THE POTENTIAL FOR A STOCK INDEX FUTURES IN MALAYSIA: AN EMPIRICAL STUDY OF THE OPINIONS AND PERCEPTIONS OF MALAYSIAN FUND MANAGERS

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ABSTRACT

This study was made with the objective of identifying and analysing the opinions and perceptions of Malaysian fund managers towards the use of a stock index futures contract based on The Kuala Lumpur Stock Exchange Composite Index (KLSECI). The study utilised a survey method and the analysis was made in three stages, namely among all the respondents, among potential non-participants and among potential participants.

The general findings were that all fund managers, irrespective of which stratum they came from, held similar opinions and perceptions of factors relating to incentive, deterrent and administrative problems. Among potential non-participants, the findings were that there was a lack of awareness of the economic uses of futures trading and of the mechanics of trading futures. Among the potential participants, the findings show that they have similar perceptions of the trading activities considered of great concern when dealing with futures.

I. BACKGROUND

Modern portfolio theory divides the risks inherent in common stock into systematic and unsystematic risks. The former is the degree of correspondence of a security's price movements with the general stock market, and the latter refers to company-related risks.

Systematic risk cannot be mitigated by means of diversification. The appropriate way to do it is by using stock index futures. Its introduction in 1972 at the Kansas City Board of Trade in the United States enabled portfolio managers for the first time to separate and manage company-

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related and market-related risks. At present, there is no market in Malaysia where local portfolio managers can hedge their stock portfolio against declining market value.

According to a survey by The Kuala Lumpur Stock Exchange (KLSE) of shareownership of 225 Malaysian incorporated companies as at 31 December 1987, institutional and nominee shareholders owned 44% and 35% of paid up capital respectively. Individual shareholders owned only 19%.

At end of 1990, financial institutions' investment in corporate securities alone accounts for about RM22.7 billion (Bank Negara 1990). These institutions include those in the banking system (commercial banks, finance companies, merchant banks, discount houses) and non-bank financial intermediaries (provident funds, pension funds, insurance companies, unit trusts etc.). By the sheer need to exercise prudent risk management decisions, the institutions are perceived to be potential participants in the stock index futures contract.

2. OBJECTIVE

The objective of this study is to identify and analyse local fund or portfolio managers' opinions and perceptions of the use of stock index futures based on the Kuala Lumpur Stock Exchange Composite Index (KLSECI). Portfolio managers in their own hedge management processes operate along two broad functions namely decision making regarding the hedge positions, and record keeping and control of the positions (Rothstein 1984 and Loosingien 1985).

In order to examine the above, the following hypotheses were tested :-

- Fund managers' perceptions of incentive factors which attract participation in stock index futures represented by the data are identical.
- Fund managers' perceptions of deterrent factors which discourage participation in stock index futures represented by the data are identical.
- Anticipated administrative problems among fund managers are identical.
- The level of knowledge of futures trading is identical among the potential non-participants in stock index futures.

5. The potential non-participants have common opinions on factors that influence their companies' decision not to commence trading in stock index futures.

6. The potential non-participants have common opinions on factors that attract fund managers to participate in stock index futures.

7. The potential participants have identical opinions on activities that are perceived as of great cause of concern.

The primary findings on the KLSE indices, which include the KLSECI using an extensive range of statistical tests to identify its behavioural characteristics, show that an introduction of a stock futures index is inappropriate at this point in time (Othman 1988, Cheong 1988). Cheong's findings show that a highly volatile market, the lag in information, and the potential for excessive capital returns pose a potential for manipulation of the proposed stock index futures.

The above report recommends strongly that the launching of the stock index futures be deferred indefinitely. However, studies on various aspects relating to the stock index futures should continue.

The second research by the Working Group precisely fulfilled that objective (Stock Index Futures Contract Working Group 1989). It was commissioned to study the economic feasibility of stock index futures market and opinions of the trade sector. Unfortunately, the research is extremely exploratory in nature and does not deal in depth with all the relevant issues.

This study expands the previous studies mentioned above by looking into the opinions and perceptions of the fund managers who will be the major players in the futures market once it is operational. The findings of this study should shed some light on a number of relevant issues and problems.

3. METHODOLOGY

3.1 Research Design

This study utilised a survey method and a stratified random sampling as the data-assembly technique. Each sector or stratum had very diversified and distinctive characteristics and in order

to achieve more efficient stratification results, this study used a disproportionate stratification method. After considering the variability with the sectors, the sample selected should be representative of the population (Table 1).

TABLE 1

NUMBER AND PERCENTAGE OF RESPONDENTS BY SECTOR

Name of Sector	Total No. of Institution	% in stratum	No. of Institution in each stratum
1. Merchant Banks	12	50%	6
2. Commercial Bank & Finance Companies			
a. Local Com Banks	23	15%	3
b. Foreign Com Banks	16	15%	2
c. Finance Companies	45	15%	7
3. Insurance Companies	60	10%	6
4. Govt. Stat. Agencies	11	36%	4
5. Trust/Mutual Fund	7	20%	2
Total	174	17%	30

The analysis was designed to meet the following stages of hypotheses testings :-

1. Among all respondents
2. Among non-potential users
3. Among potential users.

At each stage the hypotheses testings were conducted on two sectors i.e. banking (merchant banks, commercial banks and finance companies) and non-banking (insurance companies, government statutory agencies and trust or mutual funds) sector. The rationale is to highlight and analyse the findings from tile perspective of all respondents and of group of respondents.

3.2 Statistical Testing

Mann-Whitney Test was applied in this study with an objective to draw a conclusion whether fund managers in banking and non-banking sectors have common perceptions of certain factors. Since all the responses from the questionnaire are ordinal, it is expected that the median of the responses within each sector is the same, reflecting common rating found in each sector.

The hypothesis:

H_o : That banking and non-banking populations are identical

H_1 : That banking and non-banking populations differ with respect to location.

The test statistic is -

$$Z = \frac{T - n_1 n_2 /2}{n_1 n_2 (n_1 + n_2 + 1)/12}$$

where n is the number of observations and the expected value of T is $n_1 n_2/2$ and its variance is $n_1 n_2 (n_1 + n_2 + 1)/12$.

The null hypothesis would be rejected if the p value is less than 0.1, and the conclusion would be that banking and non-banking sectors came from populations having the same distribution. In this case, their sample distribution of ranks was similar.

4. FINDINGS

4.1 Among All Respondents

The respondents completing the questionnaire were classified into would be participants and non-participants. As shown in Table 2, 33.33% of the respondents are those who would be considered potential users of stock index futures, while 66.67% would be non-users.

TABLE 2

NUMBER OF POTENTIAL PARTICIPANTS AND NON-PARTICIPANTS

Respondents	Number	Percent
Participants	10	33.33
Non-participants	20	66.67
Total	30	100.00

TABLE 3

PORTFOLIO AND NET WORTH OF RESPONDENTS

Size (RM'000)	PORTFOLIO		NET WORTH	
	Number	Percent	Number	Percent
1,000 - 99,000	7	23	17	57
100,000 - 199,000	3	10	1	3
200,000 - 299,000	3	10	1	3
300,000 - 399,000	1	3	1	3
Above 400,000	6	20	2	7
Confidential	10	33	8	27

Table 3 shows the size of the respondents in terms of portfolio and net worth. About 33% of the respondents did not indicate the amount of their portfolio as they considered it confidential. Despite this, the respondents with portfolios of more than RM400 million constituted 20% of the total respondents.

In terms of net worth, about 57% of the respondents have a net worth of between RM1 million and RM99 million. Only 27% indicated that their total net worth was confidential information.

4.1.(a) Incentive Factors

The stock index futures contract is a new concept to fund managers in Malaysia. Having to confront this new financial instrument, the fund managers will look into many areas before they decide to participate.

Table 4 exhibits the result that only one variable, namely increasing regulation of the futures market, is significant. As such, the null hypothesis is rejected. It concludes that the perceptions of the incentive factor to attract participation in stock index futures among fund managers in both banking and non-banking sectors, as represented by the data, are not identical at the significance level of 5%. For other incentive factors the null hypothesis is not rejected and as such, these factors appear to be commonly shared by fund managers.

TABLE 4

MANN-WHITNEY TEST RESULTS
ON INCENTIVE AND DETERRENT FACTORS AMONG ALL RESPONDENTS

Incentive/Deterrent Factor	AS INCENTIVE Z-value	AS INCENTIVE p-value	AS DETERRENT Z-value	AS DETERRENT p-value
Increasing regulation	-1.9637**	0.05496	-1.1729	0.2408
KLSECI can be manipulated	-0.4859	0.6270	-0.2062	0.8366
Financing integrity	-0.9475	0.3434	-0.6414	0.5213
Accounting & reporting issue	-0.4039	0.6863	-1.2624	0.2068
Greater capitalisation	-0.8187	0.4129	-1.9889**	0.0467
KLSE brokers allowed to trade	-1.6336	0.1023	-0.5581	0.5768
Clients' instruction	-1.4329	0.1519	-1.9001*	0.0574

Note: ** significant at 5% level
* significant at 10% level

4.1.(b) Deterrent Factors

The variables in respect of deterrent factors are the same as those of incentive factors; except that these factors act as deterrents.

The results of the Mann-Whitney test are shown in Table 4. Two variables, namely "greater capitalisation of futures market brokers" and "clients' instructions" are significant. As such, the null hypothesis is rejected. The conclusion is that fund managers do not have the same opinions and perceptions of the two variables. In respect of the other factors, fund managers appear to share the same perceptions.

4.1.(c) Administrative Problems

Four types of administrative problems were posed to the respondents. These problems are typically crucial in determining whether the potential participants will be able to administer the use of stock index futures efficiently.

The results of the Mann-Whitney test are shown in Table 5. No significant factor is found in the analysis. The fund managers appear to have common opinions and perceptions of the administrative problems.

TABLE 5

MANN-WHITNEY TEST RESULTS
ON ADMINISTRATIVE FACTORS AMONG ALL RESPONDENTS

Administrative Factors	Z-value	p-value
Inefficient internal control	-0.5287	0.6681
Lack of qualified personnel	-0.4450	0.6564
Board of Directors' resistance	-1.3087	0.1916
Accounting treatment of futures	-0.0270	0.9785

4.2 Among Potential Non-Participants

Respondents who will not be participating in a stock index futures contract, as indicated in their responses, constitute 66.67% of the total respondents (Table 1). They are therefore considered important as the findings about them from the survey could shed light on their background of their perceptions.

4.2.(a) Knowledge Of The Aspect Of Futures Trading

TABLE 6

MANN-WHITNEY TEST RESULTS
ON KNOWLEDGE OF FUTURES TRADING AMONG NON-PARTICIPANTS

Factors	Z-value	p-value
Function of futures trading	-1.2792	0.2008
Brokers' role	-1.4530	0.1462
Services offered by brokers	-0.7529	0.4515
Clearing function	-0.4569	0.6477
Margin requirement	-0.0000	1.0000
Futures regulation	-0.6104	0.5416
Accounting	-0.8389	0.4015
Tax ramification	-0.6104	0.5416
Internal control	-0.8389	0.4015

Table 6 shows that all variables are insignificant at the significance level of 10%. The acceptance of the null hypothesis leads us to conclude that fund managers' level of knowledge of futures trading does not differ among themselves. This probably should be the anticipated result as the majority of non-participant fund managers lack knowledge of futures trading.

The explanation of the above may be found in Table 7. The table exhibits the extend of the potential non-participants'understanding of the economic uses of stock index futures.

TABLE 7

FAMILIARITY OF ECONOMIC USES OF STOCK INDEX FUTURES AMONG POTENTIAL NON-PARTICIPANTS

	Very Familiar	Familiar	Not So Familiar	Not Familiar	Don't Know At All
Hedging existing stock	1	5	7	3	4
Hedging anticipated investment	1	6	7	1	5
Market timing tool	1	6	6	2	5
Speculation	4	6	6	2	2
Total	7	23	26	8	16
Percent	9	29	32	10	20

Sixty two percent of the respondents are not familiar with the economic use of the stock index futures. Of this percentage, 32% are not so familiar, 10% are not familiar at all and 20% do not know. Those who are familiar constitute a minority of 38%.

The most relevant economic use of a stock index for trade sector such as financial institutions is hedging. Table 7 shows that even out of the 38% of the respondents who have some familiarity only 16% of them are familiar with hedging.

4.2.(b) Decision Not To Commence Trading

On applying the Mann-Whitney test, the results in Table 8 shows that three factors i.e. financial integrity of the KLCE and its members, internal control, accounting and reporting

requirement, and market illiquidity are significant. The null hypothesis is rejected. These results lead to the conclusion that fund managers have no common perceptions of these factors.

TABLE 8

MANN-WHITNEY TEST RESULTS
ON DECISION NOT TO COMMENCE TRADING AMONG NON-PARTICIPANTS

Factors	Z-value	p-value
Fear of market manipulation	-1.5818	0.1137
Financial integrity of KLCE	-2.2102**	0.0271
Internal control & accounting	-1.9740**	0.0484
Market liquidity	-2.0987**	0.0358
Tax ramification of trading	-1.0502	0.2936
Size and depth of the market	-1.2944	0.1955
Statute and regulations	-1.743	0.2403

Note: ** significant at 5% level

4.2.(c) Factors That Attract Participation

Table 9 exhibits the results of the Mann-Whitney test where three variables are shown to be significant, namely increasing volatility of KLSECI, decreasing volatility of KLSECI and greater capitalisation of future market brokers. No common perceptions is concluded among non-participants fund managers insofar as those three factors are concerned.

TABLE 9

MANN-WHITNEY TEST RESULTS ON FACTORS
THAT ATTRACT PARTICIPATION AMONG NON-PARTICIPANTS

Factors	Z-value	p-value
Increasing KLSECI volatility	-1.7171*	0.0860
Clarification of accounting	-0.2622	0.7931
Changing income tax	-1.5664	0.1173
Clarification on legislation	-0.2610	0.7941
Increasing regulation	-0.1294	0.8970
Decreasing volatility	-1.8122*	0.0700
Brokers' capitalisation	-2.1213**	0.0339
KLSE brokers to trade	-1.4682	0.1420

Note: ** significant at 5% level
* significant at 10% level

4.3 Among Potential Participants

The responses to be tested under this heading are factors relating to trading activities perceived to be of great concern among the potential participants. The questionnaire was silent as to the level of familiarity of the respondents of futures market. In this respect, the assumption is that a potential market user to a large extent should be familiar with the market.

The test results presented in Table 10 show no significant variables at 10% significance level. Therefore, the null hypothesis is not rejected. It is apparent that fund managers in their respective sector or stratum have similar perceptions and opinions of the factors.

TABLE 10

MANN-WHITNEY TEST RESULTS
ON FACTORS OF GREAT CONCERN AMONG POTENTIAL PARTICIPANTS

Factors	Z-value	p-value
Exposure of open contract	-0.0000	1.0000
Balancing open positions	-0.9867	0.3238
Time stamping orders	-0.9645	0.3348
Management reporting	-0.2229	0.8236
Back office computerisation	-0.4613	0.6446
Order execution procedures	-0.4399	0.6600
Cash flow	-1.0306	0.3027
External reporting	-0.3354	0.7373
Unauthorised trading	-0.8944	0.3711
Collusion-employees/brokers	-0.2236	0.8231

5. CONCLUSION AND RECOMMENDATIONS

From the results of the findings, there are five main issues perceived to be of importance in the KLCE's efforts to launch the stock index futures. First, is the awareness and familiarity of the economic uses of futures market. This has to be looked into from a wider promotional strategy on the basis of internal and external perspectives. The former revolves around the KLCE, its members and locals, while the latter is concerned with attracting the members' client participation.

The second issue is public confidence. It relates to factors that deter a potential user from using the market and factors that give them the incentive to participate in the market. The fear of possible manipulation of the KLSECI is commonly shared by all respondents. In all probabilities, the decision not to commence because of size and depth of the market and liquidity has a direct link to the fear.

The third issue is clarification of accounting treatment and tax which was implied to be one of the reasons why many fund managers were reluctant to use the market. In this case there is no guidance from the local accounting body and from the Inland Revenue Department in the case of tax.

The fourth issue is the function of the regulatory bodies, namely the Commodities Trading Commission for the futures market and the Central Bank for the financial institutions. The last issue relates to the recruitment of qualified and experienced personnel to man the futures operations.

In line with the major issues, it is recommended that the CTA 1985 must first be amended to legally recognise a cash settled contract like a stock index futures. It could take the form of a provision that such a contract will not be void or unenforceable by reason of the Common Gaming Houses Act 1953. Alternatively, it is highly recommended to review the national need for an efficient financial system by formulating a legal framework to include the recognition of financial futures through a separate Act of Parliament.

It is also recommended that the CTC be made accountable to the Ministry of Finance. Meanwhile, the Central Bank which is under the same Ministry, come up with clear guidelines as to whether the institutions in the banking system and non-banking financial intermediaries are allowed to trade futures. This is of the utmost importance as these institutions are the potential hedgers and yet, very highly regulated.

Finally, to counter the unfamiliarity with and lack of awareness of futures trading, the KLCE should continue to hold seminars and workshops both on general or specific contracts. In respect of the stock index futures, a survey among the potential users of the stock index futures should be made to find out matters that need the urgent attention of the KLCE. The promotional exercise and the survey should be organised in collaboration with the associations within

the financial system such as the Association of Banks and relevant professional bodies like the Institute of Bankers.

A similar collaboration should be undertaken with the Malaysian Institute of Accountants, the governing body of the accounting profession in Malaysia, so that a pronouncement on accounting standard relating to futures trading could be issued. A similar objective for tax could also be achieved if cooperation is sought from the Inland Revenue Department.

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