.
- (b) Monetary policy has several objectives the Government can use to control certain situations that may arise in the economy from time to time. Primarily they are:
- To maintain price stability – constant price fluctuation can be disruptive to the economy. Prices are allowed to fluctuate within a certain acceptable range in order to maintain economic stability.
  - To achieve a higher level of economic growth – this can be achieved when major macroeconomic issues, like unemployment and inflation, are well controlled.
  - To control the demand and employment – there must be a balance between the aggregate demand and the level of employment, in order to achieve a stable economy
  - To maximise employment of resources – all factors of production should be fully employed for maximum benefits to the economy.
- (c) The basic monetary functions are effected through monetary instruments at the disposal and within the controls of Bank Negara Malaysia. These instruments are standard among central banks around the world. The volume of money and the generation of credit by the central banks and financial institutions are regulated through a range of instruments, including quantitative and qualitative controls. Primarily, these are statutory reserve requirements, money market operations, discount operations, interest rate regulation, centralisation of Government and EPF deposits, credit control and guidelines on lending, moral suasion, liquidity requirement and limit on SWAP transactions with foreign currency.
- (d) The monetary policy instruments are used to influence the credit and rate of money creation through their impact on the availability of bank reserves. They work through the monetary transmission process, which links the intermediate and final targets of monetary policy. Intermediate targets are usually interest rates, exchange rates and money supply while the final targets are normally output, prices and employment. The choice of instruments also depends on the economic environment and the development of the financial system. Central banks will therefore need to coordinate their use effectively and efficiently in a manner that best meet the needs of a particular situation towards attaining the desired monetary policy goals and growth targets.

**Question 5**

The majority of the candidates were not able to correctly show the formula for the computation of the base lending rate (BLR). Some candidates wrongly placed the intervention rates of the commercial banks and finance companies in their computation.

Candidates were able to answer the questions relating to development finance institutions (DFIs).

Candidates did not elaborate their answers for part (c) of the question relating to merchant banks.

5. (a) Assuming that Bank Negara Malaysia's 3-month intervention rate is reduced by 50 basis points from 5.00% to 4.50%.

(i) **The BLR for commercial banks and finance companies before and after**

	<b>COMMERCIAL BANKS</b>		<b>FINANCE COMPANIES</b>	
<b>BEFORE</b>	$\frac{(\text{Intervention rate} \times 0.8)}{1 - \text{SRR}}$	+ 2.25%	$\frac{(\text{Intervention rate})}{1 - \text{SRR}}$	+ 2.25%
	$\frac{(5.00 \times 0.8)}{1 - 0.04}$	+ 2.25%	$\frac{5.00}{1 - 0.04}$	+ 2.25%
	$\frac{4.00}{0.96}$	+ 2.25%	$\frac{5.00}{0.96}$	+ 2.25%
	4.17	+ 2.25%	5.21	+ 2.25%
	<b><u>6.42</u></b>		<b><u>7.46</u></b>	

	<b>COMMERCIAL BANKS</b>		<b>FINANCE COMPANIES</b>	
<b>AFTER</b>	$\frac{(\text{Intervention rate} \times 0.8)}{1 - \text{SRR}}$	+ 2.25%	$\frac{(\text{Intervention rate})}{1 - \text{SRR}}$	+ 2.25%
	$\frac{(4.50 \times 0.8)}{1 - 0.04}$	+ 2.25%	$\frac{4.50}{1 - 0.04}$	+ 2.25%
	$\frac{3.60}{0.96}$	+ 2.25%	$\frac{4.50}{0.96}$	+ 2.25%
	3.75	+ 2.25%	4.69	+ 2.25%
	<b><u>6.00</u></b>		<b><u>6.94</u></b>	

(ii) **Reason for the difference in the level of BLR between that of a commercial bank and a finance company**

The difference lies in the 0.8% factor appearing in the commercial banks' formula due to the fact that commercial banks have a current account facility which is interest free (zero cost of funds) while the finance companies do not have any current account facilities.

- (b) (i) Development Finance Institutions (DFIs) are specialised financial institutions established by the Government to promote investment in the manufacturing and agricultural sectors. Some of the institutions have distinctly emphasised the agricultural sector, while others operate primarily in the commercial and industrial sectors of the economy.
- (ii) The general functions of DFIs include extensions of financial assistance in the form of medium to long terms loans, participation in equity capital, underwriting and wherever relevant acting as an issuing house for public share issues and the provision of guarantee for loans.
- (c) Choose any two services
- Corporate financial advisory services
  - Investment and funds management services
  - Banking intermediation services
  - Banking services

### **Question 6**

Candidates did not clearly differentiate between the nature, functions and players in the three markets tested in part (a). To correctly answer this part of the question, candidates must be able to state the nature of the market, purpose of having the market, instruments traded and the market players.

Candidates gave poor answers for part (b). They must be able to tell who issues and buys these instruments, the purpose and tenor of the instruments, where can they be traded and the returns offered by each instrument.

**6. (a) (i) Money market**

The money market deals in short-term funds. The activity in the money market consists of borrowing and lending short-term funds with maturity ranging from overnight to one year. Any other instruments with maturity greater than one year will be traded in the capital market. The financial institutions in the money market are the commercial banks, merchant banks and finance companies. This market mobilises short-term funds for working capital, bridging loans, and for any immediate liquidity needs. It can also take the form of conventional borrowings and lending activities on a secured or unsecured basis, e.g. the issue of short-term securities, which can be bought and sold. The money market in Malaysia comprises an interbank money market and a market for short-term funds involving discount houses, money brokers and other intermediaries. The interbank money market deals in short-term funds involving overnight money, 7-day money and funds for periods of one, two, three and six months. A non-bank money market also exists. It deals through the intermediary of discount houses and participation in this market is open to all institutions including the commercial banks. The instruments used in the money market are money market papers, like Treasury bills, bills of exchange, promissory notes and Government securities. A money market instrument is negotiable and when traded is transferable.

**(ii) Capital market**

The capital market comprises a primary securities market, in which new issues of government and corporate securities are offered both to the public and the financial institutions, and the secondary market, in which existing government and corporate securities are transacted. This is where medium to long-term funds are mobilised. This means instruments with maturity of more than one year. It is also used to finance long-term investments and capital expenditure for both private and public sectors. The funds raised can be either interest-bearing debt or equity. Interest-bearing debts are commercial papers and bonds, which are short term and issued by companies directly to the investors. Equity comes in the form of public issues, right issues and convertible shares.

(iii) **Foreign exchange market**

The foreign exchange market is where the exchange of currencies takes place, i.e. buying and selling of the currencies. For example when individuals, businesses and the government in one country want to trade, borrow or lend in another country, they must convert their currency into the currency of the country they are dealing with. The exchange rate is the price of one country's currency in terms of another. Market forces determine the exchange rate that prevails for consumers and investors. However, governments through their central banks do intervene in the foreign exchange markets to promote or safeguard their national policy objectives. International currencies are traded in foreign exchange markets around the world through computer networks between traders in commercial banks in many countries. The transactions in the foreign exchange market determine the rates at which international currencies are exchanged. These exchange rates affect the cost of acquiring foreign financial assets or foreign goods and services. Foreign exchange market transactions are over-the-counter, i.e. there is no single physical location where traders gather to exchange currencies, as there is for many domestic stocks and bonds.

(b) (i) **Malaysian Government Securities (MGS)**

These are long-term debt securities issued by the Government with an original maturity of more than one year. Largely financial institutions and pension funds hold MGS. Financial institutions need to hold MGS for compliance purposes, while pension funds, such as the EPF, are investing to comply with statutory requirements and at the same time provide a secured return to contributors in the long run.

(ii) **Government Investment Certificates (GIC)**

These are issued by the Government based on Islamic principles and are also regarded as liquid assets. Islamic banks can invest in the certificates to comply with the stipulated liquidity requirements as well as to park their temporarily idle funds.

(iii) **Bank Negara Bills (BNB)**

This is a short-term paper issued by BNM to mop up excess liquidity in its open market operations and to provide financial institutions with an alternative instrument in meeting their liquidity and reserve requirements on their investment portfolios. BNBs are short-term debt securities with maturity of 91, 182 and 364 days.

(iv) **Corporate bonds**

They are intermediate and long-term obligations issued by large corporations to finance plant and equipment investment. Typically, corporate bonds pay interest twice a year and repay the principal amount at maturity. There are many variations, like the convertible bonds where the holders are allowed to convert the debt into equity. The corporate bond market is smaller than the stock market.

### Question 7

Candidates managed to answer well on the Islamic banking principles and the objectives and functions of Bank Negara Malaysia (BNM). However, they answered poorly on the objectives of the Financial Sector Master Plan (FSMP). Candidates need to read the related articles available on the BNM website. Subsequently, candidates are advised to check in the BNM Annual Reports for the latest developments of the FSMP.

7. (a) (i) **Al-Wadiah (safekeeping with guarantee)**

Refers to goods or deposits, which have been deposited with another person, who is not the owner, for safekeeping. As wadiah is a trust, the depository becomes the guarantor and, therefore guarantees repayment of the whole amount of the deposits, or any part thereof, outstanding in the accounts of depositors, when demanded. Depositors are not entitled to any share of the profits but the depository may provide returns to the depositors as a token of appreciation.

(ii) **Al-Mudharabah (profit sharing)**

Refers to an agreement made between a party (who provides the capital) and another party (entrepreneur) to enable the entrepreneur to carry out business projects, which will be on a profit-sharing basis, according to a pre-determined ratio agreed upon earlier. In the case of losses, the losses are borne by the provider of the funds.

(iii) **Al-Musarakah (joint venture)**

Refers to a partnership or joint venture for a specific business with a profit motive, whereby the distribution of profits will be apportioned according to an agreed ratio. In the event of losses, both parties will share the losses based on their equity participation.

(iv) **Al-Murabahah (cost-plus financing)**

Refers to the sale of goods at a price, which includes a profit margin as agreed to by both parties. Such sales contracts are valid on condition that the price, other costs and profit margin of the seller are stated at the time of the agreement of sale.

(b) (i) **Objectives of the Financial Sector Masterplan 2001-2010**

The objectives of the Financial Sector Masterplan (FSMP) released by Bank Negara Malaysia in March 2001, is to develop a more resilient, competitive and dynamic financial system with best practices, that supports and contributes positively to the growth of the economy throughout the economic cycle. It has a core of strong and forward looking domestic financial institutions that are more technology driven and ready to face the challenges of liberalisation and globalisation. The development of domestic institutions that form the core of an efficient, effective and stable financial sector is an important part of this process.

(ii) **Objectives and functions of Bank Negara Malaysia (BNM)**

Bank Negara Malaysia was established on 26 January 1959, under the Central Bank of Malaya Ordinance 1958, with the following objectives:

- To issue currency and keep reserves safeguarding the value of the currency
- To act as a banker and financial adviser to the Government
- To promote monetary stability and a sound financial structure
- To influence the credit situation to the advantage of the country
- Responsible for supervision, regulation and development of the insurance industry.

In meeting these objectives, BNM is guided by the principle that it should act only in the economic interest of the nation and without regard to profit as a primary consideration. Hence, the functions of the BNM are carried out within the context of the broader goals of promoting economic growth, a high level of employment, maintaining price stability and a reasonable balance in the country's international payments position, eradicating poverty and restructuring society. In particular, the BNM ensures that the availability and cost of money and credit in the economy are consonant with national macroeconomic objectives.