

Revisiting Inter-Sectoral Diversification Theory

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Abstract: Malaysia wants to be a fully developed nation, and the government has made every effort to make that happen. Since 1997, the Malaysian stock market has seen a sharp increase in investment from foreign, institutional, and individual investors. However, the 2007 phenomenon and certain recent events have led the stock market to fluctuate greatly, making it difficult for analysts to make accurate predictions. We need a better understanding of the transmission mechanism of stock price formation so then investor can predict well the stock. Most of the investors, they believe that stock price index is one of the most important indicators that may use to predict whether it is a good timing to invest or not to invest. The reason why we need to study about stock market, it is because if we cannot predict stock market. For the investor, it may difficult for them. They do not know which stock they should buy. Since stock market in some event occur difficult from them to choose the right shares to buy. Example like, after the great depression Asian Crisis 1997, Malaysia stock price index drop significantly. At that time, no one can predict anything. Since the market are unpredictable.

Keywords: International Linkages, Inter-Sectoral relationships, Intra-sectoral relationships, Stock price index, Investments.

1. Introduction

In 1987 the market crash is happened. Because of that we need a better understanding of the transmission mechanism of stock price formation. Information in one market is transmitted to other markets and affects the stock price formation in these markets. It will also know as contagion effect. From the financial view we can see that there are many arguments that contagion effect among financial institution can be driven by the psychological panic among depositors rather than by information in the stock market. (Jacklin and bhattacharya, (1988)). Contagion effect means we need to examine the transmission process of stock formation among industrial firms within a national market. In this study they also provide such an analysis of the stock price dynamics in overlapped market segments.

The efficient-market theory documents that the stock market movement is essentially random, whereby the price of a stock shows no predictable pattern.

Interest in this area has been displayed by a number of studies concentrating on the linkages between the markets of developed countries and Asia.

What do we mean when we talk about a 'relationship' between variables? In sciences research, we are referring to a connection between two or more factors that we can measure or

systematically vary.

Foster, G., (1981) stated that a correlation is the measurement of the relationship between two variables. These variables already occur in the group or population and are not controlled by the experimenter.

- A positive correlation is a direct relationship whereas the amount of one variable increase, the amount of second variables also increases.
- In a negative correlation, as the amount of one variable goes up, the level of another variable goes down.
- In both types of correlation, there is no evidence or proof that changes in one variable cause changes in the other variable. A correlation simply indicates that there is a relationship between the two variables.

One of the most important distinctions to make when discussing the relationship between variables is the meaning of causation.

A causal relationship is when one variable causes a change in another variable. These types of relationship are investigated by experimental research in order to determine if changes in one variable truly causes changes in another variable.

Bursa Malaysia Berhad is an exchange holding company, listed on the Main Board of Bursa Malaysia Securities. We operate a fully integrated exchange, offering the complete range of exchange-related services, including trading, clearing, settlement and depository services. We also provide information services related to the Malaysian securities market.

Established in 1973, Bursa Malaysia today has over 1,000 listed companies offering a wide range of investment choices to the world. Companies are either listed on Bursa Malaysia Securities Main Board for larger capitalised companies, the Second Board for medium sized companies or the MESDAQ Market for high growth and technology companies.

We also have an offshore market. In assisting the development of the Malaysian capital market and enhancing global competitiveness, Bursa Malaysia is committed to maintaining an efficient, secure and active trading market for local and global investors.

It is generally widely recognized that the stock markets are to some extent interrelated. They tend to move together. (Grubel, 1968; Lessard, 1967; Ripley, 1973; Hillard, 1979). Due to several factors stock market are believed to be not only internationally interrelated but also inter sectoral and intra sectoral related. A study by Cheung and Mak (1992) for

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example found that the causal relationship between developed markets of US and Japan, and some Asia market. They also found that the US market led most of the Asia Pacific markets while the Japanese market had some influence only on the Singapore market.

Within a national stock market, stock returns are also detected to interrelate. Stock return are found to be inter sectorally and intra sectorally interrelated. The causal linkages among the counters implies that since each of the stock sectors contains information on the common stochastic trend (binds all these counters together), the predictable of one sector stock can be enhanced significantly by utilizing informational on other sector stock prices.

Issue here is, how has the Malaysia stock market behaving in recent years since Bursa Malaysia is inter related and intra related prior to during and after the economy crisis (1996 to 2025)?

2. Literature Review

A. *International Linkages*

The above section says how to prepare a subsection. Just copy and paste the subsection, whenever you need it. The numbers will be automatically changes when you add new subsection. Once you paste it, change the subsection heading as per your requirement. Kock and Koch (1991) found in their research that national stock markets have become more interdependent over time. Cheung and Ho (1991) found that the relationship between the developed markets and some Asia Pacific Markets to be not stable over time.

Cheung and Mak (1992) examined the causal relationship between the developed markets of US and Japan, and some Asia-Pacific markets and found that the US market led most of the Asia-Pacific markets while the Japanese market had some influence only in the Singapore markets.

Kok and Goh (1994) examined the interdependence between the Malaysian market and some Asia –Pacific markets and again found that the US market led the Malaysia Ng, et. all (1991) stressed that volatility inter-linkages in the international financial markets are important for diversification strategies, hedging strategies and also regulatory policy across the financial market. It is found that volatility spillovers exist in most of the world stock markets where volatility is transmitted across or among the emerging as well as the developed markets.

Besides the volatility behavior, Black (1991) and Nelson (1987) suggest that the financial returns often display a tendency to be negatively correlated with the return's volatility. This phenomenon is also known as leverage effect. Financial stock market volatility tends to rise in response to bad news and responses reversely to good news. This shows a correlated relationship between stock market affect volatility and news.

B. *Inter- Sectoral relationships*

The results reveal by Faoziah Idris and Tang T.C (2004) that at least one direction exists among the counters return in Bursa Malaysia. An exception is for Trading/ Services and Industrial Product where no causality was found among variables. In sum

most of the returns of Bursa Malaysia are linked with one another. This indicated that the returns of a counter are predictable using the past returns of another counters.

Prof. Kok Kim Lian and Goh Kim Leng examine the inter-relationship in the Malaysia Stock Market and found that the relatedness of the various sectors is established, but they found that the inter relationship change overtime. Over the first period (1984-1985) the industrial sector was dominant, but the second period (1986-1987) saw the finance, property and tin sectors becoming jointly dominant. These were replaced by the plantation and tin sector over third period (1988-1989), following by the re-dominance of the Finance sector over the fourth (1990-1991) and fifth (1992-1993).

C. *Intra- sectoral relationships*

Lang and Stulz (1992) said that if intra-industry contagion is not simply and informational effect, it will impose a social cost on our economy system.

Intra-industry information transfers are consistent with a net contagion effect at the announcement of a corporate event, it means by the stock price reaction for other firms in the industry moves in the same direction as that of the announcing firm. However, there is an argument by Lang and stulz (1992), and Laux, at all (1998). They said that when in highly concentrated industries where competition for market share is high, that might be for certain events may trigger a change in the competitive balance within the industry. The announcement of these event will cause the stock price movements for other firms in the industry in the direction opposite or competitive effect.

Brown and Ball (1967) found that changes in dividends are associated with expected and actual futures earning. Corporate profits display positive correlations among firms in the same industry. Changes in future earnings that have been forecasted internally motivate management to change dividends that derived perceived industry wide influenced. The industry-wide influence is expected to affect all firms within that industry in a directionally similar manner.

Besides changes in dividend, Lang and Stulz (1992) found that competitive effect also is very important in contagion analysis. This area of studies focuses on the intra-industry effect only. Firms which produce similar output and use similar input may be affected by the same announcements, even if they are classified in different industries. And thus, the inter-industry impacts of contagion may be as costly and important as the intra- industry consequences.

There is an argument besides the changes in dividend. Foster (1981) and Baginski (1987) found that earnings have significant intra-industry valuation effect. A wide variety of corporate earning has shown to affect the market values of other firms in the same industry as the announcing firm. Henceforth it is referred to as the contagion effect.

Firth (1996), Howe and Shen (1998) and Laux, Starks, and Yoon (1998) found significant contagion effect around dividends payment. Many have argued that earnings could cause investors to question the quality of financial statement for other firms in the same industry.

Result of Cross-sectional regression analysis by (Lang and

Stulz 1992) indicates that intra-industry information transfers are influenced by the degree of concentration within the industry. That is firms that have a low level of concentration will experience significant return compared to those industries that have a higher concentration.

The study by Firth (1976) found that there is a strong link between cross sectional firm performances and operating strategies and because of this matter investors make inferences from the information releases of one company to other entities. Earnings affected not only at their own stock prices but also the returns of other firms in the same industry.

If we focus on the banking sector, Aharony and Swary (1996) found that geographic distances and capital were negatively related to the contagion effect, but on the other hand bank size was positively related. But according to Docking, et. al (1997) found that money-center and large regional banks reacted differently than other banks. Further Akhigbe and Madura (2001) reported that the informational element of the contagion effect varies over time depending on bank size and capital level.

3. Methodology

To examine the behavior of the Malaysia stock market in term of linkages between the sectoral markets, statistical procedure will be used. This research used weekly data of sectoral market from 1996-2005. As a whole this study used two (2) methods for data analysis, which were Granger causality and Vector Auto regression (VAR). These are brief explanations regarding of 2 methods:

A. Granger causality Test

In the econometric literature, there exists a menu of alternative estimation methods, which permit valid testing of causal inference in theoretically postulated models and systems that are known to be integrated. Correlation, of course, does not necessarily imply causation in any meaningful sense of the word. The econometric graveyard is full of magnificent correlations that are simply spurious or meaningless. Granger (1988) argues that co-integration between two prices imply an efficient market as the error correction model indicates that at least one of the prices predictable.

Therefore, the Granger-type causality procedure (Granger, 1969 and 1988) was applied to determine the direction of causation among the counters in Bursa Malaysia. The causality procedure was conducted based on a bivariate system (x, y). This approach was adopted because of its simplicity and because the data series in use were stationary. Granger (1969) simplified the definition of causality as “x is a Granger cause of y,” denoted as $x \rightarrow y$, if present y can be predicted with better accuracy by using past values of x rather than by not doing so, other information being identical. In short, Granger causality measures precedence and information content among x and y.

The null hypothesis for equation (1) is that “x does not Granger cause y”. This hypothesis would be rejected if the coefficients of the lagged xs were jointly significant (different from zero). The null hypothesis for equation (2) is that “y does not Granger cause x.” This hypothesis would be rejected if the coefficients of the lagged ys were jointly significant. If both of

these null hypotheses are rejected, then a bidirectional relationship ($x \leftrightarrow y$) is said to exist between the two variables. The causality pattern can be unidirectional causality, $x(y) \rightarrow y(x)$.

The Bursa Malaysia becomes a demutualised exchange which consists of a Main Board, as a second board and MESDAQ in year 2002. The common market barometer is Kuala Lumpur Composite Index (KLCI) which consists of 100 most representative listed companies from mostly the industrial product, consumer product, and trading / services sectors. The 100 listed companies from the Main Board with approximately 500 to 650 listed companies in the Main Board which comprise of multi-sectors companies across the year 2000-2006. The selection guideline for KLCI components is available in the Bursa Malaysia official website (<http://www.bursamalaysia.com>). Other indications of multi-sector's performance are EMAS as Second Board indices. Across the year 2000 to 2006, significant improvement in terms of listed companies numbers and market capitalization.

The new lurching sectors are Syariah and technology in years 1999 and 2000 respectively. The Syariah is not included in our empirical analysis due to the overlapping listed companies which initially exist in other sectors. The data of the empirical study consists of nine multi-sector indices transaction prices during the period 1996-2005

All the data are available in Data stream. The nine major multi-sectors are such as Trading and Services, Plantation, Consumer product, Industrial Product and Construction respectively.

4. Conclusion

In conclusion, this research could help investors to choose the right investment and make better choices about their investments. This research is a useful tool that enables investors to choose smart and responsible investments, opening the way for long-term financial success.

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