THE KLSE COMPOSITE INDEX FUTURES CONTRACT

Media Article 3

The following article is the third part of a series of five educational articles presented by Malaysia Derivatives Exchange Bhd (MDEX). This series of articles provides a detailed explanation of the mechanics and trading applications of the KLSE Composite Index Futures. The publication of these articles is part of an on-going effort by MDEX to increase public awareness and knowledge of the financial instruments traded in the MDEX Market. Further information on educational programmes organised by MDEX may be obtained from the Strategic Planning & Product Development Department.

The titles of the series of articles are as follows:

Article 1: The Structure of the Malaysian Financial Derivatives Industry
Article 2: Stock Indices and Stock Index Futures Contracts
Article 3: Basics of Stock Index Futures Trading
Article 4: Pricing of Stock Index Futures
Article 5: Hedging Applications of Stock Index Futures

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ARTICLE 3 : BASICS OF STOCK INDEX FUTURES TRADING

This week's article will discuss some of the more salient features of stock index futures trading; namely, the cash settlement mechanism and the all-important element of margin trading. The article concludes with a brief description of the order types that can be employed.

CASH SETTLEMENT

Almost all stock index futures contracts provide for cash settlement in lieu of actual delivery of the basket of stocks because futures contracts are often used for hedging purposes and hence cash settlement would suffice. Furthermore, delivery of a basket of stocks is often a cumbersome exercise.

Generally, there are two ways in which a stock index futures contract may be settled. A trader with an existing open position (whether long or short) may choose to 'close-out' his position by entering into an opposite trade or perform the contract by 'final cash settlement' when the contract expires.

By Closing Out Positions

Closing out (or liquidating) a position means that a trader with an existing position enters into an opposite trade to the original one. For example, a trader may be long a Kuala Lumpur Stock Exchange Composite Index ("KLSE CI") Futures contract ("FKLI") on the 1st of July. He may subsequently 'close-out' his position by shorting a FKLI contract on the 4th of July. Similarly, a trader may be short a FKLI contract initially and subsequently liquidate his position by buying a FKLI contract.

If the trader originally bought the FKLI contract at a price of 620.5 and subsequently closes out the contract by selling at a price of 625.5, he would have made a realised profit of RM500. This is the amount that is required to be cash settled before the start of trading on the following business day. The computation is based on the difference between the initial value of the contract, i.e. RM62,050 (620.5 x RM100) and the close-out value of the contract, i.e. RM62,550 (625.5 x RM100).

By Final Cash Settlement

If the trader does not close-out his position and the contract matures, he is obligated to perform the contract. As mentioned earlier, performance of the FKLI contracts is stipulated to be by means of cash settlement rather than by delivery of the physical assets.

At the end of trading on the maturity date of a futures contract, all outstanding positions that have not been closed out by an opposite trade will be settled according to a final settlement value. For the FKLI contract, the expiration day for the respective contract month, falls on the 'Final Trading Day' which is defined as the last business day of the month; and the 'Final Settlement Value' is calculated by taking the average value of the KLSE CI for the last half hour of trading on the KLSE, excepting the highest and lowest values. The cash difference will have to be settled on the 'Final Settlement Day' which is the business day following the Final Trading Day.

For example, if a trader originally sold a futures contract at a price of 620.5 and on the Final Trading Day, the Final Settlement Value is calculated to be 601.5 (rounded to one decimal place), he would have made a realised profit of RM1,900. This is the amount that is required to be cash settled on the Final Settlement Day. The computation is based on the difference between the initial value of the contract, i.e. RM62,050 (620.5 x RM100) and the Final Settlement Value, i.e. RM60,150 (601.5 x RM100).

MARGINS

An appealing feature of trading futures contracts is the leverage provided by the margin requirement where a trader need only put up a 'marginal' portion of the contract value instead of the full amount of the contract value.

Margins are not down payments for the contracts. They are a form of a 'good faith' deposit which ensures that the trader can pay the cash difference when the trade is settled. The margin payment, less any amount needed to settle the cash difference, will then be returned to the investor. Where the margin deposited by the trader is insufficient to settle the cash difference, the trader will have to pay the additional amount required. However, as long as the position is open (not closed out), the margin required must be maintained at all times.

The utilisation of margins in futures trading ensures more efficient usage of money. An investor needs only deposit up-front a fraction of the contract value of a futures contract and obtain the same amount of exposure that a portfolio of stocks would otherwise offer. He can put aside a portion of the funds remaining after payment

of the margin to invest in fixed income securities such as bonds and fixed/time deposits, and thereby earn additional returns for his funds.

The quantification of margin requirement is by the clearing house, and is determined based on the requirement that the clearing house guarantees all trades that it clears for (i.e. provides settlement facilities for). In other words, in setting the amount of deposit required from traders, the clearing house must be satisfied that the amount is sufficient to cover it's potential liabilities as a guarantor of trades. For the FKLI contract, the Malaysian Derivatives Clearing House Bhd ("MDCH") requires the payment of "initial margins" and daily settling of "variation margins". These concepts are explained below.

Initial Margin

Most exchanges or clearing houses require investors to deposit an initial sum of money with their brokers for each futures contract that they trade. This sum of money is often referred to as the "Initial Margin". In the case of FKLI, it is at the date of this publication, quantified as RM4,000 per contract. The brokers may however, require their clients to deposit a higher initial margin according to its credit risk assessment of the customer. The requirement of margins by the exchange or clearing house arises out of it's role as the guarantor to all contracts traded. MDCH quantifies the amount of initial margin required per contract by adhering to risk-based margining methodologies. 'Risk-based margining' is a generic name for risk management methodologies that purport to contain the financially destabilising effects of a projected worst-case scenario that a market can statistically be expected to realise, the following trading day. The quantification of risk-based margins may therefore vary from time to time as the computation takes into account the statistical volatility of the instruments being margined - this ensures that the margining regime dynamically addresses the currency of the market. The MDCH uses a risk-based margining system developed by the Options Clearing Corporation called the Theoretical Intermarket Margining System ("TIMS").

Variation Margins

Generally, clearing houses require the "variation margin" to be settled daily based on the daily 'marked-to-market' value of the futures traded. Marked-to-market means that the positions which a trader holds is revalued according to the most current market price. For daily marking-to-market, the closing/settlement price (normally the last-traded price) of the contract is used as being the most recent price at day's end. The daily settlement of variation margin merely means the cash difference between the last two settlement prices of the futures contract.

For example, as illustrated in the table below, if a trader buys a June FKLI contract on Day 1 at a price of 600.0, and the June futures closes that day at a price of 605.0, he would have made a floating (unrealised) profit of RM500 which will be credited to his margin account. Although the profits are still unrealised, the credited amount may be used to offset future debits from his margin account when the market turns against him. Thus, on Day 2, when the June futures closes at a price of 590.0, the trader would have incurred a floating (unrealised) loss of RM1,500 for the day and a net floating (unrealised) loss of RM1,000 for his trading activity over the two days. If he does not have any additional deposit with his broker, he will be issued with a margin call of RM 1,000.

Time	Activity	Price	Contract Valuation (Price x RM100)	Variation Margin (difference between last two valuations)
Day 1	Trader buys one June FKLI contract at price	600.0	RM60,000	
	Day 1 Closing Price	605.0	RM60,500	+ RM500
Day 2	Day 2 Closing Price	590.0	RM59,000	- RM1,500

Margin call on the second day is = - RM1,000

At this juncture, we may look at examples of two basic strategies used in trading futures, namely the bullish strategy of buying (long) futures and the bearish strategy of selling (short) futures.

BULLISH STRATEGY

A trader expecting rising stock prices could buy a FKLI contract. If the market price does turn up, the buyer will gain from the daily increase in the price of the futures contract.

As illustrated in the table below, a bullish move is reflected in an increase of 8.5 points, from 620.0 to 628.5. When the long FKLI position is closed out on July 3rd, the bullish position has a profit of RM850 (8.5 x RM100). Conversely, a decline of 8.5 points would have resulted in a loss of RM850. Please note that all examples omit any commissions, brokerage fees or transaction costs.

Bullish Strategy

Buy 1 FKLI Contract

Date	FKLI	Value of Contract	Value of Change (Variation Margin)	Profit/Loss on Long Position
July 1	620.0	RM62,000	0	0
July 2	618.0	RM61,800	- RM200	- RM200
July 3	628.5	RM62,850	RM1,050	RM850
	+ 8.5		RM850	

The cash flow schedule of the investor would be as follows:

Date	Activity	Amount	Investor's Equity	Cash Received (+) or Paid (-)
July 1	Investor Deposits Initial Margin	RM4,500	RM4,500	- RM4,500
July 2	End-of-Day Variation Margin (Investor receives a margin call*)	(RM200)	RM4,300	n/a
July 3	Investor meets margin call by 9:00 am	RM200	RM4,500	- RM200
	End-of-Day Variation Margin (Investor closes out position)	RM1,050	RM5,550	RM5,550
			Profit/Loss =	+ RM850

Note:
* Margin call is actually made before 9.00 a.m. Therefore, money must in fact be in before the next day. This is why Members request for a higher margin than requested by the Clearing House.

BEARISH STRATEGY

Bear markets also offer profit opportunities. A trader anticipating lower stock prices could sell a FKLI contract. A possible selling strategy is shown in the table below. Here, the FKLI declined from 620.0 to 610.0. This decline of 10.0 points resulted in a RM1,000 profit. Conversely, a rise of 10.0 points would have resulted in a loss of RM1,000.

In this case, the trader would have generated a profit. The hedger who sold stock index futures to protect a stock portfolio could have achieved some protection for his portfolio in the subsequent market decline.

Bearish Strategy

Sell 1 FKLI Contract

Date	FKLI	Value of Contract	Value of Change (Variation Margin)	Profit/Loss on Short Position
July 8	620.0	RM62,000	0	0
July 9	623.0	RM62,300	- RM300	- RM300
July 11	610.0	RM61,000	RM1,300	RM1000
	- 10.0		RM1000	

The cash flow schedule of the investor would be as follows:

Date	Activity	Amount	Investor's Equity	Cash Received (+) or Paid (-)
July 8	Investor Deposits Initial Margin	RM4,500	RM4,500	- RM4,500
July 9	End-of-Day Variation Margin (Investor receives a margin call**)	(RM300)	RM4,200	n/a
July 11	Investor meets margin call by 9:00 am	RM300	RM4,500	- RM300
	End-of-Day Variation Margin (Investor closes out position)	RM1,300	RM5,800	RM5,800
			Profit/Loss =	+ RM1,000

Note:
** See above.

TYPES OF ORDERS

Market Order.

A market order is one of the simplest and most popular types of orders in most of the exchanges. It is executed at the best available price. Market orders are used for equity trades involving long-term strategies since equity prices do not fluctuate as much as futures prices between the decision to trade and the time the order reaches the trading floor.

Limit Order

A limit order stipulates a price limit for the execution of the transaction and allows the investor to avoid the dangers associated with market orders. A buy limit order indicates that the futures contract may be purchased only at the price designated or at a lower price. A sell limit order indicates that the futures contract may be sold

at the price designated or at a higher price. The danger with a limit order is that there is no assurance that it will be executed or the designated price may not be reached.

Stop Order

A stop order is another type of conditional order. It specifies that the order is not to be executed until the market reaches the order price. A buy stop order specifies that the order is not to be executed until the market rises to a designated price. A sell stop order specifies that the order is not to be executed until the market price falls below a designated price. A stop order is useful when a futures trader cannot watch the market constantly. Profits can be preserved or losses minimised on positions by allowing market movements to trigger a strategy.

Day Order Or Good For The Day

The limit or stop order will lapse at the end of the dealing day if it has not been enacted during the day.

Good Till Cancel Order (GTC)

This order remains valid until either filled or cancelled. It is prudent that a record of such orders is kept and monitored on a daily basis.

Good To Date

This order remains valid until either filled or cancelled at a specified date.

'Fill or Kill Order'

This is an immediate order transaction. If not filled immediately it must be withdrawn. An example is where a party's intention is to take out a large bid or offer. If this cannot be achieved then they would want to withdraw their order from the market immediately.

'Immediate or Cancel Order'

This is another immediate order transaction. If only a portion of the order is filled the remaining order that is not filled will be withdrawn immediately.

Basis Orders.

Also known as spread orders, basis orders are used for taking a spread position, i.e the simultaneous sale and purchase of contracts with different expiration dates. The trader attempts to make a profit from changes in the differential between the market price of the respective contract months as time goes by.

In the next article, we will look at how futures may be priced theoretically.