



Faculty of Economics and Business

**DETERMINATION MACROECONOMICS VARIABLES AND
STOCK RETURN: A CASE OF FINANCE SECTOR AND
TRADING & SERVICE SECTOR IN MALAYSIA**

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**DETERMINATION MACROECONOMICS VARIABLES AND STOCK
RETURN: A CASE OF FINANCE SECOTOR AND TRADING & SERVICE
SECTOR IN MALAYSIA**

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Statement of Originality

The work described in this Final Year Project, entitled
**“Determination Macroeconomics variables and stock return: a Case of Finance
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is to the best author’s knowledge that of the author except
where due reference is made.

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ABSTRACT

Determination Macroeconomics Variables and Stock return: a Case of Finance Sector and Trading & Service Sector in Malaysia

By

Pauline Chee

The study investigate the interaction between stock return, inflation rate, money supply, industrial production and oil price in finance sector and trading & service sector in Malaysia. The time period start from January 1998 to December 2010. The test that are conducted in the study included Augmented Dickey-Fuller (ADF) unit root test , Phillip-Perron(PP) unit root test, Johansen and Juselius cointegration test, VECM granger causality test and Granger Causality test. The finding are: first, the long run cointegration exist in sector and trading & service sector. Secondly, there is short run relationship between money supply and stock return for finance sector. Thirdly, the oil price and inflation rate has impact on stock return for trading & service sector in short time period. Fourth, the stock return for sector will behave differently in economics condition. The policy recommendation have discussed in the study.

ABSTRAK

Determination Macroeconomics Variables and Stock return: a Case of Finance Sector and Trading & Service Sector in Malaysia

Oleh

Pauline Chee

Kajian ini menyiasat interaksi antara pulangan saham, kadar inflasi, agregat kewangan M2, indeks pengeluaran perindustrian, dan harga minyak di sector kewangan dan sector perdagangan & perkhidmatan di Malaysia. Jangka waktu kajian ini bermula dari Januari 1998 hingga Disember 2010. Uji yang telah dilakukan dalam kajian ini termasuk ujian Kepeguan Imbuahn Dickey-Fuller, ujian Kepeguan Phillip-Perront, ujian Kopingamiran Pembolehkan Johansen-Juselius ujian Pembetulan Ralat Vektor and ujian Penyebab Granger. Penemuan kajian adalah : pertama, Kewujudan kointegrasi jangka panjang sektor Perdagangan & Perkhidmatan. Kedua, agragat kewangan akan mempengaruhi pulangan saham di sector kewangan. Ketiga, harga minyak dan kadar inflasi mempengaruhi pulangan saham di sector perdagangan & perkhidmatan. Keempat, the pulangan sham akan berlakuan beza dalam keadaan economic. Cadangan telah dibincangkan dalam kajian ini.

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CHAPTER ONE

INTRODUCTION

1.1 Introduction

Stock market is a place for listed companies to raise capital .Companies can use the capital for continuing operating activities and expand business. However, the investors are explained to get a positive return from dividend and capital gain in the stock market. Based on the history, the economic condition will influence stock market. For instances, Malaysia faced deflation during the Asian crisis in years 1997. It caused the KLCI index sharply reduced from 1207.43 to 470.43. It have been shown that the investors need to predict the stock prices based on the macro factors to get an abnormal return from stock market

There were a lot of researches to study the relationship between macroeconomics variables and stock returns. It is important to study the interaction of macroeconomics factor and stock return. Based on the study, the public can identify which factors can influence the stock market and use the knowledge to predict movement of stock price. According to Wongbangpo & Sharma (2002), the research can reveal the functions of stock market in identify the change in economic condition

and also can predict the future performance of stock market. Besides, the study will be useful for the stock market participators. Clare & Priestley (1998) said that the study of the risk factor relationship of stock market will be useful for corporate manager to undertake cost of capital calculation. Moreover, the fund managers can use the information from the result of study to make an effective investment decision and at the same times the investors can access the performance fund managers (Clare & Priestley, 1998). Lastly, the result of study can be used as guidelines for the government to implement policy. Butt et.al (2010) said that the finding of the study can be used to devise an effective economics and financial policy and improve the stock market condition in the country.

Basically, the previous study evidenced that stock return are determined by macroeconomics variables. Chen et.al (1986) found that industrial production, unanticipated inflation, expected inflation rate are significance to stock return. In the study of Azeez & Yonezawa (2006), the findings showed that money supply, inflation rate, exchange rate and industrial output have impact on stock return in Tokyo stock exchange. Moreover, Frimpong (2009) stated that inflation rate, interest rate and money supply have negative impact on Ghana stock market. The result from Gan et.al (2006) documented that money supply and inflation rate have significance impact on the New Zealand stock exchange. Besides, Eryigit (2009) examine the relationship between oil price and stock return. The study concluded that oil prices have positive significant in Oman, Saudi Arabia and Qatar.

For a number of years, the investors and researchers have paid attention on emerging market especially in South Asia country. For examples, Wongbangpo & Sharma (2002) examined the interaction of macroeconomic factors on stock market for Indonesia, Malaysia, Philippine, Singapore and Thailand. The results showed that consumer price index has negative effect on stock market in the selected countries. Moreover, Maysami et.al (2004) found that inflation rate and money supply have positive relation on stock return in Singapore stock market. Rahman et.al (2009) document that the money supply has negative effect on Malaysia stock market but industrial product has positive relationship with stock return.

The emerging market have distinguish feature from developed market. According to Harvey (1995), the emerging market provides high expected return with more predictability power compare with developed country. The specialty feature of emerging market provides an investment opportunity to investors. In fact, Malaysia stock market is an emerging stock market. Exception for Asian crisis and Mortgage crisis in year 1997 and year 2008, Malaysia experienced a growth in GDP rates in past few years. During years 2002 to years 2010, the GDP rate of Malaysia increase from 5.39% to 6.18%. Therefore, it is interested to examine the interaction of macro factor on Malaysia stock market since the stock market provides high potential of growth.

The general objective is to examine the interaction between macroeconomics factor and sector stock return. There are three specific objectives which are to examine the interaction between stock return, industrial production, inflation rate, oil price and money supply for finance sector, to examine the relationship between industrial production, inflation rate, oil price and money supply for trading and service sector, and lastly to find out whether the interaction of stock return, industrial production, inflation rate, oil price and money supply in different sector.

There are four macroeconomics variables which consist of industrial production, inflation rate , oil price and money supply are obtained in the study. The study examines the interaction of stock return and macro variables by using sector approach. The study focuses on finance sector and trading & service sectors in Malaysia. The reason of selected trading & service sector and finance sector are because both sector contributed the high GDP growth in 2009 and 2010. The data for the variables obtained for the period of 13 year. The period from January 1998 to December 2010 has been selected in the study. Data was collected from Thompson Reuters Datastream at Unimas and Bank Negara Malaysia.

In term of methodology, the study employed unit root tests consist of Augmented Dickey Fuller test, Philip Perron test and Kwiatkowski-Phillip Schmidt-Shin test to analyze the stationary of the times series of data. The finding of the unit root

tests show that all the times series data are stationary and integrated order I(1). Besides that, Johansen Cointegration test will be used for investigate the relationship between selected variables and stock return in long term. The result indicates that there are one cointegration factor in the trading & service sector. However, the result show that he finance sector does not have cointegration factor in the long run. Lastly, the VECM Granger Causality test and Granger causality test will be conducted to examine the relationship between the macro variables and stock return in short run. The finding shows that oil price and inflation rate have significance impact on stock return in trading & service sector. Besides, the result also concludes that there are short run relationship between money supply and stock return in finance sector.

The study contributes to the literature in two ways. Firstly, the study provides a sectoral measurement of stock return caused by macroeconomics factors. The study investigates the interaction between macroeconomics factor and stock return in finance sector and trading & service sector. Secondly, the finding of the study will be meaningful for investors and policy makers. The study provides useful information regarding finance sector and trading & service sector. Through the information, the investors have deeper knowledge about the movement the two sectors. Therefore, the investors can take the advantages to gain abnormal profit by make an efficient investment portfolio.

The reminder of the study is organized as followings. The chapter two explains the theoretical framework and the previous studies. The data employed and methodologies are described in chapter three. The chapter four will discuss the finding. Finally, the chapter five will provide that conclusion of the study.

1.2 Background of Study

Malaysia

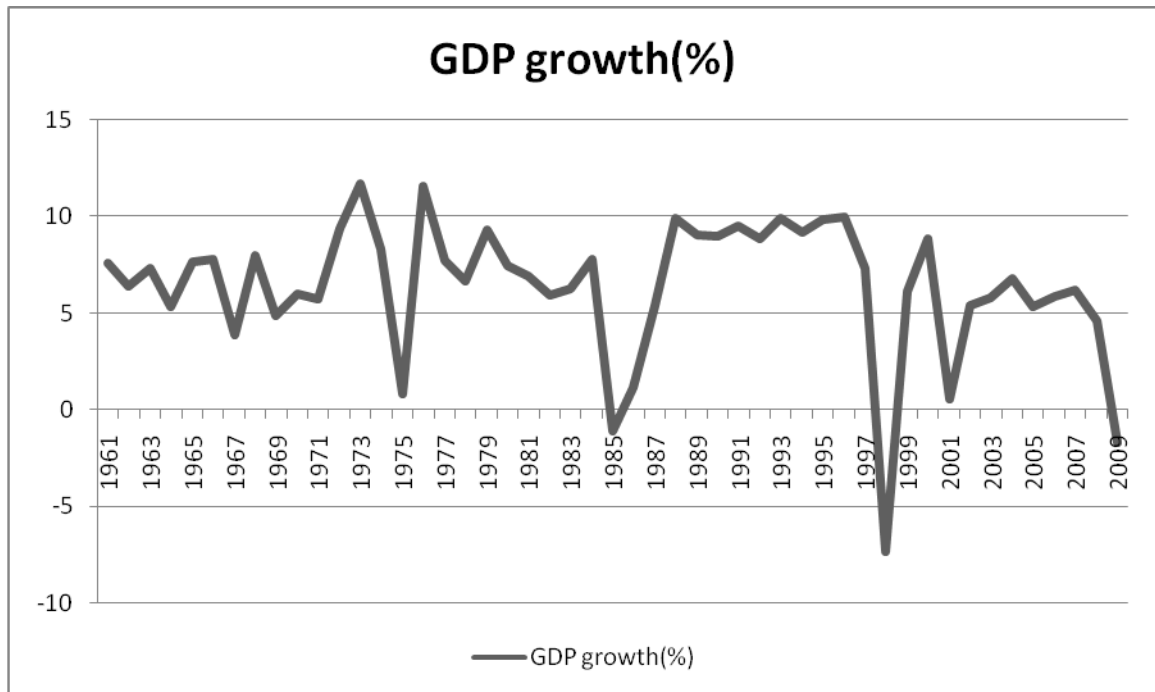
Malaysia is a federal constitutional monarchy in Southeast Asia. It consists of thirteen states and three federal territories. Malaysia is divided into two regions which consist of peninsular Malaysia and Malaysia Borneo.

The Figure 1.1 shows that the GDP has consistent growth from 1961 to 1972. In 1971 and 1972, the increase oil price has contributed the GDP growth from 5.7% in 1971 to 11.7% in 1972. Malaysia economy happened recession in 1975. The GDP have showed a slow growth 0.8% in 1975. During 1977 to 1984, the GDP has consistent growth. In 1985, the downturn of electronic sector has negative impact on Malaysia economics (Treasury Malaysia, Ministry of Finance, 2010). The GDP has reduced from 7.76 % in 1984 to -1.12% in 1985.

Malaysia kept high interest rate to attract foreign investment. The higher interest rate attracts a huge amount of foreign capital inflow (Treasury Malaysia, Ministry of Finance, 2010). Malaysia experienced high growth from 1994 to 1996. The GDP has increased from 9.21% in 1994 to 10% in 1996. However, the GDP has reduced to 7.3% in 1997. Malaysia faced the Asian economic crisis in 1997. The economics Malaysia experienced low growth which GDP become -7.3%. The GDP of Malaysia has recovered to 6.13% in 1999. The exchange control and pegging of the ringgit at RM 1 = US\$ 0.2632 has brought confidence in the market (Treasury Malaysia, Ministry of Finance, 2010). Besides that, the positive growth in GDP was contributed by recovery in the manufacturing and agricultural sector and the improvement of oil yield (Treasury Malaysia, Ministry of Finance, 2010).

In 2001, the GDP growth became 0.5%. The slow performances in United States and Japanese economy have slowdown the performance of Malaysia economy (Treasury Malaysia, Ministry of Finance, 2010). During 2002 to 2007, Malaysia has positive growth in GDP. The GDP has increase from 5.39 % to 6.18%. The constant growth of Malaysia economics is contributed by the increasing demand for housing, motor vehicles, and electronics (Treasury Malaysia, Ministry of Finance, 2010). In 2008, the GDP has reduced to 4.6%. The economy of Malaysia faces a negative growth -1.7% in 2009. The slow economic performance is affected by the slowdown of United States economy which arising by the subprime mortgage crisis (Treasury Malaysia, Ministry of Finance, 2010).

Figure 1.1: Gross Domestic Product Growth (%) in Malaysia from Year 1961 to Year 2009



Notes: World Bank (2010)

KLCI Stock Exchange

The first formal securities business organization in Malaysia was established in 1930 (Bursa Malaysia Berhad, 2010). It was namely as Singapore Stockbrokers Association. In 1937, the Singapore Stockbrokers Association was re-registered as the Malayan Stockbrokers's Association and the public trading of shares are not traded (Bursa Malaysia Berhad, 2010).

The Malayan Stock Exchange was introduced in 1960 (Bursa Malaysia Berhad, 2010). The public trading of shares can commenced on Malayan Stock Exchange. In the years 1961, the board system was introduced. There are trading room in Singapore and Kuala Lumpur which linked by telephone links (Bursa Malaysia Berhad, 2010).

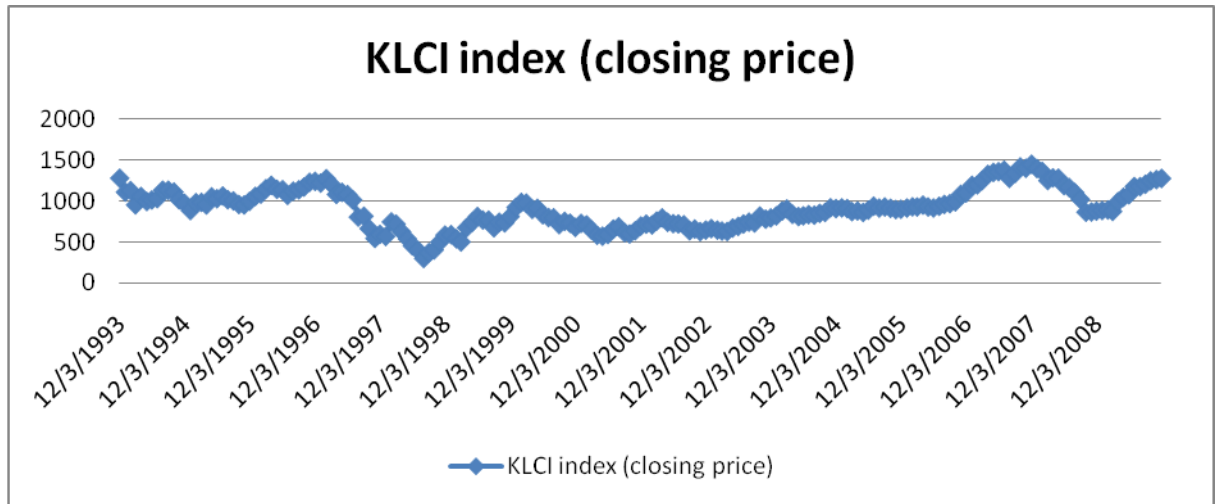
The stock exchange of Malaysia was incorporation in 1964(Bursa Malaysia Berhad, 2010). In 1965, Singapore was secession from Malaysia. The stock exchange of Malaysia became stock exchange of Malaysia and Singapore (Bursa Malaysia Berhad, 2010). Due to the currency interchangeability between Malaysia and Singapore, the Kuala Lumpur Stock Exchange Berhad was official split from stock exchange of Malaysia and Singapore in 1973(Bursa Malaysia Berhad, 2010). The Kuala Lumpur stock exchange was established on December 14, 1976(Bursa Malaysia Berhad, 2010).

On April 14, 2004, the Kuala Lumpur Stock Exchange changed their name to Bursa Malaysia Berhad(Bursa Malaysia Berhad, 2010). Bursa Malaysia Berhad continually offering full- integrated exchange and provide complete exchange related services. Bursa Malaysia Berhad set up wholly-owned subsidiary. On 18 March 2005, Bursa Malaysia Berhad has set a Bursa Malaysia Securities Berhad (Bursa Malaysia Berhad, 2010). The Bursa Malaysia Securities Berhad provides, operate and maintain securities exchange (Bursa Malaysia Berhad, 2010). Besides Bursa Malaysia securities Bhd, Bursa Malaysia also set up several businesses. There are subsidiary businesses

including Bursa Malaysia Derivatives, Labuan International financial exchange, Bursa Malaysia Bonds Sdn Bhd, Bursa Malaysia Securities Clearing Bhd, Bursa Malaysia Derivatives Clearing Bhd, Bursa Malaysia Depository Sdn Bhd, Bursa Malaysia Depository Nominees Sdn Bhd and Bursa Malaysia Information Sdn Bhd(Bursa Malaysia Berhad, 2010).The Bursa Malaysia provides under 1000 listed companies and those companies can be listed on Bursa Malaysia Securities Berhad main market or ACE market.

Bursa Malaysia introduced Kuala Lumpur Composite (KLCI) in 1986. The index is known as FTSE Bursa Malaysian Malaysia KLCI. The Figure 1.2 shows the KLCI index closing price from December 1994 to December 2009. In 1997, the KLCI index decline from 1207.43 to 470.43. The dramatically declined is caused by Asia Economic crisis. The KLCL index increase from 1096.24 to 1445.03 in December 2007. The high growth of KLCL index is contributed by the high growth of U.S economy. However, the subprime mortgage crisis leads to reduce the KLCL index to 876.75 in December 2008.

Figure 1.2: KLCI Index Closing Price



Notes: Yahoo Finance (2010)

As at September 2010, the Bursa Malaysia Index Series were classified into nine sectoral major indices, namely, construction, consumer product, finance, industrial product, mining, plantation, property, technology, and trading & service.

The sectoral finance, mining, plantation and property indices were established in 1970s. As at 30 September 2010, the sectoral indices consist of 38 stocks. For the mining sectoral indices, it consists of 1 stock which known as Kuchai Development Bhd and sectoral plantation included 43 stocks. There are 87 stocks in sectoral of property.

In 1992s, Bursa Malaysia introduced its new 4-sector classification of listed companies which included construction, consumer product, industrial product and trading services. The construction sector has 50 stocks at September 2010 and sector consumer product included 139 stocks. The sector trading service included 179 stocks

of listed companies. The sector industrial product is the largest sector indices in Bursa saham Malaysia. It consists of 263 stocks of listed companies. The Bursa Malaysia introduced sector technology in 1999s. The sector technology included 29 stocks in Bursa Malaysia.

1.3 Motivation of Study

There are two factors that motivate a study. First, unlike the previous studies that focuses on identified effect on stock return from developed countries, the study focuses attention to find out the interaction between stock return and macroeconomic factors in Malaysia stock market. As an emerging market, Malaysia stock market has provided an investment opportunity to public. The findings of study will provide additional information regarding Malaysia stock market. It will increase the understanding and knowledge among public towards Malaysia stock market. Thus, it also helps to attract more foreign investor to invest in Malaysia.

Since previous studies on Malaysia have been conducted by Clare & Priestley (1998), Wongpo & Sharma (2002) and Rahman et al (2009), however there were less studies examine stock return and macroeconomics factors by sector approach. Therefore,

the study will focus on two major sectors which is finance sector and trading & service sector in Malaysia stock market. The two sectors have distinguished features and growth. Therefore, the interaction of stock return and macro variables might be different in two sectors. Based on the findings of study, the investors can identify which macro factors can be used to predict stock return in different sectors. Thus, the investor can diversify their investment portfolio in different sectors based on their risk level.

1.4 Problems Statement

The study of the relationship of stock return and macroeconomics always been studied among the academics. In general, the macroeconomics variables always are considered as factors that affect the stock return. Therefore, it implied that the investor will change their investment planning based on the changes of the macroeconomics condition. Based on those reason, it motivated many academics to examine the effect of macroeconomics on stock return. There are a number of study investigates the interaction between macroeconomics factor and stock return in several countries such as London, United States, Brazil, India, China, Singapore, Thailand, and Malaysia. The founding from the previous study are still under the consideration of mix concluding remark among the macroeconomics. Thus, it is interested to find out whether there is any relationship of stock return, industrial production, inflation rate, oil price and money supply in Malaysia.