

DP01

Monetary Economics and the Malaysian Financial System

6 OCTOBER 2003

1. Time allowed : Three (3) hours
2. Total number of questions : Six (6) questions
3. Number of questions to be answered : Four (4) questions
Part A : Compulsory question [40 marks]
Part B : Three (3) questions [20 marks each]
4. Candidates must obtain a minimum of 20 marks in Part A as well as pass the paper as a whole.
5. Begin each answer to a new question on a fresh page.
6. Answer **all** questions in **English**.
7. Blank pages are provided at the end of the question paper for rough work.

PART A

COMPULSORY QUESTION

1. (a) (i) Explain the present structure of the Malaysian financial system. [5]
(ii) Explain how funds are mobilised in the financial system. [4]
 - (b) (i) Define the term "financial intermediation". [2]
(ii) Name **two** benefits of financial intermediation to savers. [2]
 - (c) Briefly explain **two** functions of the capital market. [4]
 - (d) List **four** functions of development finance institutions in economic development in Malaysia. [4]
 - (e) Briefly explain **three** characteristics of an international offshore financial centre. [6]
 - (f) Briefly explain the following terms:
 - (i) Statutory reserve requirement [3]
 - (ii) Liquidity requirement [3]
 - (iii) Money multiplier [3]
 - (g) How does the level of supply and demand of money determine interest rate? [4]
- (Total:40 marks)

PART B

ANSWER THREE (3) QUESTIONS ONLY

2. (a) List **three** sources and **three** uses of funds of merchant banks in Malaysia. [3]
 - (b) Explain the importance of asset-liability management in financial institutions in Malaysia. [3]
 - (c) Name **two** benefits of bank mergers in Malaysia. [3]
 - (d) Venture capital industry provides an alternative form of financing for new high growth industries in the economy.
Briefly explain **two** developments in the venture capital industry in the last **three** years. [4]
 - (e) Briefly describe the following Islamic banking principles:
 - (i) Al-Wadiah [2]
 - (ii) Al-Musyarakah [3]
 - (iii) Bai' Al-Dayn [2]
- (Total:20 marks)
3. (a) Briefly describe **two** functions of Bank Negara Malaysia (BNM). [4]
 - (b) Explain the dilemma faced by BNM in targeting both the money supply and interest rates. [3]
 - (c) List **three** forces that affect the flow of credit and money in an economy. [3]
 - (d) (i) Briefly explain what the base lending rate (BLR) is. [2]
(ii) How is the BLR determined for commercial banks and finance companies? [2]

- (e) Explain **one** method of money market operations adopted by BNM to influence liquidity, interest rate, money and credit growth in the economy. [3]
- (f) Explain how the central bank renders its services as the lender of last resort when financial institutions are short of funds or in financial difficulty. [3]
(Total:20 marks)
4. (a) (i) Differentiate between “narrow” money and “broad” money. [4]
(ii) Briefly explain **two** factors that determine the level of money supply in an economy. [4]
- (b) Briefly explain **two** elements in the determination of money stock in an economy. [4]
- (c) Name **two** sources and **two** uses of monetary base (high-powered money). [4]
- (d) (i) What is the size of the money multiplier if the currency-deposit ratio is 0.2 and the reserve-deposit ratio is 0.1? [2]
(ii) What is the size of the currency-deposit ratio and the excess reserves when the money multiplier reaches the maximum? [2]
(Total:20 marks)
5. (a) Briefly explain the objectives of monetary policy in economic growth. [5]
- (b) Briefly explain the transmission process of monetary policy through the financial system. [3]
- (c) (i) What are “general instruments” and “selective instruments” of monetary policy? [2]
(ii) Name **one** type of general instrument and **one** type of selective instrument. [2]
- (d) (i) Explain **two** targets used by central banks to achieve monetary policy goals. [5]
(ii) Explain **three** problems faced by the central bank in achieving monetary policy goals. [3]
(Total:20 marks)
6. (a) There are two important international financial institutions, namely the World Bank and the International Monetary Fund.
For each financial institution, briefly explain the following:
- (i) Purpose of establishment [4]
(ii) Source of funding [4]
(iii) Recipients of funding [2]
- (b) Explain **one** advantage for each of the following:
- (i) Fixed exchange rate system [3]
(ii) Flexible exchange rate system [3]
- (c) Briefly explain the following:
- (i) Short-term capital flows are volatile in nature. [2]
(ii) Financing of current account deficits in the balance of payments. [2]
(Total:20 marks)

OUTLINE ANSWERS

PART A

Question 1

Generally, candidates were able to answer well most parts of the question, except the parts on IOFC and the determinants of interest rates.

1. (a) (i) The Malaysian financial systems comprises the **financial institutions** and the **financial markets**.

Financial institutions comprises the banking system (including Bank Negara Malaysia, commercial banks, finance companies, merchant banks, discount houses, foreign banks, representatives offices, etc.) and the non-bank financial intermediaries (including provident and pension funds, insurance companies, development financial institutions, savings institutions and others).

The financial market comprises money and foreign exchange markets, capital markets (equity and bond markets, public and private debt securities), derivatives markets (commodity futures, KLSE CI futures, KLIBOR futures) and offshore market.

OR

Structure of the Malaysian Financial System

Financial Institutions	Financial Markets
<p>Banking System</p> <ul style="list-style-type: none"> <input type="checkbox"/> Bank Negara Malaysia <input type="checkbox"/> Banking Institutions <ul style="list-style-type: none"> - Commercial Banks - Finance Companies - Merchant Banks <input type="checkbox"/> Others <ul style="list-style-type: none"> - Discount Houses - Representative Office of Foreign Banks - Offshore Banks in Labuan IOFC <p>Non-Bank Financial Intermediaries</p> <ul style="list-style-type: none"> <input type="checkbox"/> Provident and Pension Funds <input type="checkbox"/> Insurance Companies <input type="checkbox"/> Development Finance Institutions <input type="checkbox"/> Savings Institutions <ul style="list-style-type: none"> - National Saving Banks - Co-operative Societies <input type="checkbox"/> Other Non-Bank Financial Intermediaries <ul style="list-style-type: none"> - Unit Trusts - Pilgrims Fund Board - Housing Credit Institutions - Cagamas Berhad - Credit Guarantee Corporation - Leasing Companies - Factoring Companies - Venture Capital Companies 	<p>Money & Foreign Exchange Markets</p> <ul style="list-style-type: none"> - Money Market - Foreign Exchange Market <p>Capital Markets</p> <ul style="list-style-type: none"> <input type="checkbox"/> Equity Markets <input type="checkbox"/> Bond Market <input type="checkbox"/> Public Debt Securities <input type="checkbox"/> Private Debt Securities <p>Derivatives Markets</p> <ul style="list-style-type: none"> <input type="checkbox"/> Commodity Futures <input type="checkbox"/> KLSE CI Futures <input type="checkbox"/> KLIBOR Futures <p>Offshore Market</p> <ul style="list-style-type: none"> <input type="checkbox"/> Labuan International Offshore Financial Centre

- (ii) The sources of funds are from the surplus units (comprising the savings or investments of households, enterprises, government, financial institutions and the external sector) and the financial instruments (comprising currency, deposits, bills, loans, bonds, unit trusts, share capital, insurance premiums, provident funds, foreign loans and investments).

The uses of fund are the deficit units (comprising investment or expenditure of households, enterprises, government, financial institutions or the external sector). The financial instruments are money at call, overdrafts, bills, term loans, hire-purchases, bridging loans, leasing, bonds, debentures and external reserves. The financial intermediaries are the Central Bank, commercial banks, finance companies, merchant banks, discount houses, saving institutions, industrial financial institutions, provident funds, pension funds, insurance companies, unit trusts, building societies and co-operatives.

- (b) (i) The financial intermediation refers to the flow of funds between the depositors and the borrowers that is fulfilled through the efforts of a financial intermediary.
- (ii) The advantages of financial intermediation to savers (any **two**):
- savers can purchase relatively safe assets and more liquid.
 - savers who are borrowers realise lower cost of funds.
 - savers have a more diversified portfolio assets.
 - mobilisation of savings for productive investments by borrowers.
- (c) Functions of capital market:
- To assist the process of economic development by mobilising medium and long-term funds for a wide-section of the population to finance the public development programmes and to fund private investment as well as assist the banking system in securitising their assets.
 - To promote private enterprises by providing intermediary services to raise funds for corporate investment and expansion, and in changing the ownership structure of companies.
- (d) Functions of DFIs (any **four**):
- Extension of financial assistance in the form of medium and long-term loans.
 - Participation in equity capital.
 - Underwriting and, wherever relevant, acting as issuing house for public shares issues.
 - Provision of guarantees for loans.
 - Identification of new projects, participation in promotion and, wherever appropriate, provide ancillary financial, technical and managerial advice.
- (e) International offshore financial centre (IOFC):
- An IOFC is basically a small territory or jurisdiction that imposes low or no taxes on income, profit, dividend and interest earned or derived from the offshore business activities or transactions carried out by offshore multinational corporation in or from those jurisdictions.
 - It does not have any exchange control or limitations or trans-boundary movement of funds into and out of the jurisdiction by the offshore company, no stamp, death, inheritance or estate duties and no value added tax.
 - An IOFC maintains a high degree of secrecy through limitations on public inspection of company files, prohibition from disclosure of the shareholding or beneficial ownership and management of business, financial or other affairs of the company other than in compliance with the law.
- (f) (i) The statutory reserve requirement (SRR) is deployed by the central bank to control the liquidity situation in the banking system. Banking institutions are required to maintain certain percentage of their reserves with the central bank. SRR is defined in terms of a bank's eligible liabilities (EL). The EL base comprises deposits and net

interbank borrowings. All banking institutions are required to place a 4% of their EL as cash reserves with the central bank.

- (ii) Banking institutions are required to observe a minimum liquidity ratio. The ratio, which is akin to the reserve ratio, is also expressed as a percentage of the EL base of the banking institutions. It operates very much the same manner as the SRR in that when the liquidity ratio is raised, the amount of deposits and loans a given supply of reserves can support is much less. Correspondingly, the impact is expansionary when the ratio is reduced.
 - (iii) The money multiplier is the number of times money supply will change in response to a given change of the monetary. For example, given a monetary base of RM100 million and a money multiplier of 5, the money supply is RM500 million. The size of the money multiplier is determined by the central bank as well as the non-bank public and banks. The factors that influenced the size of the money multiplier are the required reserve ratio determined by the central bank, the currency-deposit ratio and the size of the excess reserves relative to deposits determined by the banks.
- (g) At any time, there is a demand for money as well as a supply for it. The interaction of supply and demand for money determines its price – the interest rate. At any level of interest rate, the demand for money will depend mainly on income and to a certain degree, wealth. The amount of money which the private sector desires to hold at any particular point of time may not be in line with that which will be supplied to the economy. The equality of supply and demand would be brought about by adjustments in interest rate.

PART B

Question 2

Candidates performed poorly in this question. They did not know what were the sources and uses of funds of merchant banks and they also could not explain the recent development of venture capital in Malaysia. While some candidates were able to state the benefits of bank mergers, they were not detailed enough in their description of the Islamic banking principles.

2. (a) Merchant banks:
Sources of funds (any three):
- Capital and reserves, deposits, NIDs, amount borrowed in Malaysia, BAs outstanding and other liabilities.
- Uses of funds (any three):
- Cash and bank balance, reserves with BNM, fixed deposits, government securities, loans, bills discount/purchased and fixed assets and other assets.
- (b) The asset and liability management practices of financial institutions in Malaysia play important roles in addressing the risks and management of liabilities. Asset management addresses the exposure of the banks to liquidity risks by lending money to other banks through the interbank market. The role of liability management is to manage liquidity as the bank's liabilities are usually of shorter term compare with their assets.
- (c) Benefits of merger:
- Customers have access to a wider scope of banking services through cross selling of banking products between institutions within the same banking group.
 - The merged banking groups are more capitalised to meet future calls for capital expenditure as well as able to undertake higher levels of risk arising from wider scope of business activities.
- (d) Development of the venture capital companies (any two):
- Two venture capital funds of RM150million each were launched for high-technology projects.

- The government has also set up another RM500million venture fund to increase the pool of funds to stimulate more new ventures, in particular in new high growth areas.
 - Tax incentives in the form of tax deductions were accorded to approved venture companies at the start-up, seed capital and early stage financing.
 - A “one-stop” VC centre has been established that will chart the strategic direction for the VC industry as well as a single reference point for all government initiatives and incentives. In addition, was the liberalisation for MESDAQ listing requirements and this would make the exit mechanism for VC companies more attractive in Malaysia.
 - The Financial Sector Masterplan as well as the Capital Market Masterplan that were launched in early 2001, have also recommended various measures to develop a more vibrant VC industry as an alternative mode of financing besides the banking sector. The recommendations included an Islamic venture capital fund; matching services; venture capital trusts; business-angled clubs; and networks.
- (e) (i) The principles of Al-Wadiah (trusteeship) is used in the mobilisation of demand and savings deposits. Under this principle, the bank is entrusted with the safe keeping of the customer deposits, which can be withdrawn at any time upon demand by the customers. Payments of dividends are not obligatory but at the discretion of the bank since the customer already benefit from the safe custody of their money.
- (ii) Under the principle of Al-Musharakah, the bank shares the cost of the project with the entrepreneur based on an agreed proportion, and both parties have the right to participate in the management of the project as well as to waive such rights. The profit from the project will be shared according to an agreed ratio, which is not necessarily the same as the share of the cost. In the event of losses, these will be shared by both parties according to an earlier agreed cost-sharing formula.
- (iii) Bai’ Al-Dayn refers to debt financing, that is, the provision of financial resources required for production, commerce and services by way of sales/purchase of trade documents and papers. It is a short-term facility with a maturity of not more than a year. Only documents evidencing debts arising from bona fide commercial transactions can be traded.

Question 3

This was a generally well-answered question.

3. (a) Functions of BNM (any **two**):
- Bank for currency issue.
 - Keeper of international reserves.
 - Government banker and financial advisor.
 - Responsibility for monetary policy.
 - Banker to banks.
- Candidates are required to briefly explain each function they choose.
- (b) The central bank can either control the level of money supply or interest. However, the central bank cannot be expected to control both the level of money supply and interest rate at the same time. When the central bank controls money supply, then interest rate becomes volatile and vice-versa. If the central bank chooses interest rate as its intermediate target, then it will loose control on money supply. Money supply will increase or decline depending whether the central bank is acting to prevent interest rate from falling below or rising above its target.
- (c) Forces that affect the flow of credit and money in an economy are as follows (any **three**):
- The government’s budgetary policies on expenditure, taxes and debt.
 - The distribution of income and allocation of this income between spending and savings.
 - Business plans to invest and to employ labour, including their expectations of price changes.
 - The flow of international trade and foreign investment.

- (d) (i) The base lending rate (BLR) refers to the average of the base lending rates that commercial banks and finance companies quote to their best customers. Essentially, the formula computation for the ceiling BLR is now based on the prevailing BNM 3-month intervention rate instead of the previous month's average LIBOR. The current computed BLR formula is:

Computed BLR

= adjusted BNM intervention rate + fixed administrative change of 2.25%

(ii) *BLR for commercial banks*
 = $\frac{[\text{BNM intervention rate} \times 80\%]}{1 - \text{SRR}\%} + 2.25\%$

BLR for finance companies
 = $\frac{[\text{BNM intervention rate}]}{1 - \text{SRR}\%} + 2.25\%$

- (e) The central bank conducts money market operations (MMO) to influence the liquidity situation in the financial system. Money market operations can be conducted by (choose any **one**):

- *Open market operations (OMO) through the sale and purchase of government papers.*
 In an OMO, it involves the sales and purchases of government papers by the central bank in open organised markets. The purpose is to affect directly the reserves of banks and thus, the flow of credit and money. OMO are conducted either outright or through repurchase agreements. To achieve such a market, the conditions required include: a constant and substantial flow of funds for investment and a large volume of existing business in Government securities.
- *Direct borrowing or lending by the central bank in the interbank market.*
 Direct borrowing or lending was normally undertaken in short-term maturity periods of one to three months. For a successful open market operation, there must be a viable capital market that does not depend on central bank activity.

- (f) The central bank stands ready to provide lender of last resort facilities to the licensed institutions. The main form of assistance given by the central bank are re-discounting of eligible bills and borrowing from the central bank against collateral. When an unforeseen circumstances arises and an institution is temporarily short of funds, the central bank stands ready to extend credit to tide temporarily the institution over its temporary difficulty. Assistance could also be extended by placing short-term deposits with these institutions on a rollover basis.

Question 4

- Candidates were able to define narrow and broad money, and explain the determinants of money supply.
- However, most candidates were not able to answer the questions on money stock and monetary base.

4. (a) (i) “Narrow” and “broad are money” are distinguished as follows:
- Narrow money or M1 refers to the total supply of money available for the public to spend. The supply of money is basically for payment purposes. M1 comprises currency holdings and demand deposits held by the private sector.
 - Broad money refers to M2 (private sector liquidity) and comprises M1 and private sector holdings of fixed and savings deposits with the commercial banks and the central bank. Very broad money or M3 comprises M2 and all private sector deposits including Repos, placed with finance companies, merchant banks, discount houses and Bank Islam or M2 plus broad quasi money.

- (ii) Factors that determine the level of money supply (choose any **two**):

Net Government Operations

Financing of the Government's overall deficit by the banking system will have the same effect on money supply as the banking system's loan to the non-bank private sector, as both of them work through bank reserves to inject greater liquidity into the private sector. The expansionary or contractionary impact on money supply arising from the bank financing of Government expenditure will be reflected in the average difference over time between the level of Government deposits with the banking system and the holdings of Government debt by the banking system. If on average, Government's deposits with the banking system are larger than the holding of Government debts by the banking system, the public sector's financial operations have imparted a contractionary impact on money supply and vice-versa.

Bank Credit to Private Sector

Loans by the banking system to the private sector are major source of liquidity. Every loan will create a deposit and, therefore, expand money supply. The limit which banks may extend credit to will depend on the size of the statutory reserves at the central bank. In the Malaysian economy over the past years, credit to 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.

External Sector

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

- (b) Two elements in the determination of money stock:

- Firstly, money can only be created if banking institutions can increase their holdings of domestic assets, which are normally constituted by loans to the private sector, by increasing their own liabilities in the form of demand and/or fixed deposits. There is no creation of money when the currency in the hands of the public is substituted for deposits with a bank and vice-versa, since such an operation modifies only the composition of the stock of money and not its amount.
- Secondly, since it is unlikely that all depositors will request encashment of all their deposits at the same time, bank will hold as a reserves only a fraction of the amount of their deposit liabilities, that is, the amount they consider appropriate to satisfy the demands buy the public and the amount they are legally required to hold. It follows that an increase of cash (reserves) in the banking system can support the expansion of banking system assets and liabilities equal to a multiple of reserve accretion. Thus, there is said to exist, on a fractional reserve system, a money and credit multiplier.

- (c) Sources of MB (choose any two): Net foreign assets, net claims on Government, central banks on the commercial banks and other factors.

Uses of MB (choose any two): Currency notes and coin in the hands of the public, currency in the vaults of the commercial banks, deposits maintains by the commercial banks at the central bank (bank reserve).

- (d) (i) Size of money multiplier = $\frac{1 + 0.2}{0.2 + 0.1} = 4$

- (ii) When the money multiplier reaches the maximum, the currency-deposit ratio and the excess reserves becomes zero.

Question 5

- Candidates gave satisfactory answers on the objectives of monetary policy.
- Many had difficulty explaining the transmission process of monetary policy.
- Candidates were also unsure of what the general and selective instruments of monetary policy are.
- They also did not know what are the targets used and the problems faced by the central banks in achieving monetary policy goals.

5. (a) Objectives of monetary policy in economic growth:
- 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 process 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.
 - High employment – to maintain a low rate of unemployment. The reasons being unemployment leads to excess productive capacity, financial stress and low-esteem for those who lose their jobs. Indeed, excess production capacity is evident during an economic slowdown.
 - Real economic growth – The achievement of the highest sustainable rate of real economic growth consistent with domestic prices and exchange rate stability. Higher growth promotes national savings and therefore, a large pool of investment fund for capital formation.
- (b) Monetary policy is transmitted through the money market to the financial system by the price and quantity effects. The resultant change in relative prices and yields of financial and real assets cause portfolio adjustments. This will change spending and income in the economy. The two key channels for the transmission of monetary policy are through the open market operations and interbank rate.
- (c) (i) General instruments of monetary policy are those that operate to influence the level of bank reserves or high powered money.
- Selective instruments are used to influence credit to a particular sub-sector type of lending.
- (ii) The general instruments are as follows (choose any **one**):
- Variations in the statutory reserve requirements (SRR).
 - Adjustment in the liquidity ratio.
 - Money market operations.
- The selective instruments are as follows (choose any **one**):
- 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 of specific types of property.
- (d) (i) Targets used to achieve monetary policy goals:
- Intermediate targets.
 - Operating targets.
- Candidates need to provide brief explanation for the two targets.
- (ii) Problems in achieving monetary policy goals
- Trade-offs in attempting to reach high economic growth and low inflation.
 - No direct control over real output or the price level.
 - Timing difficulties due to information lag and impact lag.

Question 6

Candidates were able to answer the questions pertaining to the WB and the IMF. However, they showed poor understanding on the topics of exchange rate system, capital flow and balance of payments.

6. (a) (i) **Purpose of establishment**
World Bank (WB): To promote economic and social progress in developing countries by helping to raise productivity so that the people may live a better and fuller life.

International Monetary Fund (IMF): Oversees its members' monetary and exchange rate policies and a guardian of the code of conduct.
- (ii) **Source of funding**
WB: Market borrowing through issue of bonds to individuals and private institutions, grants from donor nations, selling of bonds and notes directly to governments, their agencies and central banks.

IMF: Quota subscriptions from member countries, borrowing from official entities.
- (iii) **Recipients of funding**
WB: Creditworthy governments of developing nations

IMF: All member nations
- (b) (i) The advantage of the fixed exchange rate system is it reduces uncertainty in payments for international trade. However, under the fixed exchange rate system, the central bank would need to have sufficient amount of foreign reserves.
- (ii) The advantage of the floating exchange rate system is that the strengthening of the domestic currency will reduce the cost for importing goods and services (less expensive).
- (c) (i) The inflow of short-term capital or "hot money" are determined mainly by external factors, namely, interest rate differentials, exchange rate speculations and the performance of the stock market. Short-term capital also responds to higher returns and expectations of an appreciation of the exchange rate. A reversal in interest rate trend in favour of international interest rates and an appreciation of the domestic currency can cause a reversal in movements of short-term capital. Thus, in view of its characteristics, short-term capital is not dependent upon to build up reserves of the country.
- (ii) When an economy records a deficit in the current account of the balance of payments of a country, the gap is financed by inflows of both long-term and short-term capital. When the inflows have more than offset the deficit current account position, there will be a surplus basic balance position. The additional capital in the basic account would contribute to build up the external reserves of the country.