UNIVERSITI PUTRA MALAYSIA

HERDING BEHAVIOUR IN CHINA'S MARKETS AND THEIR INFLUENCES ON INTERNATIONAL MARKETS AND TRADING PARTNERS

CHONG OI PING

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HERDING BEHAVIOUR IN CHINA'S MARKETS AND THEIR INFLUENCES ON INTERNATIONAL MARKETS AND TRADING PARTNERS

By

CHONG OI PING

Thesis Submitted to the Putra Business School, in Fulfilment of the Requirements for the Degree of Doctor of Philosophy

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Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfilment of the requirement for the Degree of Doctor of Philosophy

HERDING BEHAVIOUR IN CHINA'S MARKETS AND THEIR INFLUENCES ON INTERNATIONAL MARKETS AND TRADING PARTNERS

By

CHONG OI PING

January 2020

Chairman : Associate Professor Bany Ariffin Amin Noordin, DBA
Faculty : School of Business and Economics

In its rapid transition to a modern economy, China is undergoing dynamic changes in all of its business sectors and industries, a situation that present features unique to China's economy. This study focuses on several issues related to the Chinese stock market, and these issues are investigating herding behaviour in four local Chinese markets, which are Shanghai A-share (SHA), Shanghai B-share (SHB), Shenzhen A-share (SZA) and Shenzhen B-share (SZB). This study used cross-sectional absolute deviation (CSAD) to examine the herding behaviour. First, this study found that the SHA, SHB and SZA showed herding in their markets, but the SZB did not. Second, this study discovered that Hong Kong, Israel, Pakistan and Thailand were herding around the Chinese market. Third, this study discovered that all three categories of total trade with China instead showed the dominant influence of the Chinese market return dispersion. However, the results of this study have shown that the Chinese market did not play a significant role in influencing and causing other local markets or its trading partners to herd around its markets, as did the U.S. market. Thus, the result of this study can be used to reduce the tendency of the formation of herding behaviour.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk Ijazah Doktor Falsafah

PERILAKU KAWANAN DI PASARAN CHINA DAN PENGARUHNYA DI PASARAN ANTARABANGSA DAN RAKAN DAGANGAN

Oleh

CHONG OI PING

Januari 2020

Pengerusi : Profesor Madya Bany Ariffin Amin Noordin, DBA
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Dalam peralihan yang pesat ke ekonomi moden, China mengalami perubahan yang dinamik, di mana kesemua sektor perniagaan dan perindustrian menunjukkan suatu keadaan yang menampilkan ciri-ciri unik bagi ekonomi di China. Kajian ini memfokuskan mengkaji perilaku kawanan di dalam empat buah pasaran tempatan China, iaitu Shanghai A-share (SHA), Shanghai B-share (SHB), Shenzhen A-share (SZA) dan Shenzhen B-share (SZB). Kajian ini menggunakan keratan rentas penyimpanan mutklak (CSAD) untuk mengkaji tingkat laku herding. Pertama, kajian ini mendapati bahawa SHA, SHB dan SZA menunjukkan perilaku kawanan di dalam pasaran mereka, tetapi SZB tidak. Kedua, kajian ini menemui bahawa Hong Kong, Israel. Pakistan dan Thailand melakukan aktiviti kawanan mengelilingi pasaran China. Ketiga, kajian ini mendapati bahawa ketiga-tiga kategori jumlah perdagangan dengan China menunjukkan pengaruh dominan penyebaran pulangan pasaran China. Keputusan kajian ini menunjukkan bahawa pasaran China tidak memainkan peranan penting dalam mempengaruhi dan menyebabkan pasaran antarabangsa atau rakan dagangannya melakukan aktiviti kawanan mengelilingi pasarannya, sebagaimana pasaran Amerika Syarikat. Oleh itu, hasil dapatan kajian ini boleh digunakan untuk mengurangkan kecenderungan pembentukan tingkat laku kawanan.

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Our life is full of challenges, and nobody life is smooth sailing. I had done my MBA in Finance in 2012 and returned to work as usual. However, at that time, my mother was a dialysis patient, and she needed somebody to care for her. Hence, two years after my MBA, I made up my mind to further PhD since I am a government servant and my salary still on if I have the study leave together with scholarship, I can yet support my family while in the meantime, I can care for my mother.

In 2014, I applied the 'Hadiah Latihan Persekutuan' a scholarship awarded to the Malaysian government servants. I was lucky to be awarded this scholarship. However, before enrolled in my PhD in Finance at Putra Business School (PBS), University Putra Malaysia (UPM), my beloved mother passed away peacefully in March 2015. I was in dilemma whether to further my PhD in Finance or just rejected the scholarship award and continue my work. I knew if I refused the scholarship offer at that time, I might have to wait for another three years before I am allowed to reapply for it. Finally, I made up my mind and opted to pursue a PhD in Finance as I have the intention to achieve self-fulfilment and wanted to know how far I can go.

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I want to take this opportunity to state my heartfelt, and profuse thanks to my beloved brothers and sisters, best friends and colleagues who supported me throughout my PhD journey. Last but not least, I would like to dedicate this thesis to my dearest parents who have passed away. I wish I could make them proud of my achievement.

I certify that a Thesis Examination Committee has met on 17 January 2020 to conduct the final examination of Chong Oi Ping on her thesis entitled "Herding Behaviour in China's Markets and Their Influences on International Markets and Trading Partners**"** in accordance with the Universities and University Colleges Act 1971 and the Constitution of the Universiti Putra Malaysia [P.U.(A) 106] 15 March 1998. The Committee recommends that the student be awarded the Doctor of Philosophy.

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LIST OF ACRONYMS AND ABBREVIATIONS

CAPM	Capital Asset Pricing Model
CICB	Chinese Industrial and Commercial Bank
CSAD	Cross-sectional Absolute Deviation
CSDCC	China Securities Depository and Clearing Company
CSRC	Chinese Securities Regulatory Commission
CSSD	Cross-sectional Standard Deviation
CSRC	Chinese Securities Regulatory Commission
EMH	Efficient Market Hypothesis
GDP	Gross Domestic Product
HKSE	Hong Kong Stock Exchange
NYSE	New York Stock Exchange
P/E	price-to-earnings ratio
QFII	Qualified Foreign Institutional Investor
RMB	renminbi
SCSC	State Securities Regulatory Commission
SHA	Shanghai's A-share
SHB	Shanghai's B-share
SHSE	Shanghai Stock Exchange
SOE	State-own enterprises
SZA	Shenzhen's A-share
SZB	Shenzhen's B-share
SZSE	Shenzhen Stock Exchange
The U.K.	United Kingdom
The U.S.	United States
USD	United States Dollar
WTO	World Trade Organization

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CHAPTER 1

INTRODUCTION

1.1 Introduction

The introduction of chapter one of the thesis would provide a brief account of the main themes and their inter-connection that motivated this study, which is herding behaviour and its effects on China stock market and international stock markets. This chapter would further generate the problem statement, research question, and objective that guide this study. The chapter will end by highlighting the significance and contributions of the present study and forwarding the definition of key terms used throughout this study.

1.2 Background of Study

Herding behaviour in financial markets is described as how individuals are affected by their peers to adopt certain behaviour such as actions and predicts other beliefs and principles. Such behaviour has led to a tendency among investors to form groups and in turn, cause asset prices to be correlated (Gebka & Wohar 2013). This behaviour appears when the number of investors has different information, and this information cascade leads them to certain decisions. It has proved many times that people follow others when they make certain decisions. The behaviour is known as herding behaviour. Herding behaviour has led to financial market instability and inefficiency. Thus the psychological definition developed for herding behaviour is referred to as the phenomenon in which a group of people follow the decisions of others, though the decision may be incorrect. It means the group decisions are not taken as rational decisions (Christie & Huang, 1995; Rook, 2006).

It is normal that people go after what others do and hence ignore their own judgements and experiences. This is the reason that herding has an impact on one's intuition and decision-making process and this behaviour helps to understand the violation of the Efficient Market Hypothesis (EMH). This theory explains the rationality of decisions (Chang et al., 2000). On the other hand, the herding behaviour of investors contradicts to the theory of EMH which states that investors imagine the expected prices of stock in the same manner for the reason that they all own the same type of information from an efficient market. This situation results in the fair value of securities that is only possible due to perfect information which is available in an active market (Fama, 1970).

Contrary to the efficient market hypothesis, herding behaviour suggests that this does not happen every time and some investors originate share price by merely scrutinising and following other investor's behaviour even though all participants are not well versed. So the herding behaviour will imbalance the market and leads to imprecise

values of securities because of the involvement of irrational decisions (Hott, 2009, Demirer & Kutan, 2006). Thus, it can be concluded that in a China stock market, the EMH cannot explain the presence of herding behaviour.

This study has shown that the behaviour of Chinese stock market players demonstrating their tendency toward herding behaviour. Two stock exchanges operate in China founded in 1990, which are Shenzhen Stock exchange and Shanghai Stock Exchange. Shenzhen's market capital is USD 3.5 trillion. However, Shenzhen is not available to international investors entirely. The Chinese economy is rising at a very rapid pace as a developing market. It enables its bursary to yield strong returns. Jones (2000) stated that China index had raised 49%. Such a gain level was achieved previously in 1933. So, a higher return is associated with higher volatility, and the China stock market also shows high volatility.

There are two different aspects concerning the behaviour of the stock market, one is traditional, and the other is the view of Behavioural Finance; that controls investment decisions in the stock exchange market. The EMH principle is still recognised as a keystone in investment strategies. In a competitive market, the stock prices disclose all the relevant information available and participants in the market cannot earn an abnormal profit in the long run. Market effectiveness is explained on three levels, where each level is explained based on the availability of information. Such three types are called weak shape, semi-solid, and solid quality. Securities are priced in a weak form based on historical or past information. This historical information is not relevant, so it does not affect prices. The semi-strong form explains the prices of securities include public information, and strong efficiency showed that security prices indicate both private and public information. It includes the consideration of fundamental and technical analysis to obtain the best near accurate pricing.

Efficient market hypothesis depends on multiple factors such as investor rational behaviour and arbitration. The rational choice implies being rational, so if any investors act irrationally, it does not impact stock prices. The theory behind this is that investors take random decisions, and this random action may cancel the stock market effect on the stock market. Arbitrage, a result of market inefficiencies will also invalidate the irrational behaviour against prices. Certain studies have been conducted during the sixties and seventies of the penultimate century, which also supported the Efficient Market Hypothesis theoretically and experimentally. For market participants, financial behaviour has challenged EMH. Several other academics appeared in the scope of academic finance in the 1980s, for example, Thaler (1981) and Shiller (1981) each challenged EMH. The field of behavioural finance is a combination of psychology and neoclassical economics.

In the 1980s, some experimental results reveal the inefficiency of EMH by showing the securities having a higher price to earnings ratio (P/E) are priced above the fair value and vice versa. Earnings of securities also support this inefficiency. An anomaly in the behaviour of earnings of some securities, contradicting EMH then opened up a new room of discussion and gave rise to behavioural finance. This is the broader term,

including both psychology and sociology. Behavioural finance contradicts with EMH and is not in line with the theory of an efficient market.

Cross-sectional dispersion of stock-return correlations in response to an extreme change in the market environment is the second strategy for the analysis of herding behaviour. Through studying knowledge asymmetry in the emerging market, researchers expect that herding behaviour is found in this market among investors. Chang et al. (2000) presented substantial evidence of herding behaviour on the Taiwan and South Korea market. There is no evidence of herding by the participant of the U.S. and Hong Kong stock market. Based on Hong Kong's stock, Zhou and Lai (2009) notice that herding on the Hong Kong market seems more popular with small stocks and investors are more likely to be in the middle of selling rather than buying stocks. Demirer and Kutan (2006) in the China stock market, examined whether Chinese market investors, adopted the market opinion or private knowledge while making their investment throughout market stress times. Demirer and Kutan (2006) study indicate no evidence of herding, implying that market players in Chinese stock markets make investment decisions reasonably. Tan et al. (2008) stated that the herding particularly occurs among A-share investors under both rising and declining market conditions in Chinese stock markets. Thus, according to the previous studies (Chang et al., 2000; Zhou & Lai, 2009; Demirer & Kutan, 2006; Tan et al., 2008), the herding activity is not present in the developed market but preferably present in an emerging market.

While the previous studies mentioned above have contributed to the herding behaviour definition in different aggregate markets, but the authors primarily only limit to the single market. However, there is no effort made to examine herding activity across an international border. Thus, it can be concluded that the empirical finding generated from several specific countries generally show local behaviour. Therefore, the findings do not adequately represent a more extensive test for the evaluation of an international issue.

Current experience states that the financial crisis that occurred did not occur by itself but also involved other countries. However, a study of Forbes and Rigobon (2002) considered that during the high-volatility era, financial markets are somehow interdependent. During the financial instability at the later stage of the Asian crisis, the study of Chiang et al. (2007) has found substantial evidence of the concomitance between the different stock markets. Bekaert and Harvey (1997) studied different cross-country variants in market-level share prices, found that in developing economies, the higher rate of return dispersion is linked to higher price volatility. Bekaert and Harvey (1997), suggested that dispersions may represent the information magnitude that flows at the industry/firms' level for these markets. Inspired by mentioned past studies. However, this study will analyse the herding behaviour by evaluating the cross-sectional stock-return rises with several variables, including absolute domestic stock returns, excess domestic market conditions, and influences of the foreign market.

In summary, the objectives of this research are to clarify what is herding behaviour in China's stock market context and its influence on international markets and their trading partners. This study also indicates what the overall idea implies and how numerous studies have studied it. However, this study will also determine how herding behaviour is evaluated and detected by different models, and the overall effect of herding is based on these particular models.

1.3 Problem Statement

Since the economic conditions are changing, and there are periods of market instability, causing the effect of the investors' decision-making process is attempting to change. One of the impacts that have been receiving attention among researcher in recent years is the herding idea. Although the behaviour of herding pertains to the tendency of animals to obey the herd, a number of theoretical methods have allowed the concept to be extended to several domains. In behavioural finance, herding activity is typically characterised by the imitation of the behaviour of other investors, which constitute a market consensus (Bikhchandani & Sharma, 2001). As Klein (2013) pointed out, the imitation of behaviour can also be observed on a global level or across the market and not limited in a single market. This approach appears to be cost-saving and time-consuming in decision-making.

Devenow and Welch (1996) proposed a second approach. They can be referred to as a wrong path, which considers herding to be a blind behaviour in which investors are irrationally following other investors for psychological reasons. In order to answer the theoretical argument as mentioned above, this present studies mainly concentrated on detecting the presence of herding behaviour among mutual fund managers (Clement & Tse, 2005; Gleason et al., 2003; Kubik & Solomon, 2000). However, very few studies are attempts to analyse the global business environment or economic factors associated with herding behaviour. In this report, the researcher argues that stock return is critical in explaining the relationship between the herding behaviour and conditions of the market.

The basic requirement for carrying out such a study aimed to determine if either herding behaviour prevails in the market. Christie and Huang (1995) and Chang et al. (2000) revealed a comprehensive strategy to check general investors role of herding behaviour in financial markets. Chang et al. (2000) in their study, categorised herding behaviour as the investors' willingness to imitate the acts of the others. By using data from Taiwan, South Korea, Japan, Hong Kong, and the U.S., Chang et al. (2000) found that there is no evidence of herding in developed markets such as Hong Kong and the U.S. Nevertheless, there is proof of herding in two developing markets which are Taiwan and South Korea. Even though Chang et al. (2000) have no justification for what may have influenced behavioural variation in different industries are highly related to herding behaviour. Yet, their findings have inspired the researcher in this study to evaluate two levels in the Chinese stock market (A-share and B-share) for the reasons discussed in the next section.

China's stock markets have a minimal view which is almost thirty years. In December 1990, Chinese stock issues were divided into two different stocks since the establishment of the Shanghai Stock Exchange (SHSE) and the Shenzhen Stock Exchange (SZSE). A-Share can only be bought and traded by domestic investors and denominated in domestic currency, Renminbi (RMB). However, B-shares is traded to international investors before February 2001. As for now, B-shares have been selling to both domestic and foreign investors. Shareholders of A-shares and B-shares are continuously traded in the Shenzhen and Shanghai stock markets, but neither Shenzhen nor Shanghai stock market allows for cross-listing. Although in Chinese stock market, that is a coexistence of A-shared and B-share, however, their components of investors are quite different. In other words, individual domestic investors dominated in A-share markets. A-share markets are identified as an emerging market equal to those in Taiwan and South Korea. However, the B-share markets are dominated by international institutional investors and can be considered as mature markets.

A-share investors investments decisions are probably affected by other inexperienced investors, education level, or understanding of financial knowledge. Both A- and B-shares have unique investor elements for a substantial part of the history of the Chinese stock market. Investors taking part in these two shares issued are reported to demonstrate unique characteristics. Data analysis within these two-tier markets enables the researcher to analyse not just to their herding behaviour but as well as the impact of the changes in the market returns. For this study, the researcher decides whether there is a herding behaviour in A-share and B-share market in both Shenzhen and Shanghai market by using the techniques adopted from Chiang and Zheng (2010).

In addition, numerous researchers have conducted to validate the presence or unavailability of herding behaviour in several stock markets. An overview from several findings is provided based on their relevant contribution to this research. Firstly, research has shown that the qualities of the information in an emerging market make herding are likely to occur in such a market compared to those in the developed market (Economou et al., 2011; Lao & Singh, 2010; Chang et al. 2000). Lao and Singh (2010) also presented an understanding of the influences pattern of herding behaviour. This trend means that investors appear to herd more rigorously during either upward or downward moves of the stock. Additionally, it has been proposed that the emergence of herding activity is more likely to occur during times of significant market volatility, as investors will then be more likely to obey the consensus of the market (Chen et al., 2010). Chiang and Zheng (2010) revealed that their finding is also applicable to the impact of the financial crisis on the degree of herding, as intense return movements continue in these periods.

Bikhchandani and Sharma (2001), stated that the influence of the market capitalisation of firms on the propensity of the herding suggests that the action of the herd is more significant amongst those smaller stocks than bigger stocks. Given rise to the motivation to analyse the correlation of herding behaviour in a particular stock market, thus, various researchers' methods are used (Bikhchandani and Sharma, 2001). For the following reasons, the Chinese stock market was chosen as the setting for the

investigation. First, China is considered to be one of the emerging markets, expected to be a major of economic power by the year 2050. This makes it exciting to evaluate whether herding behaviour is to become more significant in such an emerging market. Second, as far as the researcher understand, the effect of herding activity on this market is not investigated thoroughly.

1.4 Research Objectives

On the justification of the problems as mentioned earlier, the general objectives of this study are to examine the herding behaviour of the Chinese stock market and its influence on the international market and their trading partners. This study also analysed the effect of China's cross-sectional dispersion of returns to other local markets or global markets, and their trading partners, grouped into high, medium and low volumes of exchange from its total trade with China, based on the 2015 trade statistics. In this topic, this work carefully and extensively explores the following details:

a) To investigate the effect of A-share investors copy the trading behaviour of the B-share investors, perceived to be well-informed on the Shanghai Stock Exchange and Shenzhen Stock Exchange;

b) To investigate whether China's cross-sectional dispersion of return can influence and cause herding on other local stock markets; and

c) To investigate the influences of China's cross-sectional dispersion of return to their trading partners, grouped into the high, medium and low volumes of total trade with China.

1.5 Research Questions

As a result of the nature of this analysis, only three relationships with herding activity on the Chinese stock market and their impact on the international market and their trading partners are examined. This being the case, an effort has been made to identify the problem statement. As a consequence, the research question, as specified in the following order:

a) Do A-share investors copy the trading behaviour of the B-share investors who perceived to be well-informed on the Shanghai Stock Exchange and Shenzhen Stock Exchange?

b) Does China's cross-sectional dispersion of return have the ability to influence and cause herding on other local stock markets?

c) Does China's cross-sectional dispersion of return influences and affects their trading partners, grouped into the high, medium and low volume of total trade with China?

1.6 Research Hypotheses

Three hypotheses tested, each of it representing a specific objective of the study to achieve the ultimate motives of this study, namely to examine if herding behaviour still present in the China market. Do A-shares investors copy the trading behaviour of the B-shares investors even though they are accounted to 90% out of the 200 million account holders in the Chinese stock market? For that, this study comes up with the first hypothesis as follow:

H_0: A-share investors do not copy the trading behaviour of the B-share investors who perceived to be well-informed on both the Shanghai and Shenzhen Stock Exchange.

H_1: A-share investors copy the trading behaviour of the B-share investors who perceived to be well-informed on both the Shanghai and Shenzhen Stock Exchange.

This study needs to test whether the Chinese stock market also plays an essential role in the global market by influencing and causing 55 countries stock markets herding around their stock market given the role of China's economic growth with significant implications for many countries. Consequently, the second hypothesis is written as:

H_0: China's cross-sectional dispersion of return cannot influence and cause herding on other local stock markets.

H_1: China's cross-sectional dispersion of return can influence and cause herding on other local stock markets.

Finally, this study also would like to examine whether China's cross-sectional returns would affect their trading partners. For this purpose, the study classified all 55 markets in this research sample and divided it into three groups that are high, medium and low overall trade volumes with China based on the 2015 trade statistics (total trade with China includes import and export figures) according to the National Bureau of Statistics of China. It is presumed that top trading partners (consisting of countries with a higher link in trade with China) must be impacted the most by the Chinese stock market condition. Since they may encounter spillover effects from China's stock market, especially in comparison to those countries with fewer ties in trade with China.

H_0 Top trading partners are not being influenced the most by China's cross-sectional dispersion of return.

H_1: Top trading partners are being influenced the most by China's cross-sectional dispersion of return.

1.7 Significance and Contribution of the Study

Before 1978, China operated a closed economic system with little room for the market mechanism to growth. However, starting from 1978, the Chinese government has undertaken several reforms and initiatives which including open up its financial and banking system, attract foreign investment, increase exports, and import of high-tech products for the benefit of economic growth to the Chinese. Besides, China economic growth has recorded double digits since its accessions into the World Trade Organization (WTO) at the end of 2001. It has replaced the world's second-largest economic power which is known as Germany. Hence, the study of herding behaviour in China has attracted many researchers lately, as China stock market still categorised as an emerging country as both the Shanghai Stock Exchange and Shenzhen Stock Exchange that established in late 1990. Moreover, according to some of the literature reviews, herding behaviour is more notable in emerging markets, compared to developed markets (Chang et al., 2000) or frontier markets (Chiang & Zheng, 2010). With that, the significance of this study presented as follows:

a) Investors

The findings from this research would help the investors to have a reasonable understanding of the herding behaviour in the Chinese stock market, especially between the A-share and the B-share markets. Through this study, investors would understand the influence of the Chinese stock market to the other local markets and their trading partners. Investors also get to know the cross-country herding which wiped out international diversification benefits, highlighting market participants for risks that could not be easily hedged. Hence, it would have helped them in planning the future international investment portfolio.

b) Analysts

Analysts could view with caution through these findings, especially herding between the A-share, and B-share markets could cause the prices of securities not to reflect the actual value. This is because the securities prices have been influenced by the investment behaviour of market participant's and will make adjustments to their analysis in the future. Moreover, the analysts also will be interested in the result of the Chinese stock market influenced on other international stock markets and their trading partners.

c) Researchers

The findings will show herding behaviour that presents in the Chinese market as previous studies a lot of the conflicting conclusions due to different methodologies employed. Additionally, with a different set of data and period of research, it would have different findings. Moreover, most of the study's findings indicated that the U.S. has significant influences on the local market herding, and in fact, most of the countries herd around the U.S. market. However, the influence of the Chinese stock market on other local markets and their trading partners has not been fully explored by other financial researchers. From this study, the researchers need to pay extra attention to the Chinese stock market, given its growing and influences are so tremendous and hard to be avoided.

d) Regulators and decision-maker (government and firms)

Recognition and understanding of factors affecting investor behaviour (between A-share and B-share) can be practical and useful for different policyholders as it will influence the future policies and strategies of the company from its perspective. Besides, it can have effects on the required law and the additional procedures required to fulfil the investor's desire and also provide more support to market efficiency from the government's perspective in making future policies and stock market regulation.

1.8 Scope of the Study

This present study will not try to differential intentional herding and spurious herding neither rational nor irrational herding behaviour as it is out of the research scope. The study period will be focused on 1 January 2010 to 31 October 2016. January 2010 was chosen as the starting point because China has the most vigorous economic growth by 10.3%, even though many researchers found that since 2005 the Chinese stock market started to show its spillover effects to other countries. Most important is that, in 2010, China's economic output surpassed Japan to be the world's second-largest economic power after the U.S. with Gross Domestic of Product (GDP) of USD 6 trillion. Besides, China has become a vital hub for Asian production networks. For example, a major production hub for the U.S. and Taiwan electronics products such as Apple computer and iPhone. Additionally, industrial production multiplied in 2010, suggesting an increase in demand for China's final products.

This study has three research objectives. The first objective is to examine the herding behaviour in mainland China. It covered four local Chinese markets, namely the Shanghai Stock Exchange (SHSE) for both the A-share and B-share market, Shenzhen Stock Exchange (SZSE) for both the A-share and B-share markets. It is impossible to include all the firms listed on SHSE and SZSE as of the end of 2015; there are 1,081 companies listed on SHSE and 1,746 companies listed on SZSE. From that, 2,808 were A-shares, and 94 were B-shares. Hence, this study only included 94 companies of A-shares and all the 94 companies of B-shares as a sample. However, this study

would make sure there is no overlapping sample as some of the companies may also have a dual-listing on both the A- and B-share markets at the same time.

As for the second and third research objectives, the sample employed in this study consisted of firms' constituents in the leading world market indices from 55 countries. This study took all the sample in the country primary index if the size is less than 300 as for the size of more than 300 companies, this study will only take 300 of the companies consisted in that significant index. While the dataset for China stock market used in Objective 2 and 3 are the stock prices of the top 300 companies (in term of market capitalisation) listed on CSI 300 Index.

1.9 The Organisation of the Study

The thesis separated into five different chapters. The first chapter will introduce the background of the study highlighting the significance of the study area followed by the problem statement showing the gaps in the field of investigation and the issues addressed in this study through the research questions and objectives of the study. The second chapter will extend the literature regarding the China stock market. Then, variables of the study which are herding behaviour, its spillover effect on the international stock markets and their trading partners and its theoretical concepts explained in details. Chapter two provides a conceptual framework and the development of hypotheses based on the identified research gaps. Meanwhile, chapter three states the research method, and it explains the research paradigm, research design, population and sampling methods, research instruments, data collection procedures and data analysis technique.

Accordingly, chapter four showed finding and result of the study achieved through the various statistical analysis that has been undertaken to establish the preposition and their effects. The last section presents the discussion and the overall conclusion of the study. This final chapter also includes a summary of the research findings, elaborated discussion on the research findings and the implication of the research findings from the research, methodological and practical perspectives. Limitations of this research will be highlighted, recommendations for the future studies will also be given. Chapter five ends with a summary of the overall study.

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