IMPACT OF STOCK ADDITION AND DELETION IN BURSA MALAYSIA INDEX FROM THE PERSPECTIVE OF OPINION DIVERGENCE THEORY

LU MING PEY

UNIVERSITI SAINS MALAYSIA
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by

LU MING PEY

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ABSTRAK

Saham-saham yang membentuk satu indeks pasaran, secara hujahnya, boleh memberikan mereka ketampakan dan prestij. Oleh itu, jika ditambah atau dikeluarkan dari indeks ia boleh memberikan kesan kepada saham-saham tersebut. Penyelidikan ini menganalisis impak penambahan dan pengeluaran saham daripada indeks FBM KLCI bagi tempoh 2001 ke 2014 dengan menggunakan 49 kes penambahan dan 38 kes pengeluaran. Dengan menggunakan kaedah kajian peristiwa, penyelidikan ini mendedahkan keputusan yang mengejutkan dan tidak konsisten dengan banyak kajian-kajian sebelumnya. Apabila syarikat-syarikat ditambahkan ke dalam FBM KLCI, harga saham dan volum dagangan mereka menurun selepas hari pengumuman dan ini telah menyebabkan kemeruapan pulangan saham meningkat. Saham-saham itu tidak kembali semula kepada keadaan asal bagi minggu-minggu seterusnya. Bagaimanapun, bila syarikat-syarikat dikeluarkan daripada FBM KLCI, harga saham mereka meningkat selepas hari pengumuman. Walaupun, keputusan menunjukkan volum dagangan bagi saham yang dikeluarkan adalah rendah, kemeruapan pulangan saham adalah lebih rendah berbanding saham yang ditambahkan ke dalam FBM KLCI. Hal ini disokong oleh prestasi jangka panjang syarikat selepas mereka ditambah dan dikeluarkan daripada FBM KLCI dalam ujian yang menggunakan model Tobin's *q*. Ujian ini membuktikan bahawa saham yang dikeluarkan adalah berprestasi lebih baik daripada saham yang ditambahkan dua tahun selepas peristiwa ini. Untuk menggambarkan kelakuan harga saham sekitar

peristiwa ini, salah satu penjelasan yang berpotensi kepada keputusan yang mengejutkan ini adalah teori perbezaan pendapat oleh pelabur-pelabur. Kajian ini menyiasatkan sama ada pelabur-pelabur berbeza pendapat terhadap peristiwa ini berikutan pengumuman penambahan dan pengeluaran saham. Proksi-proksi perbezaan pendapat yang digunakan dalam kajian ini adalah kemeruapan pulangan saham dan pusing ganti stok. Kajian ini menunjukkan pendapat pelabur-pelabur terhadap saham yang ditambah adalah berbeza dengan ketibaan pengumuman semakan indeks saham. Manakala, keputusan kajian ini menyiratkan bahawa pengumuman pengeluaran saham daripada indeks saham utama Malaysia tidak mempunyai impak kepada kepercayaan pelabur-pelabur. Penemuan-penemuan kajian ini yang berlainan daripada majoriti kajian-kajian lepas membolehkan pengamal-pengamal seperti penaja jamin, penerbit, pembuat polisi mempunyai pemahaman yang lebih baik terhadap pengaruhan kelakuan dan psikologi pelabur-pelabur yang merumitkan proses membentuk strategi-strategi melabur dan proses membuat keputusan. Ini menyumbang kepada pengetahuan yang sedia ada.

IMPACT OF STOCK ADDITION AND DELETION IN BURSA MALAYSIA INDEX FROM THE PERSPECTIVE OF OPINION DIVERGENCE THEORY

ABSTRACT

Stocks that make up the components of a market index could arguably, enhance their visibility and prestige. Hence, being added into and deleted from the index could have some impacts on the stocks. This study analyzes the impacts of stock additions and deletions from FBM KLCI over the period of 2001 to 2014 by using 49 cases of addition and 38 cases of deletion. Using event study methodology, the study reveals surprising findings, inconsistent with previous studies. When companies are added into the FBM KLCI, their stock price and trading volume decrease after the announcement day and lead to a high stock return volatility. They do not reverse in the subsequent weeks. However, when companies are deleted from the FBM KLCI, their stock prices increase after announcement day. Although the result showed that there is low trading volume after deletion, their stock returns were less volatile compared to those of added stocks. This is supported by the result of firms' long term performance after they are being added into and deleted from Malaysian main stock index using Tobin's q model. This study evidenced that deleted stocks perform better than added stocks two-years after the event. One potential explanation to the surprising results to describe the price behavior surrounding the event is the divergence of opinion among investors. This study investigates whether there is an opinion divergence of investors following the announcement of stock added into and deleted from the index. The proxies of opinion divergence in this study are stock return volatility and stock turnover. This study

demonstrated that investors' opinions about added stocks diverge upon the arrival of the announcement of Malaysian main stock index revision. However, the result in this study implied that announcement of deleted stocks from Malaysian main stock index does not have impact on the investors' belief. The findings of this study which are different from the majority past studies allow practitioners such as underwriters, issuers and policy makers to have a better understanding of the influence of investors' behavior and psychology that complicate the process of creating investing strategies and process of decision making. This contributes to the existing body of knowledge.

CHAPTER 1

INTRODUCTION

1.1 Background of Study

A stock market index represents a good indicator of market performance. Every stock exchange in the world normally creates indexes from selected stocks which represent the market or industry as a whole. Past studies have documented that changes of stock market index composition have impacts such as price, trading volume and volatility on the affected stocks. These effects can be discovered when index changes are announced and when the changes come to be effective.

As components of the stock index, the constituent stocks may get more coverage and scrutiny from market participants (Amihud & Mendelson, 1986; Sanger & Peterson, 1990 and Dhillon &Johnson, 1991). When these constituents stocks are added or deleted from the index, their visibility and perhaps prestige may be affected.

Furthermore, over recent years, one of the rapid growth areas in investment on share market has involved index funds. Index fund is designed to closely match the performance of a specific market index. These funds provide an efficient method for gaining broad exposure to equities.

A research by Elton, Gruber & Blake (1996) showed that market outperform actively managed funds over time. This makes the index fund more attractive than managed funds. As a result, index funds have grown in popularity. Hence, the activities of the fund managers in adjusting their portfolio to match the index constituents have impacts on the affected stocks.

In practice, the stock market index is an essential benchmark indicator for capital market of a country. It is a composition of a set of stocks that represent performance of a stock market or sector for that country. For example, the S&P 500 is a capitalization weighting index that comprises of 500 stocks that used to represent largest companies in major industries in the U.S. market.

Stocks in the index are selected based on market size, liquidity, and industry group. According to Sui (2003), stocks to be added into an index must have a large trading volume and the companies must be financially sound. Index committee of S&P meets regularly to assure that the S&P 500 maintains as a leading barometer of U.S. equities. Hence, the index committee making changes to the constitution of index periodically. Cai & Houge (2008) explained that this is to ensure that the index is properly tracks the performance of its market objectives.

The Malaysian stock market is of no exception; Malaysian main stock index deletes a stock from its index and adds other stocks in its place periodically. In Malaysian stock market, the main index is FTSE Bursa Malaysia KLCI (FBM KLCI) which was previously known as Kuala Lumpur Composite Index (KLCI).

On July 6, 2009, Malaysia stock market is enhanced by adopting FTSE Bursa Malaysia Index Methodology. The semi-annual regular review of the FBM KLCI components occurs in June and December. This is to ensure that Malaysia stock market provides domestic and international investor with an enhanced index that the stocks in the index are representative, liquid and transparent. The index committee examined the index components by using data from the close of business on the last trading day in May and November. The index components change will then become effective after the close of business on the third Friday in June and December.

These changes may cause an effect on the affected stocks, as fund manager and investors adjusted their portfolio. Funds that are tracking FBM KLCI in Malaysia are such as AmBank FBMKLCI ETF, RHB KLCI tracker fund, OSK-UOB KLCI tracker fund, RHB-OSK KLCI tracker fund and etc.

Hence, examining the impacts of stock being added into and deleted from market index are important because it is an event that the timing of release this information is publicly known. If the additions and deletions from the index have a value to a particular stock, then only it can have an impact to the demand of the stock. However, the compositions of the FTSE index are based on the firm's market capitalization. As this is the public information, changes in the Malaysian main stock index in principle do not contain any information and hence should not have impacts on prices of the affected stocks.

Thus far, no agreement has been reached in explaining what caused the index effect. This is because the effect of index composition changes should be reduced as market become more effective and at the same time the interest should be increasing with the growth of index fund.

The impacts of additions and deletions of stocks from an index are interesting. It is essential to index fund manager who would like to adjust their portfolio in order to minimize tracking error. In addition, it also provides a potential window to speculators who want to exploit a profit from these opportunities. Furthermore, it is also importance to the affected firm as changes in the status of the firm in the index may affect investors' perceptions of firm's value.

The earliest studies that examined the impacts of index changes were done by Harris & Gurel (1986), Shleifer (1986) and Jain (1987). It was thereafter extensively studied in past decades with a majority of the research documented that additions of stocks

into stock indices experienced significant increase in returns and deletions from stock indices are known to significantly depress the returns.

However, there are some studies documented contradictory effect of index changes, which reported negative abnormal return for added stocks and positive abnormal return for deleted stocks. At present, no consensus has been reached in explaining the index effects. This leaves the index effect puzzling, at least in the academic circle.

Hence, to throw some light on the impacts of stocks added into and deleted from the index, this study investigates several related issues i.e., the response of added and deleted stocks that happens to additions and deletions of FBM KLCI, the long-term performance of the stocks, and also the potential behavioral explanation behind the phenomenon.

1.1.1 Impacts of Index Changes

Efficient market hypothesis (EMH) suggests that investors act rationally and stock prices are incorporated and reflected all relevant information, there will be no mispricing. They do not react to informationless event. Hence, no investor can beat the market by generating abnormal return.

As the index changes do not contain any news about fundamental of stocks, so the expected future returns of a company would not have any impacts on stocks being added or deleted from the index. Thus, the price should not be affected.

But, if abnormal return can be realized in the period between the announcement day of index changes and the effective change day, this evidenced that the market is not demonstrating semi-strong form of EMH. The mispricing gives speculators an opportunity to profit. Under the semi-strong form of EMH, it is impossible to have a stock that perform

better than average, no abnormal return can be observed. Thus, any abnormal price movement would be in violation of this hypothesis.

However, over the years, many past studies documented that the stocks being added and deleted from index have significant effects on the stock return, trading volume and volatility of the affected stocks by the index composition changes.

In the past decade, many studies have reported the "price effect" which is associated with changes of index components predominantly in the developed markets. Majority studies found that the added stocks experienced a positive abnormal return while the deleted stocks experienced a negative abnormal return. This is because when a stock is added into the index, it caused a surplus demand from index funds that track these indexes and this surplus gets reflected in stock price and volume changes. On the other hand, index deletion caused a surplus supply for the deleted stock and hence, negative abnormal return can be observed.

Moreover, there is a few number of studies (Amihud & Mendelson, 1986; De Long et al., 1990; and Yun & Kim, 2010) are focus on volatility effect, some of the findings show that stocks added into an index experienced significant decrease in their volatility while stocks deleted from index experienced significant increase in volatility. This is because the stocks added into index become less risky, while stocks deleted from index become more risky.

According to Okada (2005), in the event of index revision, the positive feedback traders in the market may have played a vital role. They might take a position in the same direction as the event suggest. For example, they will buy the stocks which are added into the index and sell the stocks that are deleted from the index. Then some rational investors

speed up the momentum by following positive feedback traders' strategies to buy the added stocks and to sell the deleted stocks.

However, as De Long, Shleifer, Summers & Waldmann (1990) suggest that rational investors may follow noise traders when they expect that the positive feedback traders will further increase the market price.

This is consistent with the price behavior in the index composition changes. The initial upward trend may be created by some index tracking investors who wish to minimize the tracking error of index portfolio. They must buy the newly added stocks by the effective change day. This upward trend captures the attention of positive feedback traders. They buy the added stocks as long as the price goes up. Rational traders will also buy the stocks, although the stock price may diverges from their fundamental value. This is because they belief that positive feedback traders are willing to pay higher price as long as upward momentum is intact. This surplus demand will reached equilibrium at a higher price.

And, the reverse is true for deletions. Index tracking investors dump the stocks on announcement day. This caused the initial negative trend, which subsequently trigger the positive feedback traders to sell. Rational investors would not counter such trading until the event is over. Therefore, negative abnormal return is observed for deletions over that event period.

Past studies have used different hypotheses to explain the index effects for added stock and deleted stock from index. These hypotheses are generally divided into two group based on the assumptions of information content.

Hypotheses such as imperfect substitute hypothesis and price pressure hypothesis assume that index component changes are information free. According to Shleifer (1986)

in explaining the imperfect substitutes hypothesis, a change of index would causes to a permanent stock price changes because investors would expect compensation to rebalance their portfolio in the event that there is no perfect substitute available.

The price pressure hypothesis also assumes information free in index changes and states that the price effect is only temporary, it reversal after some period. This has been advocated by many researchers. Harris & Gurel (1986) found that surplus demand that caused by the changes in index and investors' portfolio rebalancing activity creates price pressure and the subsequent decrease to allow them to reestablish their position.

Another group of hypotheses assume changes in index components deliver information about the stocks. Added stocks convey favorable information and deleted stocks convey unfavorable information. This includes the information signaling hypothesis, the investor awareness hypothesis and the liquidity hypothesis.

The information signaling hypothesis implies that stocks being added into index revealed good performance and better future prospects of the company. This is based on the concept that when stocks added into index it conveys positive information about the stock while stock deleted from index convey negative information about the stock. This hypothesis is supported by Jain (1987) and Bildik & Gulay (2008).

Next, the implication of investor awareness hypothesis assumes that when stocks are added into an index, investor may change their expectation on stocks' future cash flow. This is because the firm is now performs better due to enhanced monitoring by analysts and investors. Parthasarathy (2010) found that this makes added firm becomes more visible for investors and reduces the information cost.

Furthermore, the liquidity hypothesis express that index addition is an event that will increase the stock's liquidity. Amihud & Mendelson (1986) examined that a firm that

is added into the index is less expensive to trade. This is because added stocks increased liquidity and lower the transaction costs, therefore attracted more interest from investors.

In addition, most of the previous researchers are focused on the short run and the five hypotheses testing. There are very few studies that investigate the affected stocks' long-term performance in this event. However, it is essential to examine the long-term performance of the added stock and deleted stock from an index. Chan, Huang & Tang (2013) explained that this may validate whether the five hypotheses are equally applicable to long run stock price movements or changes of firm's performance efficiency.

Moreover, although the price responses to index changes are well documented in literature which is positive for additions and negative for deletions, there are some studies that showed evidences of contradictory price effect of index changes. For example, Beneish & Whaley (1996) showed that additions were experienced a negative abnormal return on the announcement day. Besides that, Steiner & Heinke (1997) discovered that stocks which were designated to be added into index showed a negative price response. Siegel & Schwartz (2006) found that a portfolio comprises of firms newly added into S&P 500 are outperformed by a portfolio comprises of firms that are deleted from S&P 500. Cai & Houge (2008) and Chan et al. (2013) also evidenced that deleted stocks outperformed added stocks after index revisions.

1.1.2 Index Changes and Behavioral Explanation

The above empirical evidence suggests that the information of index revisions may send ambiguous information regarding firms' prospects as argued by Yu & Zhou (2013). This leads to opinion divergence among investors and an asymmetric index effect. If there is no ambiguous signals in index composition changes, researchers should expect the

updated portfolio performs better than the original portfolio. Hence, the ability to access to investing information and the availability of information are an essential variable that will determine how the investor reacts to the changes of index components.

Human beings sometimes behave in an irrational manner and so does the market. When investing, human emotional inclinations, ingrained thought patterns and psychological biases affect how investor perceive the market and how they make decisions. Peterson (2004) argued that this is because investor psychology complicates the process of decision making. He explained that the driver of this fact is that the information of index revision is publicly known. Hence, investors with different expectations and their trading strategies may cause the asymmetric effects of index composition changes.

The finance paradigms discussed above explores the financial markets by using models in which investors are "rational". Barberis & Thaler (2003) defined rationality in two features. First, investors update their beliefs correctly when receives new information. Second, investors make choices that are normatively acceptable. However, is investor act rationally when they received the news of stock added and deleted from the index?

Hence, this can be investigated from the behavioral finance perspective which consider the psychological aspects as an essential input to financial analysis and decisions. According to Barberis & Thaler (2003), behavioral finance successfully showing an economy interact of rational and irrational investors. Irrationality can have a substantial and lasting impact on stock prices. They explained that behavioral finance argues the existence of investors who are not fully rational caused assets prices diverges from its fundamental value.

Psychological factors of investor such as overreaction, overconfidence, heuristics, herding effect and conservatism are proof that where traders are not fully rational. For

example, overreaction hypothesis postulates that traders are suffering from cognitive biases that affect their trading activities and which in turn affect the stock price.

Previous study such as Mohd Ariffin & Power, 1996; Ahmad & Tjan, 2004; Ali, Nassir, Hassan & Abidin, 2010 and Ali, Ahmad & Anusakumar, 2011 showed evidences for overreaction in Malaysian stock market. Moreover, a survey of Wong & Lai (2009) revealed that the psychological factors do influenced Malaysian stock market investor in the decision making.

This study seeks explanations on contradictory in the index effect from the behavioral finance perspective. This study uses a theory of behavior finance that is opinion divergence theory to clarify it.

The opinion divergence theory was proposed by Miller (1977). It argues that as every person is unique, different estimates and forecasts will be assigned to the same asset. It assumes that because of the variations in terms of information required and information interpreted, different levels of uncertainty arise among investors. Doukas, Kim & Pantzalis (2004) found that investor disagreement can have a large influence on the price reaction to index revision announcements.

Yu & Zhou (2013) in the study examine asymmetric impact of good and bad news from revision of S&P 500 on opinion divergence found empirical evidence that suggests S&P 500 revision send ambiguous signals about firms' prospects. Thus, they argue that the asymmetric price responses of index changes are caused by investors who treat the announcements of index revisions as ambiguous information as predicted by Epstein & Schneider (2008).

This study examines the impacts of stocks added into and deleted from FBM KLCI on stock return, trading volume, volatility and the firms' long-term performance effects.

Furthermore, this study propose an alternative explanation to the contradictory findings by investigate investors' behavior in response to index effects from the behavioral finance perspective.

1.1.3 Investor Behavior of Malaysia Stock Market

The market demography of investor of Bursa Malaysia is institutional investors and retail investors. Institutional investors are comprises of the pension funds, insurance funds and unit trust funds. On the other hand, the retail investors are both the short term and long term investors who are speculator and blue chip holders.

Based on the past studies, many professional analysts believe that Malaysian stock market is dominated by many irrational "noise traders" who respond to emotional and fads. Foucault, Sraer & Thesmar (2011) found that the retail trading activity has a positive effect on the volatility of stock returns. This suggests that retail investors may behave as noise traders.

In addition, because of the limited access to information regarding to stock market, the investors in Malaysia are less sophisticated than investors in developed markets. A study by Ibrahim & Abdul Rahman (2003) showed that the Malaysian share market experienced excessive volatility. They confirmed that Bursa Malaysia is under the influence of speculators as economic fundamentals did not determine the Malaysian share prices and bubbles effect existed in Malaysian shares.

Furthermore, a study of Grinblatt & Keloharju (2000) states that institutional investors are more sophisticated than individual investors. Thus, it is to believe that a reason of market inefficiencies is the trading behaviors of individual investors.

Moreover, the phenomena of overreaction and momentum are also found in Malaysian stock market. A study by Ahmad & Tjan (2004) ascertained that overreaction does exist in Malaysia stock market. They found that winner and loser stocks experience return reversals.

A survey of Wong & Lai (2009) showed that the psychological factors do influenced Malaysian stock market investor in the decision making. They discovered that the trading knowledge and skills of stock market investors in Malaysia were always low and have behavioral biases that likely influence their investment decisions.

Ali et al. (2011) documented significant finding of stock overreaction in Malaysian stock market where loser stocks has significantly performed better than winner stocks in the study period. Researchers explain this finding as a sign of the irrational behavior of Malaysian investors.

In addition, Brahmana, Hooy & Ahmad (2012) in examining the weekend effect showed evidence of irrational behavior of Bursa Malaysia investors. They documented that the Malaysia's weekend effects are influenced by investors' mood.

Hence, based on the empirical evidences above, one may conclude that Malaysian stock market is dominated by investors who are not fully rational.

1.2 Index Development in Malaysian Stock Market

In 2006, Bursa Malaysia was partnered with FTSE Group in providing a suite of tradable and investable indices for Malaysian stock market. This covered all eligible companies listed on the Bursa Malaysia main and ACE markets, which enabled the launch of a comprehensive range of real-time indices. The objective of this collaboration is to create a comprehensive suite of indices that will better reflect the performance of various

segments of the Malaysian stock market and to meet the needs of both retail and institutional investors, locally and globally.

Figure 1.1 shows the FTSE Bursa Malaysia index series. There are total 13 indices of Malaysian stock market. Firstly, FTSE Bursa Malaysia KLCI (FBMKLCI) is the index comprises of 30 largest companies by full market capitalization that meets stated eligibility requirements. Secondly, FTSE Bursa Malaysia Mid 70 Index (FBM70) comprises of the next 70 companies by full market capitalization that meets stated eligibility requirements. Thus, FTSE Bursa Malaysia Top 100 Index (FBMT100) is index that comprises the components of the FTSE Bursa Malaysia KLCI and the FTSE Bursa Malaysia Mid 70 Index.

Besides that, FTSE Bursa Malaysia Small Cap Index (FBMSCAP) comprises the eligible companies which within the top 98% of the main market by full market capitalization and meet stated eligibility requirements, but those are not components of the FTSE Bursa Malaysia Top 100 Index. Hence, FTSE Bursa Malaysia EMAS Index (FBMEMAS) comprises the components of the FTSE Bursa Malaysia Top 100 Index and the FTSE Bursa Malaysia Small Cap Index.

Furthermore, FTSE Bursa Malaysia EMAS Industry Indices comprises the components of the FTSE Bursa Malaysia EMAS Index which grouped into 10 Industry, 19 supersector and 39 sector indices. These industries, supersectors and sectors are defined in the Industry Classification Benchmark (ICB). ICB is a detailed and comprehensive structure for sector and industry analysis. It could be used to implement investment strategies and to create index-linked financial products based on sector-specific criteria.

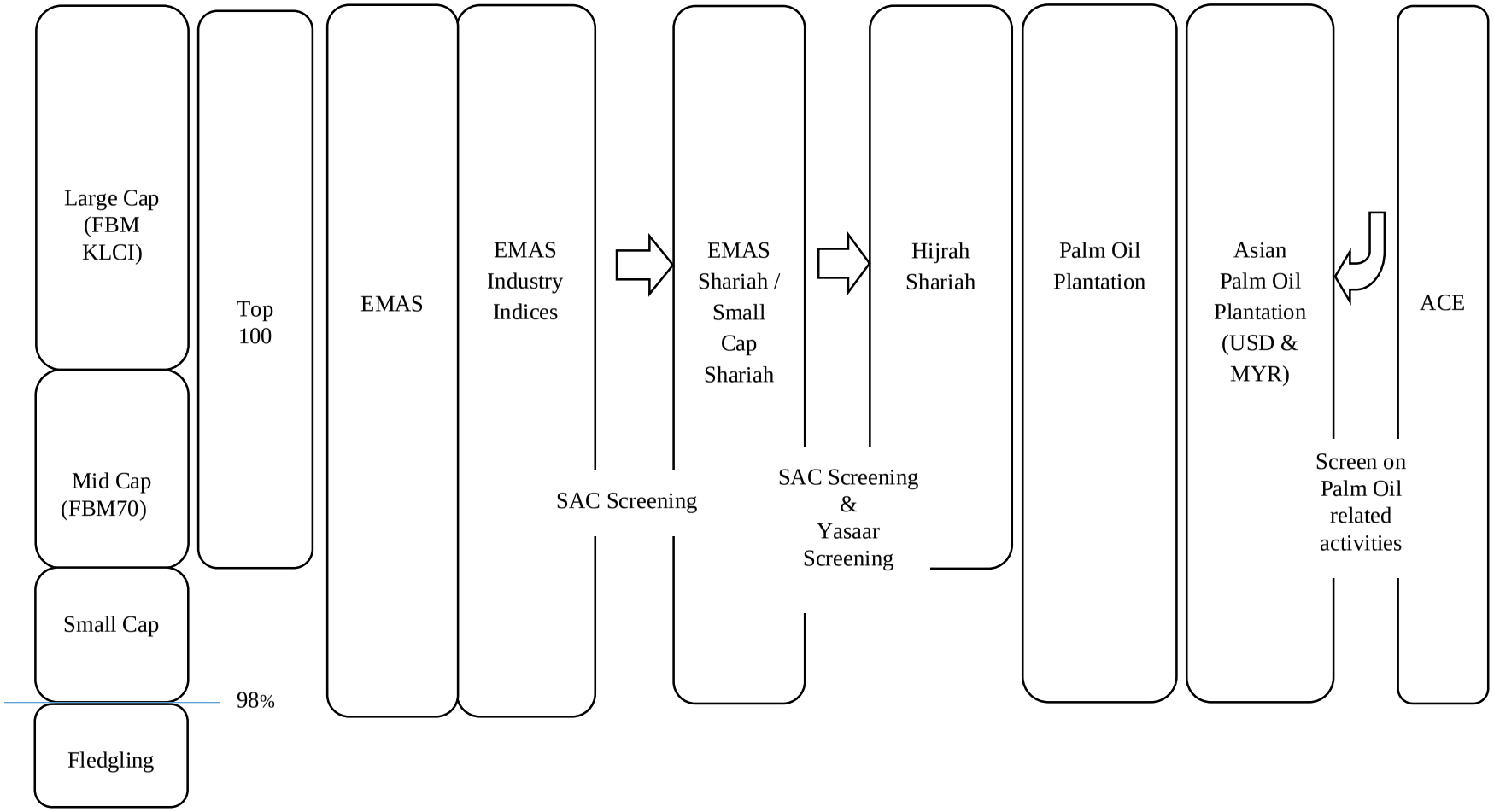

Figure 1.1: FTSE Bursa Malaysia Index Series
Data Source: FTSE Research and Data Centre

Next, FTSE Bursa Malaysia Fledgling Index (FBMFLG) comprises the main market companies which meet stated eligibility requirements, but the components are not in the top 98% by full market capitalization and are not components of the FTSE Bursa Malaysia EMAS Index.

The FTSE Bursa Malaysia EMAS Shariah Index / FTSE Bursa Malaysia Small Cap Shariah Index (FBMSHA) are the indices comprise the components of the FTSE Bursa Malaysia EMAS Index / FTSE Bursa Malaysia Small Cap Index that are Shariah compliant according to the Securities Commission's Shariah Advisory Council (SAC) screening methodology. FTSE Bursa Malaysia Hijrah Shariah Index (FBMHIJRAH) comprises of the largest 30 companies by full market capitalization of the FTSE Bursa Malaysia EMAS Index that comply with Yasaar and the Securities Commission's SAC screening methodology.

Moreover, FTSE Bursa Malaysia Palm Oil Plantation Index (FBMPALMOIL) comprises the components of the FTSE Bursa Malaysia EMAS Index that derive substantial revenue from palm oil activities that meet the stated eligibility requirements. FTSE Bursa Malaysia Asian Palm Oil Plantation Index (MYR - FBMAPMYR & USD - FBMAPUSD) comprises the companies from the universes of developed, advanced emerging and secondary emerging countries as classified by FTSE in the Asia Pacific region excluding Japan, Australia and New Zealand that derive substantial revenue from palm oil activities. Those components are required to meet the eligibility requirements.

Last but not least, FTSE Bursa Malaysia ACE Index (FBMACE) comprises all the companies listed on the ACE Market and the components are required to meet the eligibility requirements.

Prior to FBM KLCI, the Kuala Lumpur Composite Index (KLCI) was introduced in 1986 and used as a key benchmark index. It is an index which contains a basket of 67 stocks which later expand to 100 biggest capitalization companies in Malaysia in 1995.

A company to be eligible for addition into the KLCI needs to be in the top 50% of market capitalization and to have at least 5% of the total market capitalization of the Bursa Malaysia. Besides that, it must be sufficiently liquid to be traded which the trading volume must be in the top 75%. For newly listed companies, they will only be considered for addition after a minimum of 3 months period from the date of listing. But, if the market capitalization of new issue is more than 1% of the full capitalization of Main Board, Bursa Malaysia may decide to add the new issue as a component of KLCI after 1 month of listing provided that the trading volume for the month is within the first three quartiles. However, for securities which have more than two consecutive years of losses will be deleted from the index components. The semi-annual review of KLCI components occurs in June and December.

On July 6, 2009, Kuala Lumpur Composite Index (KLCI) are enhanced by adopting FTSE's global index standard. The KLCI was renamed as the FTSE Bursa Malaysia KLCI.

All classes of the ordinary shares in issue are eligible for addition into the FTSE Bursa Malaysia index series. There are two main eligibility requirements stated in the FTSE Bursa Malaysia Index Ground Rules which are the free float and liquidity requirement.

The components of FBM KLCI are adjusted for free float and weighted according to how much share capital is available for public investment. Each company is required to have a minimum free float of 15%. The free float excludes restricted shareholding like

cross holdings, significant long term holdings by founders, their families and/or directors, restricted employee share schemes, government holdings and portfolio investments subject to a lock in clause, for the duration of that clause. A free float factor is applied to the market capitalization of each company in accordance with the banding specified in the FTSE Bursa Malaysia Ground Rules. The factor is used to determine the attribution of the company's market activities in the index.

For liquidity requirement, a liquidity screen is applied to ensure the company's stocks are sufficiently liquid to be traded. Each security will be tested for liquidity by calculation of its median daily trading per month. The median trade is calculated by ranking each daily trade total and selecting the middle ranking day. Daily totals with zero trades are also included in the ranking; therefore a security that fails to trade for more than half of the days in a month will have a zero median trade.

For non-components which do not turnover at least 0.05% of their shares in issue based on their median daily trade per month for at least ten of the twelve months prior to the semi-annual review, will not be eligible for addition into the Index. However, an existing components which does not turnover at least 0.04% of its shares in issue based on its median daily trade per month for at least eight of the twelve months prior to the semi-annual review will be deleted from index. New issues which do not have a twelve month trading record must have a minimum 20 days trading record when reviewed. They must turnover at least 0.05% of their shares in based on their median daily trade per month in each month since their listing.

The semi-annual regular review of the FBM KLCI components occurs in June and December. The meeting of index committee to review the constituents will be held in June and December by using the data from the close of business on the last day of trading in

May and November. The index components changes will then become effective after close of business on the third Friday in June and December.

In the review process, the FTSE Bursa Malaysia KLCI will consist of the 30 largest eligible companies ranked by full market capitalization in the FTSE Bursa Malaysia EMAS Index. A company will be added at the periodic review if its market capitalization rises above 25th position and a company will be deleted at the review if it's ranking falls below 36th position. Figure 1.2 illustrates the review process of the FTSE Bursa Malaysia Index Series.

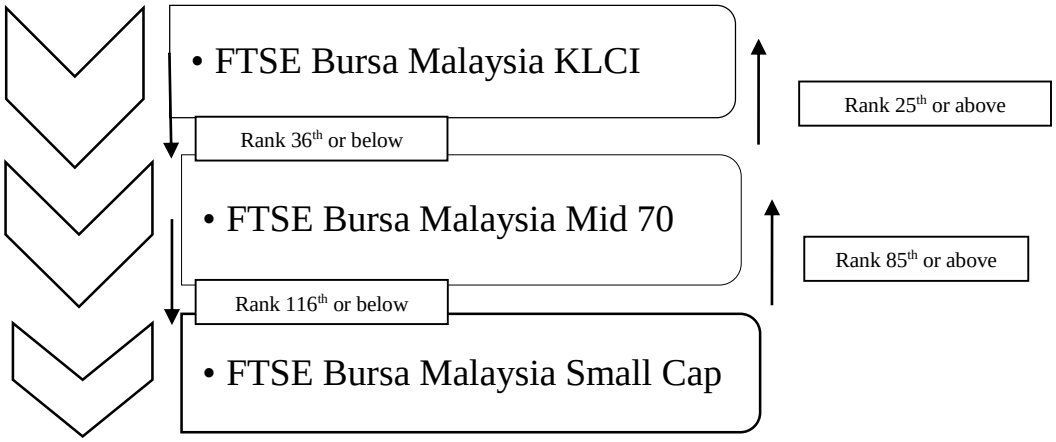

Figure 1.2: Review Process of the FTSE Bursa Malaysia Index
Data Source: FTSE Research and Data Centre

The FTSE Bursa Malaysia Advisory Committee governs the ongoing management of these indices to ensure they continue to meet the needs of index users. The committee is made up of senior investment professionals and finance industry experts acting independently to advise on the creation of new indices, any enhancements to the

methodology and to ensure that the index series evolves with any changes in the market environment.

The enhancement of Kuala Lumpur Composite Index (KLCI) ensured that its robustness in measuring the national economy with growing linkage to the global economy. Bursa Malaysia has integrated the KLCI with internationally accepted index calculation methodology to provide a more investable, tradable and transparently managed index. This index tracks the performance of 30 largest companies by full market capitalization listed on the Main Board of the Bursa Malaysia.

FBM KLCI providing global relevance, recognition and reach of the Malaysian stock market. As a market barometer, it is made up of primary market movers which will be more aptly defined market activities while remain representative of the Malaysian stock market. This enhanced index closely tracks the pulse of the Malaysian market as it adopted a higher 15 seconds speed of calculation in comparison to the previous 60 seconds.

FBM KLCI index calculation methodology emphasizes free float and liquidity screens for a clearer representative of the market. A smaller basket of 30 stocks makes it easier to manage and more appealing for the creation of index-linked products to promote market liquidity.

Compare with the KLCI which has 100 constituents, FBM KLCI comprises by only 30 largest stocks listed on the Main Board. The 30 largest stocks gave a very good proxy of the Malaysia market performance. The 30 largest companies by market size transformed the FBM KLCI to a large cap index. The main objective is to make the index easier to replicate, which means that investor who tracking the benchmark index will now only need to buy 30 stocks, rather than having to own 100 different stocks. Furthermore,

100 stocks are also more costly to maintain and some of the smaller stocks are not really liquid.

The smaller basket of stocks are in no way undermines the indexes as a representative of the underlying market. Indeed, these 30 largest companies cover roughly 70 percent of the total market capitalization for the Bursa Malaysia. It is well in line with the percentage of market capitalization for benchmark indices in key global markets. FBM KLCI is more investor-friendly index, and also keeping Bursa Malaysia relevant in the global market. This offers the FBM KLCI a recognition and credibility among investors, both domestic and internationally. It is calculated based on globally accepted index methodology, which is transparent to inspire confident.

Furthermore, this would pave the way for the creation of more investment products such as Exchange Traded Funds (ETF), exchange traded derivatives, structured warrants and other index-linked products that enhanced overall market depth and liquidity.

1.3 Motivation of the Study

The Malaysia capital market stands out as one of the important emerging market in Asian. FBM KLCI is currently internationally recognized as one of the best references for the Asia-Pacific equity markets. FBM KLCI is used by many analysts to comment on the economic prospects for the Malaysian and other important Asian economies.

Notwithstanding Malaysian main stock index as an important Asian emerging market, many professional analysts believe that Malaysian stock market is dominated by many irrational investors who respond to emotional and fads. Grinblatt & Keloharju (2000) documented that trading behavior of investor caused the inefficiencies of Malaysian stock market.