

## **CHAPTER THREE**

### **MALAYSIAN STOCK INDEX FUTURES MARKET**

#### **3.1 Derivatives Markets in Malaysia**

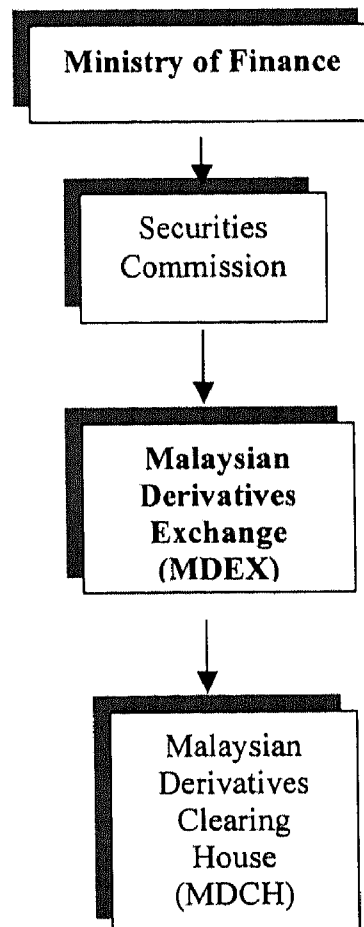
The derivatives market in Malaysia was confined to the commodity derivatives in early 1980s which saw Malaysia open its first derivatives exchange; The Kuala Lumpur Commodity Exchange (KLCE) in 1980. A viability study by the International Monetary Fund (IMF) for Bank Negara Malaysia (BNM) in 1990 identified the need for some form of financial risk management tool in the face of increasing volatility in the financial markets. This study led to a series of regulatory infrastructure reforms to introduce financial derivatives. As a result of these reforms, Malaysia's first financial derivative exchange was established- The Kuala Lumpur Options and Financial Futures Exchange (KLOFFE). KLOFFE was licensed as a futures and options exchange on December 1995 and Stock Index Futures (SIF) were first traded on 15 December 1995. The KLCE had the existing infrastructure and capacity to allow for the trading of financial futures, however, that setting up for a subsidiary was necessary because trading in financial futures fell under different jurisdiction.

On August 1992, the KLCE with the support of government authorities, incorporated a subsidiary called the Kuala Lumpur Futures Market Sdn. Bhd. (KLFM) which was later renamed Malaysia Monetary Exchange Berhad (MME) in 1995. On 7 May 1996, the Minister of Finance approved the establishment and operation of MME as a futures and options exchange company and the three-month KLIBOR (Kuala Lumpur Interbank Offer Rate) futures contract was launched on 28 May 1996.

Recently, the merger between Commodity Exchange of Malaysia (COMMEEX) and Kuala Lumpur Options and Financial Futures Exchange (KLOFFE) in early 2001 saw the birth of Malaysia Derivatives Exchange (MDEX) which its objective is to promote new derivatives products such as Bond Futures and Shariah Index Futures in the future while enhancing the remaining products (refer Figure 1 for Malaysian Futures Market Structure and Appendix 3.0 for MDEX Structure).

**Figure 3.1**

**The Structure Of The Malaysian Derivatives Market.**



Source: "Examination Study Guide"- Securities Industry Development Center, Securities Commission.

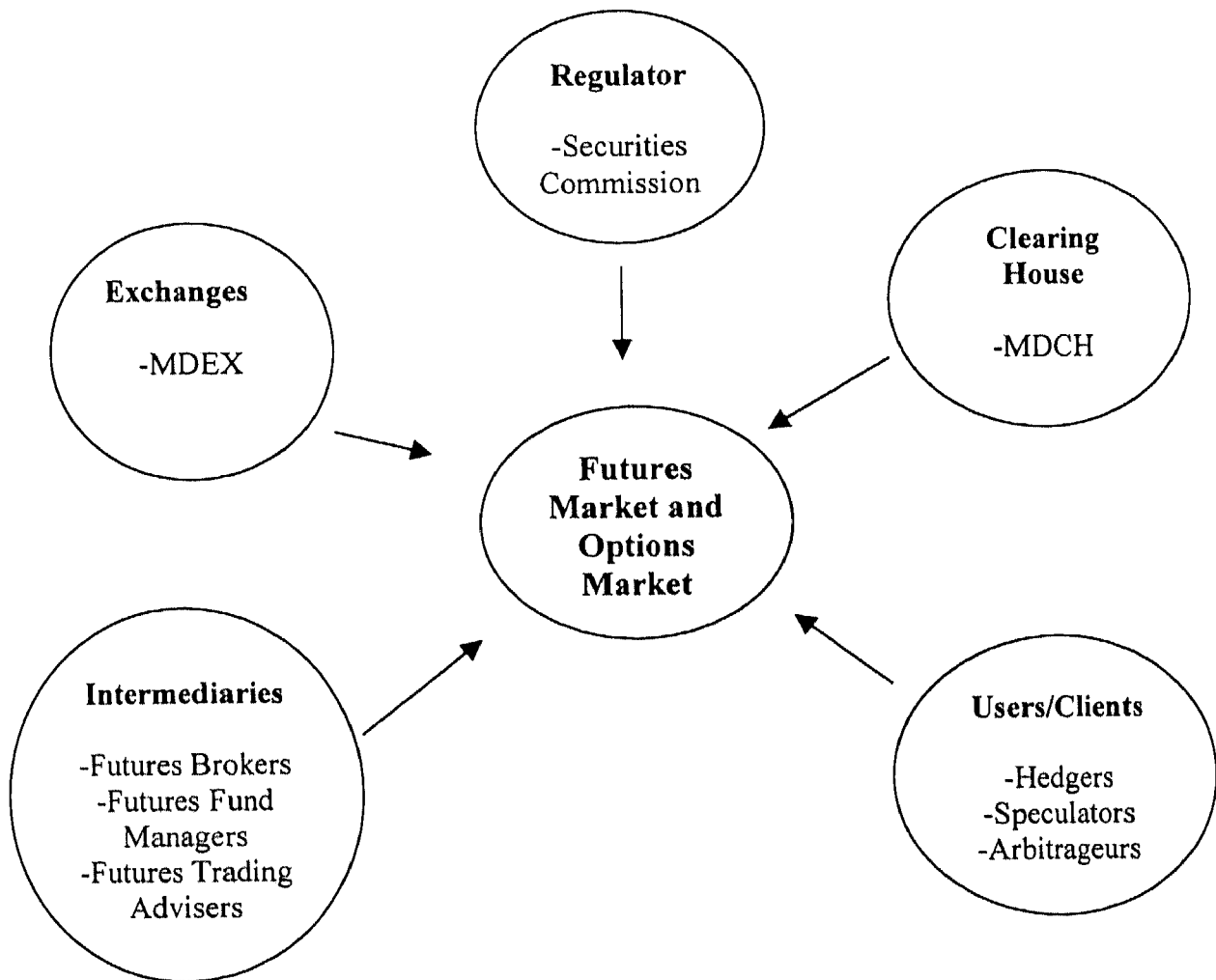
### **3.2 Participants in the Malaysian Futures and Options Market.**

The Malaysian futures and options market is made up of a diverse range of participants. They include:

- *The Regulators*-, which authorizes the existence of the market. The industry is regulated by the Futures Industry Act 1993 (FIA), which regulates futures and options.
- *The Exchange*-, which provides the trading facilities
- *The Clearing House*-, which clears and processes and assumes counter party risk
- *Intermediaries* such as brokers, fund managers, and advisers – who advise and/or trade in the market
- *The users or clients* of the intermediaries- who may be hedgers, speculators or arbitrageurs.

**Figure 3.2**

**Participants in the Malaysian Futures and Options Market.**



### **3.3 Malaysia Derivative Exchange (MDEX)'s Products**

Four products are listed traded currently in MDEX namely:

- Kuala Lumpur Stock Exchange Composite Index Futures (Stock Index Futures or FKLI)
- Kuala Lumpur Stock Exchange Composite Index Options (OKLI)
- Crude Palm Oil Futures (CPO futures)
- 3-month Kuala Lumpur Inter Bank Rate Futures (KLibor futures).

The KLSE CI futures started in December 1995 was an equity-based derivatives. It is a screen-based market, which means there is no physical trading floor. Kuala Lumpur Options and Financial Futures Automated Trading System (KATS) is the screen based trading system based on the proven EUREX model and customized for the Malaysian environment. Instead, bids and offers are entered into the computer and matched electronically. Recently only KLSE CI futures and KLCI Options use KATS screen based system. Crude Palm Oil Futures and 3-month KLibor are using the open-outcry or hands signal. However MDEX are now looking forward to introduce electronic trading system for Crude Palm Oil Futures and 3-month KLibor at the end of 2001.

### **3.4 Membership of the Exchange**

*\*(All information regarding the Membership of the Exchange were obtained from MDEX website and "Examination Study Guide"- Securities Industry Development Center, Securities Commission.)*

There are 4 classes of Membership in MDEX

#### **3.4.1 Trading Member**

Trading Members can be divided by 3 categories:

- a) Equity Financial Members
- b) Non-Equity Financial Members
- c) Commodity Members

Trading Members are corporations that conduct business as a licensed futures broker. They must be companies incorporated under Companies Act 1965 and must have Minimum Paid Up Capital of 5 million Ringgit. They must own any one class of Preference Shares in MDEX. The Preference Shares consists of 3 Preference Shares namely A Preference Shares, B Preference Shares and C Preference Shares. See Table 3.1 for further details.

**Table 3.1**

**Trading Members' Preference Shares**

<b>Preference Shares</b>	<b>Value</b>	<b>Products</b>
<i>A Preference Shares</i>	<i>RM 1.5 Million</i>	<i>Equity</i> <i>(eg. Stock Index Futures/Options)</i>
<i>B Preference Shares</i>	<i>RM 500,000</i>	<i>Non-Equity</i> <i>(e.g. 3-month KLibor, Bonds (if any))</i>
<i>C Preference Shares</i>	<i>RM 200,000</i>	<i>Commodity</i> <i>(e.g. Crude Palm Oil Futures)</i>

Source: "Examination Study Guide"- Securities Industry Development Center, Securities Commission.

Let's say if Company A wants to be a trading member servicing for equity futures and at the same time also keen on servicing for commodity, so Company A have to buy A Preferences Shares and C preferences Shares cost about RM 1.7 Million and Company A are now known as Equity Financial Members and Commodity Member of MDEX. Let say Company only specialized in non-equity futures business such as 3-month KLibor, so Company B can only buy a B Preference Shares which cost only half a million and be Non-Equity Financial Members of MDEX.

They can trade in futures and options contract for both their proprietary accounts and on behalf of clients. They have full and direct access to the trading facilities of MDEX. A Trading Member is required to become either a clearing member of the

Malaysian Derivatives Clearing House or have an arrangement with a clearing member to facilitate the clearing of its trades.

#### 3.4.2 Associate Member

Associate Members are corporations or body corporate but not Futures Brokers, which do not own any preference shares. However, they must have a Minimum Paid Up Capital of 2 Million Ringgit.

#### 3.4.3. Local Members

Local members are individuals who trade for their own accounts. These individuals cannot trade on behalf of clients. Locals have full and direct access to the trading facilities on MDEX. Local members are required to have an arrangement with a clearing member to facilitate the clearing of their trades. MDEX has also allowed the local to transfer the seat to a Lessee.

#### 3.4.4. Trading Permit Holder

The Exchange also issues Trading Permits to individuals and corporations, which want to have direct trading access to the market. Trading Permit Holders are like Local Members in that they trade only for their own accounts and cannot trade on behalf of the clients. However unlike the Local membership, Trading Permits are for a fixed period of time only and allow the holder to trade in specific contracts.



### **3.5 Regulations of the Futures and Options Market**

*\*(All information regarding the Regulation of the Futures and Options Market were obtained from MDEX website and "Examination Study Guide"- Securities Industry Development Center, Securities Commission.)*

Regulation is aimed at promoting professional conduct among market participants, ensuring fair and transparent trading, and minimizing systematic risk. An amendment to the Futures Industry Act in April 1997 saw the Securities Commission take the role and function of the Commodity Trading Commission as regulator of commodity futures. As a result, futures and options are regulated by the Securities Commission pursuant to the Futures Industry Act 1993, and the Futures Industry (Amendment) Act 1995 and the Futures Industry (Amendment and Consolidation) Act 1997 and Regulations enacted thereunder.

### **3.6 Overview of Equity Futures**

Futures contracts based on stock market indices first commenced trading in the United States of America in 1982. In Malaysia, stock index futures introduced in December 1995 with the launch of the KLSE Composite Index futures contract on KLOFFE.

#### **3.6.1 The Underlying Instrument**

KLOFFE's stock index futures contract is based on the Kuala Lumpur Stock Exchange's (KLSE) Composite Index (CI), a widely used representation of the Malaysian stock market as a whole. A stock index seeks to serve as a measure or index, of stock market performance. Hence, the KLSE Composite Index measures the performance of the Malaysian stock market. The Kuala Lumpur Stock Exchange Composite Index (KLSE CI) is calculated using the market prices of a large number of companies listed on the KLSE. The sample of companies included in the index is capped at 100 and the selection of stocks in the index is carried out according to a set of criteria determined by the KLSE. The KLSE CI is a capitalization-weighted index, which means that the index is weighted according to the market capitalization of the constituent stocks. Thus, those companies that have a higher capitalization have a larger weightage in the index.

### 3.6.2 The Futures Contract

The futures contract that is based on the KLSE CI is simply an agreement between seller and buyer to respectively deliver and take delivery of the basket of shares that makes up the index, at an agreed price, at a specified future date. However, like almost all the stock index futures, the KLSE CI futures contract is cash settled. This means that on the last day of trading, any outstanding contracts are settled by reference to the price of the underlying stock index. This is in lieu of accepting (or taking) delivery of the basket of stocks, which would be a very cumbersome exercise. By being cash settled, users of the futures contract know for certain that, at expiry of the futures contract, the futures price will equal the cash index. Thus, convergence will occur by definition.

### 3.6.3 Contract Specifications

*\*(All information regarding the Contract Specifications were obtained from MDEX website and "Examination Study Guide"- Securities Industry Development Center, Securities Commission.)*

The contract specifications for the KLSE CI futures contract are detailed below:

<b>Contract</b>	<b>KUALA LUMPUR STOCK EXCHANGE COMPOSITE INDEX FUTURES CONTRACT</b>
Contact Code	FKLI
Underlying Stock Index	Kuala Lumpur Stock Exchange Composite Index
Contract Unit	Kuala Lumpur Stock exchange Composite Index multiplied by RM100.00
Minimum Price Fluctuation	0.1 index point valued at RM10.00
Daily Price Limit	<p>In the first trading session of the day (from 08:45 hours to 12:45 hours), there shall be a Price Limit for the respective contract months of 20% (or a percentage as determined by the Exchange from time to time) in either direction from the previous Business Day's Daily Closing Price.</p> <p>In the second trading session of the day (from 14:30 hours to 17:15 hours), there shall be a Price Limit for the respective contract months of 20% (or a percentage as determined by the Exchange from time to time) in either direction from the same day's first trading session's last traded price.</p> <p>There shall no be price limit for the spot month contract.</p>
Contract Months	Spot month, the next month, and the next two calendar quarterly month. The calendar quarterly months are March, June, September and December.
Trading Hours	Malaysia 08:45 hours to 12:45 hours and 14:30 hours to 17:15 hours
Final Trading Day	The last Business Day of the contract month
Final Settlement Date	By 09:30 hours on the Business Day following the Final Trading Day
Final Settlement	Cash Settlement on the Final Settlement

	Value
Final Settlement Value	The mean of the value (rounded upwards or downwards to one decimal point, 0.05 being rounded upwards) of the underlying stock index where the value of the underlying stock index is taken at every minute or at such other intervals as may be determined by the Exchange from time to time for the last half hour of trading on the Underlying Market on the Final Trading Day excepting the highest and lowest value.
Margins	As determined by the Malaysian Derivatives Clearing House from time to time. Variation Settlement: Based on daily marked-to-market valuation

- Source from "The Business Rules of Malaysia Derivatives Exchange Berhad in conjunction with the SIDC Train-the-Trainer Workshop 16-17 July 2001 Securities Commission."

#### 3.6.4 A Comparison of the Stock Market and the Futures Market

Futures markets and stock markets share many similarities but there are also a number of important differences. Some of these are detailed below:

- High Leverage From Futures

The large exposure to the market which can be gained for a small down payment (margin) is what is known as *financial leverage*, i.e. the possibility of making large profits or losses on a small outlay of capital. It creates the possibility of high percentage returns on funds for those who are successful but multiplies the level of risk on funds outlaid for those who are not.

- Length Of Exposure

It is possible to buy shares and simply hold them, receiving dividends and possibly gaining an advantage from a rise in their value. Shares are usually paid for in full when purchased and may be held indefinitely. On the other hand, futures contract cannot be held indefinitely because they have specified expiry dates, which means they have a set lifespan. However, the rolls activities could be done in order to hold the futures contract where by selling the spot month and buying the next month contract (as spot month approaching maturity) if the current position is a long position or buying the spot month and selling the next month contract (as spot month approaching maturity) if the current position is a short position. The KLSE CI futures contract is cash settled at expiry, at which time all contracts still in existence are extinguished and the holder receives a cash amount for the difference between the closing price and the futures prices at which the contracts were originally either bought or sold.

- Short Selling vs. Selling Futures

The other major difference between the futures market and the stock market is that it is possible to sell short (i.e. agree to sell a commodity not owned by the trader) on the futures market, whereas this is not allowed on the stocks.

- Margins

Each trader in the market is required to put an amount of money called a margin when a contract is held overnight. This margin is a performance bond and is required to protect market users from counterparty default. Margin rates for KLSE CI futures are set by the Malaysian Derivatives Clearing House (MDCH) and are subject to change from time to time.

### 3.6.5 Commission Structure

The futures market brokerage fees per leg are RM60, which are cheaper compared to the cash side.

**Table 3.2**

**Differences of Commission Between Futures Market and Cash Market**

<b>Commission</b>	<b>Futures</b>	<b>Cash / Stock</b>
Brokerage	50.00 (any price or value)	$1.0\% * 100,000 \text{ (value)}$ $= 1000.00$
Trading and Clearing	10.00	$0.05\% = 50$
Stamp Duty	-	$0.1\% = 100$
<b>Total Cost</b>	<b>RM 60.00</b>	<b>RM 1,150</b>

Source: "Examination Study Guide"- Securities Industry Development Center, Securities Commission.

### **3.7 Using Stock Index Futures to Speculate**

The speculator plays an important role in any futures market by providing trading volume and liquidity and by taking on the risks that hedgers seek to avoid.

#### **3.7.1 An Outright Speculative Trade**

In the following example, a speculator forms a strong opinion that the share market is about to enter a downtrend. The speculator holds no stock and so is unable to take advantage of this opinion through trading in the stock market, where short selling (selling stock not allowed by the seller) is not permitted under most circumstances. Instead, the speculator decides to use stock index futures and sells one March KLSE CI contract at the current price of 1156. The following is the results:

<b>Time</b>	<b>Action</b>	<b>Result</b>
January 12	Sell one march KLSE CI futures contract at 1156.  Futures contract closes at this price.	Pays margin of RM 8,000  <i>No variation gain/loss</i>
January 13	March futures price rises to 1177	Variation loss of RM2, 100 (21 index points *RM100)
January 14	March futures dips to 1142	Variation gain of RM3, 500 (35 index points *RM100)
January 15	March futures declines to	Variation gain of RM1, 800



	1124	(18 index points *RM100)
January 16	After dipping to 1118 March futures prices recovers to 1122. Traders buys back at this price	Variation gain of RM 200 (2 index points*RM100) Margin of RM 8,000 returned, less commission paid to broker.

Total profit is equal to the sum of the variation gains/loses i.e. RM3, 400.

Alternatively, it may be calculated as follows:

$$1156.0 - 1122.0 = 34 \text{ index points} * \text{RM}100$$

$$\text{Gross Profit} = \text{RM } 3,400$$

$$\text{Net Profit (less brokerage} = 1 \text{ lot equals RM}120 \text{ per round turn)} = \text{RM } 3,400 - \text{RM } 120$$

$$= \underline{\text{RM } 3,220}$$

The speculators success will depend partly on the *accuracy of his predictions about the future direction* of share market movements. Most speculators use combinations of *technical analysis* (the study of price charts in an attempt to recognize patterns that in the past have signaled a particular trend) and *fundamental analysis* (the study of supply, demand and all factors that may affect price) *in order to form opinions* about future price trends. This research paper attempts to explore the use of both technical and fundamental analysis on our Malaysian Stock Index Futures market. In the fundamental analysis, econometric technique will be used to derive empirical relationship between selected economic indicators and the Malaysian stock futures index. The techniques will be examined in more detail in the next chapter.