INITIAL PUBLIC OFFERINGS AND PRICING ANOMALIES

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ABSTRACT

Initial Public Offering (IPO) is a form of fundraising through the stock market of which has evolved as an essential platform to study the performance of newly issued shares. In the case of an emerging market like Malaysia, the pricing anomalies that measure the performance of initial return and flipping activity of IPO remain an interesting subject. During the period of Global Financial Crisis (GFC) in 2008-09, it is believed that the market sentiment will affect the initial return of new IPO and oversubscription will be negative, and hence firms will be unwilling to do the new listing on the stock market. However, results from our first paper show that oversubscription is positive and initial return is not necessarily negative. The results dispel the notion that investors should totally shun IPO during crisis period as there are still positive initial returns (offer-to-close) and initial returns (high-low intraday) among the new issues. Next, the second paper of the first three-day initial return shows that there is a positive relationship between the oversubscription ratio and initial return and negative relationship between trading volume and initial return on the first trading day. However, the relationship does not exist on the second and third day of trading. In addition, the trading volume does not act as a moderator that worsens the relationship between oversubscription ratio and initial return. This shows that investors should actively participate in subsequent trading of an IPO. This is because higher participation will bring greater shareholder wealth in the stock market. The third paper touches on flipping activity and heuristic representation, the results show: firstly, the oversubscription ratio has a positive relationship with flipping activity. This is because higher demand makes investors flip more to liquidate the IPO on the first trading day. In contrast, firm size has a negative relationship with flipping activity. Larger IPO firm is more stable in terms of performance, and less risky in terms of business operation; Secondly, heuristic representation influences the relationship between oversubscription ratio and flipping activity. This study dispels the notion that

investors who are active in subsequent trading but not necessarily obtain a profit from the liquidation. Lastly, this thesis explores the IPO of newly established Special Purpose Acquisition Companies (SPACs). If SPACs are liquidated properly, it shows that the SPAC is a workable model for a new listing framework. Shareholders will get back their money and future investors feel comfortable with the fact that the system works. On the contrary, if the policy maker allows an extension for those SPACs which fail to acquire new qualifying assets, it would destroy the market confidence. In conclusion, industry players reckon that SPACs still have a bright future through its controlled experiment, stringent measurement and effective built-in mechanism with numerous safeguards to the processes of SPAC IPOs. In short, this thesis has examined and published the findings of IPOs and contributed to the extant literature of IPOs in the context of emerging markets.

Keywords: initial public offering, global financial crisis, initial returns, heuristic representation, flipping activity

ABSTRAK

Tawaran Awam Permulaan (IPO) adalah satu cara pengumpulan dana melalui pasaran saham yang telah berkembang sebagai platform penting untuk mengkaji prestasi baru saham terbitan. Dalam kes Malaysia, anomali harga yang mengukur prestasi pulangan awal dan Melibas aktiviti IPO masih diperdebatkan kajian ini. Dalam tempoh krisis kewangan, ia dipercayai bahawa sentimen pasaran akan mempengaruhi pulangan awal IPO baru dan oversubscription akan menjadi negatif, dan oleh itu firma tidak akan melakukan penyenaraian baru di pasaran saham. Walau bagaimanapun, hasil dari kertas pertama kami menunjukkan bahawa oversubscription adalah positif dan pulangan awal tidak semestinya negatif. Hasilnya menghilangkan tanggapan bahawa para pelabur harus mengelakkan IPO dalam tempoh krisis kerana masih terdapat pulangan awal positif (tawaran untuk ditutup) dan pulangan awal (intraday tinggi rendah) di antara isu-isu baru. Seterusnya, kertas kedua bagi pulangan awal tiga hari pertama menunjukkan bahawa terdapat hubungan positif antara nisbah oversubscription dan pulangan awal dan hubungan negatif antara jumlah dagangan dan pulangan awal pada hari dagangan pertama. Walau bagaimanapun, hubungan itu tidak wujud pada hari kedua dan ketiga dagangan. Di samping itu, jumlah dagangan tidak bertindak sebagai moderator yang memperburuk hubungan antara nisbah oversubscription dan pulangan awal. Ini menunjukkan bahawa para pelabur perlu mengambil bahagian secara aktif dalam perdagangan IPO berikutnya. Ini kerana penyertaan yang lebih tinggi akan membawa kekayaan pemegang saham yang lebih besar dalam pasaran saham. Ketiga, perwakilan heuristik untuk meningkatkan hubungan antara nisbah lebihan langganan dan aktiviti Melibas. Pelabur dibenarkan untuk mencairkan IPO pada hari pertama dagangan. Pembubaran bergantung kepada pelbagai sentimen pelabur sebagai keadaan pasaran kewangan berubah seperti kenaikan kadar faedah di Amerika Syarikat, krisis kewangan atau pengumuman keuntungan oleh syarikat. Oleh itu, pelabur yang berbeza mempunyai

pertimbangan yang berbeza mengenai perdagangan IPO dan harga apabila keadaan pasaran kewangan berubah. Ini akan menyebabkan turun naik harga dan pelabur boleh mendapatkan keuntungan atau mengalami kerugian. Dalam konteks pasaran Malaysia, ia adalah penting bagi pelabur untuk memahami produk kerana ia adalah berbeza daripada IPO tradisional. Berikutan kegagalan syarikat CLIQ Energy dan Sona Petroleum, pembuat dasar perlu mengkaji istilah dan syarat untuk SPAC. Jika SPAC dibubarkan dengan betul, ia menunjukkan bahawa SPAC adalah model yang boleh digunakan untuk rangka kerja penyenaraian yang baru. Pemegang saham akan dikembalikan modal mereka dan ini akan menarik pelabur masa depan berasa selesa dengan hakikat bahawa sistem ini berfungsi. Sebaliknya, jika pembuat dasar membolehkan lanjutan bagi mereka SPAC yang gagal untuk mengambil alih aset yang layak baru, ia akan memusnahkan keyakinan pasaran. Ia lebih berdaya maju untuk mencairkan jika SPAC tidak dapat untuk mendapatkan tawaran pada masa untuk melindungi pemegang saham dan tidak meletakkan mereka pada risiko dengan membuat transaksi saat-saat akhir. Kesimpulannya, peserta industri menyangka bahawa SPAC masih mempunyai masa depan yang cerah melalui eksperimen yang dikawal, ukuran yang ketat dan mekanisme terbina dalam yang berkesan dengan banyak perlindungan kepada proses SPAC IPO.

Kata kunci: tawaran awam permulaan, krisis kewangan, pulangan awal, perwakilan heuristik, melibas aktiviti

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LIST OF SYMBOLS AND ABBREVIATIONS

IPO	:	Initial Public Offering
SEM	:	Stock Exchange of Malaysia
SES	:	Stock Exchange of Singapore
KLSEB	:	Kuala Lumpur Stock Exchange Berhad
KLSE	:	Kuala Lumpur Stock Exchange
CIC	:	Capital Issues Committee
ISO	:	International Organization for Standardization
CME	:	Chicago Mercantile Exchange
KLCI	:	Kuala Lumpur Composite Index
FTSE	:	Financial Times Stock Exchange
GFC	:	Global Financial Crisis
SPAC	:	Special Purpose Acquisition Company
MSE	:	Malayan Stock Exchange
OSR	:	Oversubscription Ratio

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CHAPTER 1: INTRODUCTION

1.1 The History of the Malaysian Stock Market

Today, Bursa Malaysia is one of the largest capital markets in South East Asia. The history of the development of the stock exchange in Malaysia started from the early 1930s. It was officially formed and named as the Malayan Stock Exchange (MSE) in the 1960s (Arshad & Yahya, 2016). All the public trading of stocks commenced in May 1960 by the clearinghouse of Central Bank. The stock exchange changed its name once again to Stock Exchange of Malaysia (SEM) after the formation of Malaysia in 1963.

At that point in time, the stock exchange was the common trading floor for Malaysia and Singapore. Indeed, the currency rate between Malaysia and Singapore was exchangeable at par (RM1=S$1) and this was known as exchange rate interchangeability. However, exchange rate interchangeability was terminated in 1973 and the Stock Exchange of Singapore and Malaysia was officially separated to become two independent entities.

With the establishment of MSE, Malaysia and Singapore were traded in MSE under a currency interchangeable agreement. Both countries discontinued the single currency and began the respective market entities which are called the Stock Exchange of Singapore (SES) and the Kuala Lumpur Stock Exchange Berhad (KLSEB) in 1973. Kuala Lumpur Stock Exchange (KLSE) was incorporated as a limited company and had taken over the business of KLSEB in 1976.

Following the new formation after the change, the Singapore stock exchange was named as the Stock Exchange of Singapore whereas the Malaysia stock exchange was

named as the Kuala Lumpur Stock Exchange (KLSE) (Arshad & Yahya, 2016). The Capital Issues Committee (CIC) was established to approve, regulate and supervise the issuance of stocks in the stock exchange of Malaysia.

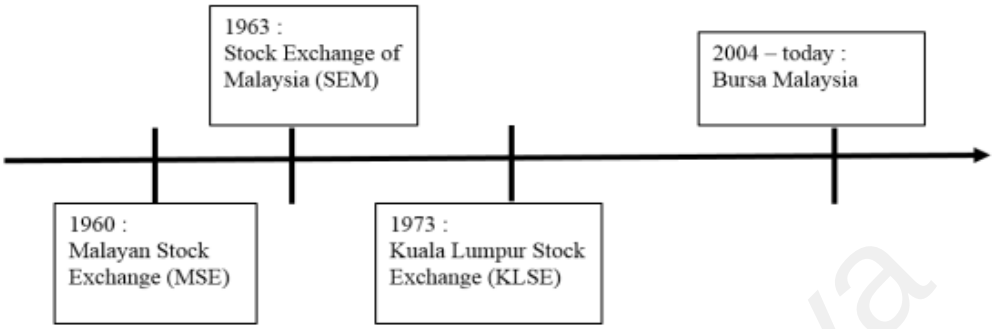


Figure 1.1: Timeline for Formation of Bursa Malaysia

Adapted from: Arshad, M. N., & Yahya, M. H. (2016).

In order to respond to the fast pace of information efficiency and to enhance the competitive advantage in the global capital market, the KLSE was renamed to Bursa Malaysia Berhad in the year of 2004. Subsequently, Bursa Malaysia was listed in the Main Market with the stock name called Bursa Malaysia Securities Berhad in the year 2007. In addition, Bursa Malaysia attained the International Organization for Standardization (ISO) certifications.

Bursa Malaysia Berhad implemented numerous new strategies such as the partnership with Chicago Mercantile Exchange (CME) that aimed at increasing globalization, in the year of 2009. Bursa Malaysia Berhad is the major shareholders holding 75% interest in Bursa Malaysia Derivatives Berhad, and CME holds 25% shareholding. The use of the Kuala Lumpur Composite Index (KLCI) was one of the strategies from Bursa Malaysia to ensure that the evolvement of the market is consistent with that of the global economy.

KLCI was upgraded to the Financial Times Stock Exchange (FTSE) Bursa Malaysia and its role is to be the market indicator for the stock market. Bursa Malaysia worked with the FTSE International Limited to incorporate KLCI to become one of the global indexes that became the more tradable, investable and traceable managed index. This transformation empowers the Malaysian stock market to provide greater opportunities to the local and foreign investors (Bit, Chee, & Zainudin, 2010).

KLCI consists of top 30 listed Malaysian companies in the Bursa Malaysia (Roshaiza, Sisira, & Svetlana, 2009). The overall performance of the stock market in Malaysia is on an uptrend. For instance, the Malaysia Stock Market (FTSE KLCI) index point, in January 2015, is 1781.26 and increased to 1806.42 in February 2015. FTSE Bursa Malaysia KLCI is averaged at 760.57 points from 1977 to 2015. The highest index point was recorded in May 2014 which is approximately 1887.07 and the lowest index point is approximately 89.04 in April 1977.

Bursa Malaysia had recorded a number of 915 listed companies with a total market capitalization of RM1.7 trillion at the end of December 2018 (Bursa Malaysia Annual Report 2018).

1.2 Initial Public Offering (IPO) in Malaysia

IPO refers to the shares of a company that are sold to the public for the first time in the primary market through the securities exchange. The IPO occurs when an ownership structure changes from private firm to the public listed firm. Most of the private firms started the businesses through capital fundraising from the financial institutions; there is no existing liquid market for them. However, if the firms need additional capital to expand the businesses, they will opt to go for public listing through

the capital market, to obtain the fundraising processes needed. This is the best method for a firm to issue shares to a huge number of diversified investors in the capital market. This will increase the liquidity in the subsequent trading from the investors.

In addition, the issuance of IPO incurs some costs such as direct costs and indirect costs. The direct costs include auditing fees, legal fees, and underpricing fees, while the indirect costs include management costs. Both direct costs and indirect costs affect the cost of capital for a firm going for listing. It is a challenge for an underwriter to determine an optimal offer price to sell for the investor on the new issuance of IPO. This is because there is no trading history for the IPO firm in the stock market.

In normal circumstances, the IPO offer price is set lower than the closing price on the first trading day. This is called IPO initial return. A successful IPO subscriber will enjoy a high return from an IPO. This is also an effective strategy to attract more investors to acquire the IPO, especially on the first day of trading and subsequent day of trading. In a short term, it is profitable to subscribe to the IPO during the promotion period. However, the long term IPO initial return is unpredictable and depends on the company performance and economic forces.

1.2.1 Types of Initial Public Offering

In Malaysia, the IPO offers consist of the offer for sale, public issue and the combination of the offer for sale and public issue. Offer for sale of particular IPO refers to the shares that have been offered to the existing shareholders and now there is the offer to sell the shares for the public to buy. Hence, there is no discrepancy on the total paid-up capital as compared to before, and the fund received from the sale of share will not go to the issuance firm.

The purpose of the IPO offer for sale is to restructure the distribution of the firm's ownership such as increasing the number of shareholders, based on the rules and regulations. In addition, the IPO public issue refers to the new shares offered to the public for the first time in the primary market. The investors from the public will subscribe for the new shares, hence, it will increase the paid-up capital and the number of shareholders of the firm.

There are numerous types of conditional IPO issue in stock market such as private placement, tender offer, restricted offer for sale, restricted public offer for sale to eligible employees, restricted offer for sale to the native's investors, special issue to the native's investors and restricted issue to the native's investors. In normal circumstances, these IPO issues depend on the firm's decision and are attached together with the offer for sale or public offer, or both.

1.3 Initial Public Offering Pricing in Malaysia

The setting of IPO offer price consists of the auction, fixed-price offer and book building. The most common price setting of an IPO in the world is the book building method. However, the fixed-price offer is the most popular in the Malaysian IPO. For the auctions, the IPO offer price is determined after the investors submit the bids offered. For the fixed-price offers, the IPO offer price has been set early before the allocation to the investors, shares will distribute to the investors based on the pro rata or lottery basis if there is any excess demand from investors. For the method of book building, the investment banker or underwriter will determine the potential buyers and set the offer price.

1.3.1 IPO Approval Process

The listing process (from the time an adviser/sponsor is engaged to the day of listing) will normally take seven months, depending on the structure and complexity of the listing scheme. Upon approval, six months is given to complete the IPO process. The conceptual timeline for the listing process is as follows:

Table 1.1: Timeline for the listing process

Time Frame	Stages
T (Decided to go public)	Board approves IPO and appointment of advisers Structuring/ pre-consultation with Securities Commission (SC) Malaysia Due diligence/ verification of information Preparation of reports/ applications
T + 11 weeks (Undertake accounting, legal and due diligence process)	Pre-Approval Structuring IPO & submission Finalisation of IPO proposal Preparation of valuation report (if required) Drafting of submissions documents & prospectus
T + 21 weeks (Obtain regulatory approval)	Approval Processing the application Public exposure of prospectus Addressing queries from regulators Visit by regulators to the company's business premises Evaluation & approval by regulators
T + 25 weeks	Post – Approval Registration of prospectus Updating the prospectus Registration & lodgement of prospectus Pre-marketing commences
T + 26 weeks (Market the shares)	IPO prospectus launch Roadshow & book-building exercise
T + 28 weeks	Listing Allocation of shares Trading commences

Source: Bursa Malaysia

1.3.2 IPO Pricing Anomaly

IPO pricing anomaly defined as the estimation of the percentage difference between the price at which the shares subsequently trade in the market (the first day closing price) and the price at which the IPO shares were sold to investors (the offer price or the issue price) and at which the offering was introduced. A firm goes public marks an important watershed in the life of a young company. It provides access to public equity capital and so may lower the cost of funding the company's operations and investments. It also provides a venue for trading the company's shares, enabling its existing shareholders to diversify their investments and to crystallize their capital gains from backing the company, which is an important consideration for venture capitalists.

The act of going public itself shines a spotlight on the company, and the attendant publicity may bring indirect benefits, such as attracting a different caliber of managers. At the same time, the company acquires new obligations in the form of transparency and disclosure requirements and becomes accountable to a larger group of relatively anonymous shareholders who will tend to vote with their feet (by selling the shares) rather than assist the company's decision-makers in the way a venture capitalist might.

1.4 Problem Statements/ Gaps

In this thesis, there are three problem statements or gaps have been identified. First, in recent years, the performance of Malaysian stock market has been affected by numerous factors such as the decline of crude oil prices, the fluctuation of CPO prices and depreciation of Malaysian Ringgit with respect to US dollars. In addition, the listing of IPO had also been affected by Global Financial Crisis (GFC) in 2008/09.

Second, investors who obtain shares from subscription tend to liquidate on the first trading day for quick gain. This causes share price to fluctuate. The underwriter fails to stable the price. Price and volume are important as key indicators to measure the share performance. For volume, the frequency of buy volume and sell volume is used to check for the flipping activity. There are always different behaviors of who are willing to buy and sell the share (buyers are more than sellers or vice versa).

If the share performance is poor, more sellers wish to dispose of the share on the first trading day. Therefore, the price stabilization through flipping activity is needed to deal with the disposal of share by the IPO subscriber on the first trading day.

Third, investors should be aware that SPAC is akin to participating in venture equity where unlike traditional IPOs, SPAC IPOs may promise a higher return to investors. However, like other venture capital, the eventual success of SPAC IPO listing is not certain. There is an investment risk in SPACs because the companies are lack of strong financial record. The time frame of three years set by the Malaysian Securities Commission for the SPAC to make qualified acquisition seems to be too restrictive.

There is a greater tendency for the company being forced to purchase new assets at an inflated price due to the time limit. Therefore, the quality of the acquired asset is in a doubt and this increases the risk to the business. If SPAC fails to acquire new assets, investors will get the refund back from SPAC liquidation. The above problem causes SPAC IPOs to be less attractive to investors.

1.5 Research Questions

Following from the above problem statement, this thesis attempts to address the following questions:

1. How financial crisis affects the IPO pricing?
2. What are the factors that affect flipping activity?
3. Is SPAC a suitable financial tool?

1.6 Research Objectives

Following from the above problem statement, this thesis attempts to achieve the following objectives:

1. To measure the IPO initial return during financial crisis.
2. To analyse the factors that affect flipping activity.
3. To investigate the suitability of SPACs as an alternative financing tool.

1.7 The Scope of the Study

The purpose of the study is to examine the IPO pricing anomalies such as initial return and trading activity. This thesis focuses on two elements, first, the GFC and first three-day performance of IPO initial return. Second, the effect of heuristic representation to the flipping activity. The data used in this thesis is IPOs from 2006 to 2016.

In addition, this thesis uses the theory of IPO asymmetric information and behavioral theories. The IPO asymmetric information explains the key parties to an IPO transaction are the issuing firm, the bank underwriting and marketing the deal,

and investors. Asymmetric information models assume that one of these parties knows more than the others. Moreover, IPO behavioral theory assume either the presence of 'irrational' investors who bid up the price of IPO shares beyond true value, or that issuers suffer from behavioral biases causing them to put insufficient pressure on the underwriting banks to have underpricing reduced.

1.8 Contribution

The successful execution of the research provided a number of significant outcomes and contribute to:

Research objective 1

i. For policy maker. As shown by earlier results, though market sentiment was negative during GFC, there are some profitable IPOs. This result dispels the notion that IPO activities must be put into to a halt during the crisis period. There is still business opportunity in a poor market environment. This research contributes to policymakers of Bursa Malaysia, to encourage more IPO activity that helps in raising capital for the business opportunity in a poor market environment.

ii. For investor. This research contributes to the knowledge of IPO investment as investors were able to obtain positive returns, even though financial markets may be faced with a lot of challenges. Therefore, if investors totally shun the IPO activity, they may lose good investment opportunities.

Research objective 2

i. For policy maker. This research contributes to policymakers of Bursa Malaysia to establish a comprehensive picture of IPO share pricing stabilization and to reduce the unusual "stagging" activities from buying and selling activity.

ii. For investor. This research contributes to investors where investors have to forecast subsequent trading to create substantial market activities.

Research objective 3

i. For policy maker. This research contributes to policymaker of Securities Commission to reframe their merger and acquisition framework and requirement such as incorporate to venture capital before acquisition SPACs enable competitive advantage to acquire assets.

ii. For investor. This research contributes to investors where SPACs provide better protection as compared to traditional IPO, as the listing requirement states that a total of at least 90 per cent of the capital raised from IPO is retained under an IPO trust. In the event of SPAC liquidation, there is a capital guaranteed fund ready for the shareholders.

1.9 Chapter Organization

The rests of this thesis will be shown as follows. Chapter two covers comprehensive literature relating to IPO research study. The study of IPO literature attempts to focus the vital research work in relation to the development of stock market as well as the studies in IPO variables, which have been used as a tool to estimate stock market performance.

In addition, the essence of the IPO literature attempts to encapsulate the important writings relating to this study and the latest literature may also shed some light as to how IPO will develop in the future. However, the research in the aspect of IPO is rather scant, but some notable findings have been made based on the work that has been published.

Chapter three discusses IPO pricing anomaly on the impact of GFC on IPO underpricing in the Malaysian stock market between January 2006 and December 2011. The IPOs are selected based on 144 issues of fixed-price IPOs. The research focuses on three main IPO pricing anomaly which is the IPO initial return (offer-to-close) and high-low intraday initial return. The impact of GFC on IPO underpricing will be tested using multiple regression, dummy regression and hierarchical regression that enables to provide the consistency of the results.

Chapter four discusses impact of oversubscription ratio (OSR) and trading volume on IPO first three-day initial return in Malaysian stock market between January 2001 and December 2016. The IPOs are selected based on fixed-price IPOs. The research focuses on the factors of OSR and trading volume that affect IPO initial return on day one, day two and day three. The impact of flipping activity will be tested using interaction effect and multiple regression that provides consistency in the results.

Chapter five discusses IPO pricing anomaly on the flipping activity in Malaysian stock market between January 2001 and December 2016. The IPOs are selected based on fixed-price IPOs. The research focuses on the factors of heuristic representation that

affect IPO flipping activity. The impact of flipping activity will be tested using multiple regression that provides consistency in the results.

Chapter six discusses alternative tools of financing and the traditional IPO in the Malaysian stock market. An alternative tool of financing such as Special Purpose Acquisition Company is discussed. The research focuses on the success of the implementation of alternative tools IPO that enable the business to get the fundraising.

Finally, chapter seven concludes the comprehensive research paper by revisiting some of the essences within the study. Next is the process of re-evaluating the research objectives and the results based on the earlier hypothesis of the study. In addition, a summary of possible future research will be discussed. The most important is the implementation of the outcomes as it relates to investors, researchers and policymakers.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

2.1.1 The Ideas of Initial Return of IPO

The Initial public offering (IPO) is one of the most important milestones for a firm, it shows how a privately held company becomes a publicly traded company. It provides a new platform for a firm to obtain capital resource for the purpose of business expansion. Hence, this is also the reason the IPO studies are popular in the financial market, especially the study on the initial return, which has been puzzling researchers since the 1970's.

The term usually described is the closing price of an IPO during the first trading day, which is higher than the offer price in the primary market. This phenomenon has been called as an initial return because the IPO seems to be lowered down by the issuer, in order to attract more subscribers. However, the issuer will receive lesser capital from the fundraising if the IPO offer price is set higher.

In order to attract more subscribers from institutional and retail investors to be involved in IPO, offer price has been lowered by the issuers. According to Krigman, Shaw and Womack (1999) this is known as the initial return "substantial money is left on the table" and IPO initial return where the closing price is higher than the offer price on the first trading day. The IPO initial return is in percentage and the formula is IR = $[(P_1-P_0)/ P_0] \times 100$, where P_0 denotes the offer price, P_1 denotes the closing price (Gajewski & Gresse, 2008).

There are numerous explanations of IPO initial return that have been introduced. For instance, IPO initial return can be divided into two main groups such as rational investors or irrational investors. The earlier perception is based on the assumption of rationality of the financial analyst. The asymmetric information theory also suggests that the key economic agent is assumed to have more financial knowledge as compared to others.

In addition, the behavioral approach for IPO initial return has received greater attention recently. The behavioural approach is based on the assumption of occasional irrationality of at least part of the investors. There are periods when the proportion of irrational investors, also called sentiment investors, rises for some reason in the market. The IPO market, due to its specifics, is very prone to sentiment investors since IPO companies are usually young, unknown and therefore hard to value. The irrational investor is affected by the feeling and emotion when coming to the decision making process. Hence, there is a chance for an IPO to be overly optimistic and exuberant and cause the market price above its fundamental value.

The fundamental value is also known as intrinsic value for a security and is defined as *"the present value of the cash flow stream expected from the security, discounted at a rate of return appropriate for the risk associated with the security"*(Chandra,2008). For the IPO, fundamental value is not relevant as the cash flow stream does not take place for the new issue.

The rational investor is based on the expectation to evaluate the fundamental value while it is not applied to the irrational investor. In most of the times, the expected fundamental value is said to be the best estimation of real fundamental value. Hence,

if the IPO is valued based on the expected fundamental value, there is no theoretical reason to support whether it will underperform or overperform in the future.

Another argument of the shift from the traditional theory to the behavioural theory, in that there are still puzzling problems related to IPO initial return, which cannot be explained by the traditional theory. For instance, it can be shown that the IPO with the higher volume brings the higher initial return. It also indicates that the IPO firm wants to issue their share in best timing when the offer price is set lower than the closing price.

The fact is, when the IPO has a high initial return in the market, this indicates the long-term underperformance. The rational investor will price the IPO based on the fundamental value when the IPO is issued, and there will be no reason for the long-term underperformance. This also highlights that the traditional theory based on the rationality of investor is reductant. This is because IPO volume and initial return show extreme performance during the crisis period.

The main player in the IPO process consists of the issuer, underwriter and investor. The underwriter is the intermediary between the issuer (deficit unit) and the investor (surplus unit). There will be one-sided risks if the underwriter limits the new IPO issue at a fixed price. Therefore, underwriter breaks the syndicate when the IPO offering is made at a price lower than the offer price. However, it is impossible to sell the IPO higher than the fixed price, if the demand is higher.

The role of the underwriter lies in terms of the firm commitment or the best efforts basis. In the firm commitment basis, the underwriter will absorb all the leftover IPO

from the issuer and bear the risk for the low demand. From there, the underwriter able to determine the IPO offer price (fixed price). This also represents the purchase price for the underwriter to receive the underwriting spread to cover all costs. In the best efforts basis, the issuer will bear all the risks in selling the IPO issue at a fixed price, but the underwriter receives the underwriting spread to cover costs.

2.2 The Past Research of Initial Return In US and Non-US Markets

Ritter and Welch (2002) review the past IPO studies and classify this into three main categories such as IPO pricing, IPO activity and IPO allocation. The discussion includes the areas of IPO activity and why a firm goes public; IPO pricing and allocation, why the investor is rewarded on the first trading day with substantial initial return; and how the IPO performs in the short run and long run.

The IPO pricing and performance of IPO are examined based on the stock return, which is measured by current market price. During the first trading day, normally investors are able to earn a high return, and this is called underpricing or short run initial return. Meanwhile, during the subsequent trading, normally investors are unable to earn a high return, and this is called overpricing or long run initial return. The performance of IPO includes both short run and long run initial return.

There is strong attention to the IPO initial return from the main players such as the issuer, underwriter and investors. The objective is to maximise the fundraising from the proceeds of IPO. For instance, the investor tries to maximise the wealth through higher share price and issuer tries to maximise the proceeds of IPO. Hence, the IPO initial return helps to achieve the financial goals.

According to Ritter (1991), there are three major IPO initial return in share market such as short-run initial return, long run return and the 'hot issue' IPO initial return. The studies from Stoll and Curley (1970), Logue (1973) and Ibbotson (1975) show the return on first trading day represents the short run initial return. This also indicates the closing price is higher than the offer price of an IPO on the first trading day.

The IPO return for the subsequent trading is known as long-run IPO initial return. The share prices can be lower or higher than the offer price of an IPO. According to Ritter (1991) it shows the negative return in long run performance. Numerous studies also reported with similar conclusion (Gompers & Lerner, 2003; Kooli & Suret, 2004; Omran, 2005; Ahmad-Zaluki, Campbell, & Goodacre, 2007; Ajlouni & Abu-Ein, 2009; Bird & Yeung, 2010; Moshirian, Ng, & Wu, 2010; Thomadakis, Nounis, & Gounopoulos, 2012).

In addition, the IPO return on a cyclical behaviour is known as 'hot issue' IPO initial return and this represents the short run initial return. The first study on hot issue IPO initial return is from Ibbotson and Jaffe (1975), and a similar hypothesis has been done in different countries (Ritter, 1984; Ibbotson, Sindelar, & Ritter, 1994; Loughran & Ritter, 1994; Lowry & Schwert, 2002; Lowry, 2003; Brailsford, Heaney, Powell, & Shi, 2004; Guo, Brooks, & Shami, 2010; Lowry, Officer, & Schwert, 2010).

Dimovski and Brooks (2004) also stated the offer price of an IPO that below the first-day closing price is known as the initial return. The term first-day return and initial return are used interchangeably and has been widely documented in various IPO studies by researchers (Reilly & Hatfield, 1969; McDonald & Fisher, 1972; Ritter & Welch,

2002). The following table 2.1 shows the equally weighted average initial returns for 52 countries.

Table 2.1: Equally-Weighted Average Initial Returns for 52 Countries

Country	Source	Sample Size	Time Period	Average Initial Return
Argentina	Eijgenhuijsen & Van Der Valk; Dealogic	26	1991-2013	4.20%
Australia	Lee, Taylor & Walter; Woo; Pham; Ritter	1,562	1976-2011	21.80%
Austria	Aussenegg	103	1971-2013	6.40%
Belgium	Rogiers, Manigart & Ooghe; Manigart DuMortier; Ritter	114	1984-2006	13.50%
Brazil	Aggarwal, Leal & Hernandez; Saito; Ushisima	275	1979-2011	33.10%
Bulgaria	Nikolov	9	2004-2007	36.50%
Canada	Jog & Riding; Jog & Srivastava; Kryzanowski, Lazrak & Rakita; Ritter	720	1971-2013	6.50%
Chile	Aggarwal, Leal & Hernandez; Celis & Maturana; Dealogic	81	1982-2013	7.40%
China	Chen, Choi, & Jiang; Jia, Xie & Zhang	2,512	1990-2013	118.40%
Cyprus	Gounopoulos, Nounis, and Stylianides; Chandriotis	73	1997-2012	20.30%
Denmark	Jakobsen & Sorensen; Ritter	164	1984-2011	7.40%
Egypt	Omran; Hearn	62	1990-2010	10.40%
Finland	Keloharju	168	1971-2013	16.90%
France	Husson & Jacquillat; Leleux & Muzyka; Paliard & Belletante; Derrien & Womack; Chahine; Ritter; Vismara	697	1983-2010	10.50%
Germany	Ljungqvist; Rocholl: Ritter; Vismara	736	1978-2011	24.20%
Greece	Nounis, Kazantzis & Thomas; Thomadakis, Gounopoulos & Nounis	373	1976-2013	50.80%
Hong Kong	McGuinness; Zhao & Wu; Ljungqvist & Yu; Fung, Gul, and Radhakrishnan; Dealogic	1,486	1980-2013	15.80%
India	Marisetty and Subrahmanyam; Ritter	2,964	1990-2011	88.50%
Indonesia	Suherman	464	1990-2014	24.90%
Iran	Bagherzadeh	279	1991-2004	22.40%
Ireland	Dealogic	38	1991-2013	21.60%
Israel	Kandel, Sarig & Wohl; Amihud & Hauser; Ritter	348	1990-2006	13.80%
Italy	Arosio, Giudici & Paleari; Cassia, Paleari & Redondi; Vismara	312	1985-2013	15.20%

Country	Source	Sample Size	Time Period	Average Initial Return
Japan	Fukuda; Dawson & Hiraki; Hebner & Hiraki; Pettway & Kaneko; Hamao, Packer, & Ritter; Kaneko & Pettway	3,236	1970-2013	41.70%
Jordan	Al-Ali and Braik	53	1999-2008	149.00%
Korea	Dhatt, Kim & Lim; Ihm; Choi & Heo; Mosharian & Ng; Cho; Joh; Dealogic; Lee	1,758	1980-2014	58.80%
Malaysia	Isa; Isa & Yong; Yong; Ma; Dealogic	474	1980-2013	56.20%
Mauritius	Bundoo	40	1989-2005	15.20%
Mexico	Aggarwal, Leal & Hernandez; Eijgenhuijsen & van der Valk; Villarreal	123	1987-2012	11.60%
Morocco	Alami Talbi; Hearn	33	2000-2011	33.30%
Netherlands	Wessels; Eijgenhuijsen & Buijs; Jenkinson, Ljungqvist, & Wilhelm; Ritter	181	1982-2006	10.20%
New Zealand	Vos & Cheung; Camp & Munro; Alqahtani; Dealogic	242	1979-2013	18.60%
Nigeria	Ikoku; Achua; Dealogic	122	1989-2013	13.10%
Norway	Emilsen, Pedersen & Saettem; Liden; Dealogic	209	1984-2013	8.10%
Pakistan	Mumtaz	80	2000-2013	22.10%
Philippines	Sullivan & Unite; Dealogic	155	1987-2013	18.10%
Poland	Jelic & Briston; Woloszyn	309	1991-2014	12.70%
Portugal	Almeida & Duque; Dealogic	32	1992-2013	11.90%
Russia	Dealogic	64	1999-2013	3.30%
Saudi Arabia	Al-Anazi, Forster, & Liu; Alqahtani	80	2003-2011	239.80%
Singapore	Lee, Taylor & Walter; Dawson; Dealogic	609	1973-2013	25.80%
South Africa	Page & Reyneke; Ali, Subrahmanyam & Gleason; Dealogic	316	1980-2013	17.40%
Spain	Ansotegui & Fabregat; Alvarez Otera; Dealogic	143	1986-2013	10.30%
Sri Lanka	Samarakoon	105	1987-2008	33.50%
Sweden	Rydqvist; Schuster; de Ridder	374	1980-2011	27.20%
Switzerland	Kunz, Drobetz, Kammermann & Walchli; Dealogic	164	1983-2013	27.30%
Taiwan	Chen; Chiang	1,620	1980-2013	38.10%
Thailand	Wethyavivorn & Koo-smith; Lonkani & Tirapat; Ekkayokkaya and Pengniti; Vithessonthi	500	1987-2012	35.10%
Tunisia	Hearn	32	2001-2013	24.30%

Country	Source	Sample Size	Time Period	Average Initial Return
Turkey	Kiymaz; Durukan; Ince; Kucukkocaoglu; Elma	399	1990-2013	9.70%
United Kingdom	Dimson; Vismara; Levis	4,932	1959-2012	16.00%
United States	Ibbotson, Sindelar & Ritter; Ritter	12,702	1960-2014	16.90%

Source: Tim Loughran, Jay R. Ritter, Kristian Rydqvist, (2015). *Pacific-Basin Finance Journal, 2*, 165-199.

As shown in table 2.1, extensive research indicate IPO has an outstanding performance and therefore, the initial return remains the popular issue for the empirical research for many decades. The table 2.1 also clearly indicates the long run IPO initial return has been reported negative return (underperformance) and positive return (overperformance) from different countries.

In more detail, the long-run IPO initial return with positive returns can be observed in Malaysia (+17.9%), United States (+11.7%), Korea (+2%) and Sweden (+1.2%) based on the average returns. However, long-run IPO initial return with negative return has been reported more frequently as compared to positive return in different countries.

Moshirian et al (2010) used a large sample of 4,439 IPOs in Asian markets from 1991 to 2004, and the results provide a comparative assessment on the short run and long run IPO initial return. For instance, China (202.63%), Korea (70.3%) and Malaysia (61.81%) show a better performance as compared to financial hubs countries such as Hong Kong (21.43%), Japan (34.04%) and Singapore (33.10%).

Sohail, Raheman, and Durrani (2010) uses 73 IPOs from Karachi Stock Exchange from 2000 to 2009. The results indicate the IPO in Pakistan showing a positive

abnormal return to investors on a short run basis in different economies such as normal, boom and recession. Banerjee, Hansen, and Hrnjic (2009) show a short run of positive return for 18 countries from 2000 and 2006.

Chan, Wang, and Wei (2004) uses 570 A-shares and 39 B-shares in Chinese IPOs from 1993 to 1998. A-share is available for domestic investor and B-share is available for the foreign investor. The results show a high initial return of 178% from A-share of IPO on the first trading day. In contrast, the initial return for B-share of IPO is 11.6%, which is much lower than A-share on the first trading day.

Numerous researchers have studied the IPO research from US market extensively over the last two decades. Johnston and Madura (2002) show 78.5% of the initial return of 366 IPOs from internet firm as compared to non-internet firm for the period of 1996 to 2000. In contrast, the degree of initial return of internet firm is not significantly different after the demise of the internet sector. Loughran and Schultz (2006) and Ritter and Welch (2002) show the initial return of 18.1% and 18.8% respectively and Ibbotson (1975), Ritter (1987) and Ibbotson et al (1994) show the initial return between 11.4% to 47.8% on the first trading day in the United States.

In addition, the Australian IPO market has also been widely examined over the past years. Finn and Higham (1988) show the Australian industrial and commercial IPOs with the initial return of 29.2%. Lee, Taylor, and Walter (1996), How, Izan, and Monroe (1995) and Dimovski, Philavanh, and Brooks (2011) show the IPO initial return from industrial sector in the short run is 11.86%, 19.74% and 29.6% respectively.

However, Dimovski and Brooks (2008) and How (2000) show the Australian mining IPO initial return of 13.3% and 107.18% respectively. Dimovski and Brooks (2005) and Dimovski and Brooks (2004) show the Australian mining and energy IPOs and industrial and resource IPOs initial return are 17.93% and 25.6% respectively on the first trading day.

Da Silva Rosa, Velayuthen, and Walter (2003) show the initial return of venture-capital-backed and non-venture-capital-backed IPOs are 25.47% meanwhile Gong and Shekhar (2001) show the initial return of privatised IPOs is 11.96%. The results are consistent with Bird and Yeung (2010) and Bayley, Lee, and Walter (2006) with the Australian IPO initial return of 37.35% and 26.72% respectively. Loughran, Ritter, and Rydqvist (1994) show the initial return of Australian IPOs on average is 20% for the period 1976 to 2006.

In Australia, the level of initial return is varied and it depends on the sample size and period. The study from Gong and Shekhar (2001) show higher initial return is reported from a large sample size. A higher initial return is shown in developed countries such as Australia, European countries, the United Kingdom and the United States but except for Germany, Ireland, Poland and Switzerland.

On the other hand, the sample size is used to calculate the initial return in Germany, Ireland, Poland and Switzerland are lower than the initial return in Australia. However, the initial return in Chile, Egypt, Hong Kong, Mexico and Turkey are higher than the initial return in Australia. In normal circumstances, the IPO initial return from developed countries is more stable and consistent as compared to emerging markets.

This is because the market from developed countries is less volatile, especially on the IPO first trading day.

The literature shows short run IPO initial return is a universal persistent phenomenon. According to Ritter and Welch (2002), about 70% of the IPOs are closed at the price higher than the offer price on the first trading day, while 16% of the IPOs are seen with the zero initial return. However, there are few IPO studies that show IPOs are closed at the price lower than the offer price in the short run (Stigler, 1964; Shaw, 1971). For instance, the study from Ibbotson (1975) shows 11.4% initial return from 1960 to 1969. The results also indicate positive initial return because of the offered price is being set in lower and investors overvalued the IPO.

The research on long-run IPO initial return is not popular as compared with short run IPO initial return. However, poor IPO initial return remains a debatable issue because of the conflicting and controversial findings. According to Ibbotson (1975); Jenkinson and Ljungqvist (2001); Gompers and Lerner (2003), show IPO has no abnormal return in the long run and concludes the market efficiency hypothesis in the long run. In contrast, Bird and Yeung (2010); Da Silva Rosa et al (2003); Thomadakis et al (2012) show IPO has an abnormal return in the long run.

Moreover, Gompers and Lerner (2003); Kooli and Suret (2004); Ahmad-Zaluki et al (2007); Abukari and Vijay (2011) show there is no IPO abnormal return when different performance measurement or methodologies are used. Ritter (1991); Lee et al (1996); How (2000) show IPOs underperform considerably in the long-run IPO market. The results from Ritter (1991) show the long-run performance of US IPOs is negative returns. However, he also shows the average holding period return of 34.47% with

1,526 IPOs from 1975 to 1984. According to Omran (2005), the results show the long-run performance is 41% return of Egyptian IPOs between 1994 and 1998 over one year period and negative return over three years and five years.

According to Johnston and Madura (2002), the IPO long-run performance of internet firm is positive at the beginning but becomes weaker over the time. In more detail, they also found the IPO long-run performance of internet firm in the United States is declining over time. This is because the market performance is also underperformed and causes the decline of IPO return.

In addition, Boabang (2005) studies the opening, short-term, medium-term and long-term Canadian unit trust IPOs performance with a total sample of 83 listed in the Toronto Stock Exchange from 1990 to 2000. The study concludes Canadian IPOs are fairly priced but underperformed the Canadian market in the long run. The Canadian unit trust IPO market is inefficient in the short and long term but is efficient in the medium term.

Cai, Liu, and Mase (2008) examined the long run performance of IPOs listed in the Shanghai A-share stock market from 1997 and 2001. The results show the long run performance of IPOs having a negative return of 30%. The result is consistent with the study from Ajlouni and Abu-Ein (2009) which show that Jordanian IPOs also reported the negative return in the long-run performance.

They conclude that IPOs from service companies perform better than industrial companies. However, both industries obtain IPO negative return. According to Chan et al (2004), Chinese A-share IPOs have underperformed and B-shares have outperformed

the benchmark portfolios in long-run. Alvarez and Gonzalez (2005) also show the negative long run stock returns in Spanish IPOs.

The study from Kooli and Suret (2004) show Canadian IPOs have negative return in the long-run with a sample of 445 IPOs from 1991 to 1998. The negative return is because of the different methodologies used and the weighting schemes. The results are consistent with Moshirian et al (2010) show the existence of long-run negative return for Asian IPOs depend on the methodology used for assessment.

In contrast, Ahmad-Zaluki et al (2007) show a positive return in the long-run with a total of 454 Malaysian IPOs from 1999 to 2000. They explain the results of long run performance are in line with the underperformance phenomenon when the return is calculated based on the company benchmark. However, the results will be changed when different methodologies and benchmarks are used for the assessment.

In the study from Australian IPOs, Finn and Higham (1988) and Lee et al (1996) found the industrial IPOs with the long run negative return of 6.52% and 51.58%. How (2000) shows the mining IPOs with the long run negative return of 7.6%, meanwhile Dimovski and Brooks (2004) show the industrial and resource IPOs with the long run negative return of 4.6%. However, the results contradict with Da Silva Rosa et al (2003), Bird and Yeung (2010), they show the Australian IPOs with 12% positive return in long run.

2.3 The Ideas of Flipping Activity of IPO

To understand IPO flipping, we must first discuss the basic mechanics of the IPO process. The company that wants to go public will want to sell stock, or equity, to

outside investors for the first time, by hiring several investment banks that work together in an underwriting syndicate to market the stock to institutional investors at the initial public offering price.

The underwriters must first buy the shares from the company, then sell them to investors in order to earn an underwriting fee. These initial sales volume are very large, and therefore require multiple underwriters and that is why they target institutional investors with deep pockets. On the day the company goes public, those institutional investors can either hold or sell all or some of their shares. If they sell, it is considered flipping, since they held the stock for such a short time.

So an IPO flipper is someone who buys an allotment of shares in the primary market of a company going public and then sells those shares right away in the secondary market instead of holding onto them. The temptation to sell shares is strong, since the opening price is often significantly higher than the IPO price, creating the possibility for a quick and easy profit.

Sometimes stocks that pop on day one retain their value, and other times they plummet. Flippers are not interested in holding on to newly issued stock long. Wanting to make a quick and easy profit is not the only reason to flip, but to understand why, it must be kept in mind that most IPO shares go to institutional investors, who manage their investments differently than retail investors.

According to Fishe, 2002, institutions often flip if do not receive a large enough allocation to assign an analyst or manager to follow the holding. For example, an institutional investor may feel that it needs 50,000 shares to justify monitoring the

stock. If the institution is allocated 40,000 shares, it will probably buy 10,000 more in the aftermarket to meet that threshold. However, if it is allocated only 10,000 shares, it will probably sell them.

Flipping might seem like it would have originated during the excitement of the dotcom bubble, but it has always been a concern because of the average initial return of IPOs, Fishe (2002). More was heard about the problem during that time because the dotcom initial return was quite substantial and so there was a much greater incentive to flip.

Underwriters want to control who flips stock in an IPO and how many shares get flipped, (Fishe, 2002). They need to have a reasonable estimate of how much of the allocation is expected to trade once the stock opens. For the most part, companies that are going public want underwriters to find buyers who want to hold the stock and possibly increase their holdings later if the company does well. Flippers do not fit this description and are thought of as sellers, not buyers. However, companies need some of their shares allocated to flippers to facilitate trading on the first day.

Flipping generates trading activity. Without flippers, there would be no stock for retail investors and the general public to buy on the secondary market. However, underwriters must determine the mix of buyers and the offer price that will lead to strong after-market performance for the newly issued stock. If there are too many shares flipped, the extra supply could flood the market and lower the stock's price.

If the IPO is weak, meaning that the stock's after-market price falls below the offering price, underwriters may have to purchase back flipped shares to shore up

the price. This price support is not only good for the newly public corporation but also for the underwriters and the IPO subscribers who did not flip their shares.

With the exception of the lock-up period that prevents company insiders from selling newly issued stock for several months after the IPO, there is no government regulation prohibiting flipping IPO shares. However, the market imposes formal and informal checks on IPO flippers.

Underwriters may also be on the hook to buy up flipped shares if prices drop too much. If an underwriter learns that a client broke a promise not to flip, the underwriter may not offer the client shares of the next IPO it sells. Clients that plan to flip their shares will usually let the underwriter know because they do not want to jeopardize future business opportunities.

The second form of market regulation comes in the form of brokerage guidelines to customers. The brokerage may limit which of its customers can participate in an IPO by requiring that the customer hold a minimum amount of assets (such as $500,000), and that they've surpassed a certain number of trades in the last year. In other words, the brokerage's biggest customers get preferential treatment when it comes to buying IPO shares.

Brokerage firms also are required by law to make sure that only sophisticated clients who understand and are able to manage the high risks of participating are included in an IPO purchase of shares, and clients with low balances are not likely to fall into this category. In addition, brokerage firms typically do not receive large IPO allotments to sell to retail investors. Underwriters allot most shares to institutional

and wealthy investors who are capable of buying in large quantities, assuming high risks and holding the shares long term. With a limited quantity of shares, brokerage firms have to be picky about whom they offer them to.

If a customer qualifies and is lucky enough to acquire shares, the brokerage may let the client know that while he or she is free to sell those shares at any time, doing so within the first two to four weeks after the shares begin trading in the secondary market will be considered flipping and will make the client ineligible to participate in future IPOs for several months to a year. Repeated offenses can result in penalties as severe as a lifetime ban on IPO participation with that brokerage. Would-be flippers should understand how the brokerage they trade IPO shares through, defines flipping and what the consequences will be if they decide to flip.

IPO flipping is not all bad. In fact, flippers are essential to an initial public offering's success in that they quickly make shares available in the secondary market. It would not look good if a newly public company saw no trading activity in its stock. The key is to control the amount of trading by trying to determine ahead of time which investors seeking IPO allotments want to buy and hold and which want to flip.

2.3.1 The Process of Flipping Activity

Underwriters perform a number of functions in the IPO process. They initially start by doing due diligence and examining every aspect of the issuing company. The underwriter also arranges the road show, after which the offering is priced. The book-building procedure is used on Wall Street to determine the price and allocation of an IPO. At the road show, senior managers of the issuing company make presentations to potential investors.

For example, the Goldman Sachs road show before their IPO in May 1999 involved 38 cities, 18 countries, 63 one-on-one meetings, and 27 group meetings to approximately 1,100 institutional investors. During the road show, the investment bank starts to build the book and gets a sense of the demand for the offering and the type of investors interested in buying it.

Based on information provided by potential investors, the underwriter decides how to price the issue and whether to revise the filing range. At this time, investors might also indicate what they will do with their shares. For example, an allocation of only 50,000 shares may be too small for the portfolio of a large mutual fund. Therefore, the mutual fund manager has the option of either buying more shares in the aftermarket or unloading the initial allocation for a quick profit.

Investment banks keep track of flipping activity by investors because the immediate reselling of shares in the aftermarket can exert downward pressure on the stock price, particularly for weak offerings. The lead underwriter considers the impact of flipping in pricing the offering. The road show and the book-building process help the underwriter to estimate demand for an offering.

Offerings that are oversubscribed by several times can absorb the flipped shares and still result in the aftermarket price rising above the offer price. Investment banks are frequently pleased to see flipping in hot IPOs because this generates trading commissions for the firm. However, in the case of weak offerings, they do not want investors to flip the stock. Flipping in weak offerings creates selling pressure that can lower the price even below the offer price.

This forces the underwriter to engage in stabilization activities to prevent the stock price from falling below the offer price. Investment banks then have to end up buying flipped shares in the aftermarket. Excessive flipping also implies that shares are not placed with long-term investors and this disappoints the issuer. However, too little flipping can result in a lack of market liquidity and problem in price discovery. It can also mean lower trading profits for market makers in the stock (Ellis, Michaely, O'Hara, 2000).

Consequently, investment banks use a number of methods to deter flipping. These include penalizing flippers by excluding them in future deals (just the threat itself can work) or imposing penalty bids. In a penalty bid, the lead underwriter takes away the commission paid to a syndicate member for selling shares (part of the gross spread) that were flipped by its customers. Each syndicate member receives a selling concession based on the number of shares it sells/distributes.

If the syndicate member's customers flip their shares, then the selling concession on those shares is forfeited and credited back to the lead underwriter. The syndicate investment bank in turn takes the commission away from the broker who sold the shares. The lead underwriter decides whether or not to assess a penalty bid. Questions have been raised about the use of penalty bids and whether they are assessed only for shares flipped by retail customers.

The first report, which is sent only to the lead underwriter, contains a list of all syndicate members whose allocated shares were flipped. This report is generated daily in either hard copy or machine-readable format and contains the sale price, trade date,

number of shares, and the clearing agent's participant number. This report does not contain detailed information about customers for other syndicate members. The second report, which is sent to each syndicate member (including the lead underwriter), contains details of the sales transactions of institutional and retail customers.

Although tracking can continue for as long as 120 days, the lead underwriter can request to stop it at any time, and the tendency is to stop it earlier. Even for IPOs that considerably increase in price, the practice is to track for 30 days. In such cases, penalty bids might not be imposed, but investment banks like to collect the information for future use.

If a customer has positions in the same security purchased in both an IPO and in the secondary market, then shares from the secondary market purchase are used to complete delivery first and are not considered flipped. The IPO Tracking System allows monitoring in a book-entry method and also eliminates the need to distribute physical certificates. The Securities and Exchange Commission approved the system reasoning that it should further aid in the efficiencies of the clearance and settlement system.

2.4 The Past Research of Flipping Activity in US and Non-US Markets

An important phenomenon commonly associated with the issuance of the IPOs is significant initial return, whereby IPOs are typically priced at substantial discounts from the values that prevail in the aftermarket (Ritter, 1984; Loughran et al. 1994). Apart from the positive abnormal initial returns, IPOs also exhibit an extremely high trading volume in the immediate aftermarket.

The findings of Aggarwal (2003) demonstrate that trading volume in the first few days after an IPO is extremely high but drops off quickly. The study finds that trading volume in the first two days is on average 81.97%, with a median of 74.10%. Similarly, Ellis (2006) finds the mean and median numbers of shares traded against the size of the offering are 76% and 67%, respectively.

It is generally believed that a large proportion of the high initial trading volume is due to the 'flippers', as Aggarwal (2003) and Ellis (2006) term investors who receive allocations of IPO shares during the offering and immediately liquidate their allocations in the first few days after the IPOs begin trading. Ellis (2006) discovers that flippers tend to sell their shares to exploit the high prices in hot IPOs and stabilise their holdings in cold IPOs. An earlier study on flipping activities by Krigman et al (1999) finds that, for the period of 1988 to 1995, flipping contributes to 45% of the first-day trading volume for cold IPOs, but only 22% for hot IPOs, in the US market.

In a study of the same market, between 1997 and 1998, Aggarwal (2003) finds contradictory results. First, Aggarwal finds that flipping accounts for only 15% of shares offered during the first two days of trading. This implies that flipping activities contribute to a smaller proportion of the actual trading volume. In addition, Aggarwal (2003) suggests that the flipped shares are traded several times, resulting in a churn in volume.

Therefore, the high volume does not occur due to the proportion of shares sold by the original owners but is a result of trading churn by market investors. This finding is supported by another study on Australian IPOs by Bayley et al (2006). Defining

flipping as the reselling of IPO shares during the first three days of trading, the study finds that flipping only accounts for a small proportion (22.07%) of trading volume.

This result suggests that the small effect of flipping is not unique to NASDAQ IPOs, as reported by Aggarwal (2003). Bayley et al (2006) also find that 51.9% of day trades are the result of post-listing trading. Another finding made by Aggarwal (2003) that differs from Krigman et al (1999) is that hot IPOs are flipped more than cold IPOs.

Ellis (2006) also studies NASDAQ IPOs, but for a period that is one year ahead of those considered by Aggarwal (2003), and finds results that are more consistent with Krigman et al (1999). Specifically, Ellis (2006) examines abnormal trading activities during the first two days after the IPOs are listed. The findings of the study demonstrate that most trading activities in hot IPOs.

From previous studies, such as Aggarwal (2003) and Bayley et al (2006), it is found that only a small proportion of the immediate aftermarket trading volume is due to flippers, and other factors must exist that contribute to the enormous trading volume in the immediate aftermarket. The possible factors include the degree of initial return and the offering characteristics of the IPOs.

Bayley et al (2006) find that initial return and hot issues have a positive impact, while size has a negative impact on trading volume. In Boehme and Colak (2012), low priced IPOs that are issued in a hot market but are not supported by venture capitalists and prestigious underwriters are found to suffer higher idiosyncratic risk and short sale constraints, while simultaneously enjoying higher liquidity.

Similarly, Ellis (2006) finds that the relationship between initial returns and the compositions of trading volume is significantly positive, except for those involving interdealer selling. Other studies that report positive relationships between initial returns and flipping activity in the immediate aftermarket include Miller and Reilly (1987) and Schultz and Zaman (1994). Other than initial return, underwriter reputation and pricing revisions from the filing price to the offer price also explain IPO trading activity in the aftermarket.

Most studies in the literature on flipping activity and subsequent aftermarket trading volume of IPOs have focused on developed stock markets. Within the scope of our literature review, little attention has been devoted to studying this issue in emerging market IPOs, such as Malaysia.

Previous studies on Malaysian IPOs, including Yong (1996), Jelic, Saadouni and Briston (2001), Yong, Yatim and Sapian (2002), Yong and Isa (2003), Wan-Hussin (2005) and How, Jelic, Saadouni and Verhoeven (2007) consider issues relating to factors that influence the initial premiums of IPOs.

Similarly, Yong (2007) examines investor demand, size effects and the performance of IPOs. Yong, Yatim and Sapian (2001) examine the short term performance of IPOs, while Dawson (1987a), Dawson (1987b), Ku Ismail, Zainal Abidin and Zainuddin (1993), Wu (1993), and Yong (1997), Ahmad-Zaluki et al (2007) study the long term performance of IPOs.

More recent studies attempt to explain IPO initial return using contemporary issues, such as regulation (Mohd, 2007), shari'ah compliance (Abdul Rahim & Yong,

2010) and flipping activity (Yong, 2010). Others such as Low and Yong (2011) relate IPO initial return and cold markets to interest (over-subscription) in the IPOs. The present study differs from previous studies, as it examines the IPO anomaly from the quantity (volume) perspective and the price (returns) perspective during GFC.

Additionally, the present study differs from Yong (2010), as it focuses on the explanation of IPO aftermarket trading volume (immediate and subsequent) by associating it with flipping activity. Underwriters in the U.S. frequently play a significant role in the aftermarket, standing in as a market maker to provide an initial source of liquidity. In addition, underwriters often stabilise the aftermarket through net buying in order to offset the downward price pressure from flipping, particularly in weak offerings (Carter & Dark, 1993).

The cost that flipping imposed on U.S. underwriters is potentially high. Significant inventory risks can be accumulated when an offering is poorly received. In addition, underwriters also risk inventory losses arising from reselling flipped shares in a declining market. Correra (1992) highlights that underwriters attempt to vigorously deter flipping. He suggests that underwriters are at "war against IPO flippers" noting that it is the "aim of underwriters is to thwart out those nefarious types, who buy a new issue and dump it quickly"

Flipping is also a problem in U.S. syndicates. Co-managers, who play an important role in the distribution of the offering, have a minor role in the aftermarket relative to lead underwriters. This provides an incentive for co-managers to allocate shares, particularly in cold issues, to flippers, waiving the costly search of placing shares with long-term buy and hold investors (Hanley, Lee, & Seguin, 1996).

Positive aspects of flipping have also been identified in the literature. Flipping provides aftermarket liquidity, which may decrease the cost of trading and lower the issuing firm's cost of capital (Booth & Chua, 1996). Fishe (2002) models the impact of flipping for a profit maximising underwriter in the aftermarket.

With a combination of a naked short position and allocating shares to investors identified as flippers in a weak offering, Fishe shows that underwriters can gain through covering their short position from a suppressed aftermarket price caused by flipping. Other economic benefits arising from flipping include aftermarket-trading profits (Ellis et al. 2000). For these reasons, U.S. underwriters seek to limit flipping, particularly in circumstances that would adversely affect stabilisation efforts, but not eliminate it.

Field (1995) finds large variations in institutional holdings of IPOs several months after the offering. The results demonstrate that because there are variations in IPO allocations and in the amount of flipping activity, the findings of Field (1995) and of Hanley and Whilhelm (1995) document that institutions are allocated similar proportions of both weak and strong offerings are not inconsistent. Institutions may be initially allocated similar percentages in most IPOs but after six months their ownership can be different due to the larger proportion of flipping in very hot IPOs.

Benveniste and Spindt (1989) argue that investment banks favor allocating shares to informed investors in order to induce them to reveal their private information. Cornelli and Goldreich (2003) find that higher allocations are given to those institutional investors who participate regularly and to those who provide more information (for example, a limit price). The winner’s curse model proposed by Rock

(1986) predicts that informed investors are allocated a larger proportion of underpriced IPOs.

Brennan and Franks (1997) suggest that allocation is done to ensure dispersed ownership. However, Stoughton and Zechner (1998) argue that allocating shares to large blockholders helps to increase firm value and institutional participation is necessary for an IPO to be successful. Hanley and Whilhelm (1995) and Ljungqvist and Wilhelm (2002) find that institutions are allocated almost two-thirds of an offering.

2.5 Theoretical Concept

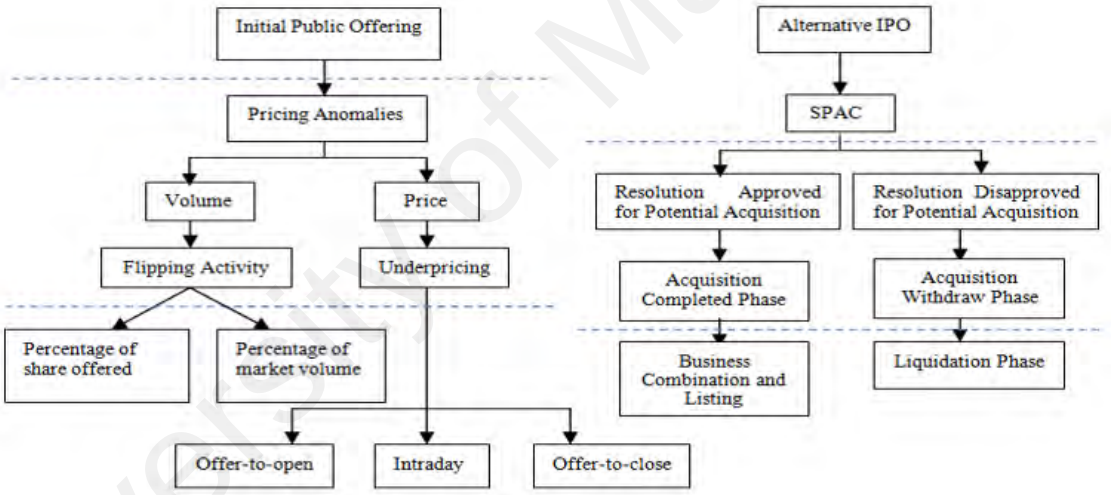


Figure 2.1: IPO Theoretical Framework

Figure 2.1 shows the theoretical framework for IPO. The IPO pricing anomaly can be divided into volume and price. For IPO volume, most of the studies focus on flipping activity to understand the investor's sentiment. Flipping activity is the percentage of share offered over the percentage of market volume, it represents the trading behaviour of the investors. For IPO pricing, most of the studies focus on underpricing to compute the initial returns such as offer-to-open, intraday and offer-to-close.

In addition, a new trend to traditional IPO known as Special Purpose Acquisition Company (SPAC) in the emerging Asia. SPAC is established with the intention of asset acquisition, merger, and other business combination. It provides greater liquidity for the flow of fund and trading volume through the stock market, and this financing tool enhances the market efficiency.

2.6 Theoretical Discussion

The decision to go public is one of the most important in corporate finance. The conventional wisdom is that going public is simply a stage in the growth of a company. Although there is some truth in it, this theoretical framework alone cannot explain the observed pattern of listings such as initial return or flipping activity. Even in developed capital markets, like the U.S., some large companies are not public. In other countries, like Germany and Italy, publicly traded companies are the exceptions rather than the rule, and quite a few private companies are much larger than the average publicly traded company. These cross-sectional and cross-country differences indicate that going public is not a stage that all companies eventually reach, but is a choice. This begs the question of why some companies choose to use public equity markets and some do not.

The firms can provide the financial sources which they need to make investments, sales etc. through internal and external sources. At the early stages of establishment most of the firms prefer the internal sources. The reason is that the value of a young firms depends on the growth potential more than assets, it is hard for the investors to value these firms correctly. From the firm's point of view, internal finance is the source that the problems arising form information asymmetry is minimum.

However the scare internal sources will restrict the growth potential of a firm. In developed countries especially in the USA, one alternative for these firms is the SPACs or venture capital. Both are not valid for most of the developing countries. For a successful offering in the going public process, and getting funds with low cost, the timing and the pricing would be important. It is also important for the success of the secondary offerings and diminish the cost of funding.

2.7 Conclusion

The evidence from the survey of literature indicates that investors, issuers and underwriters are placing an essential on IPO. In fact, underwriters have focused and are looking to solve the problem of IPO pricing anomaly that is considered more complicated than the past decade. The example of pricing anomaly is the IPO initial return and flipping activity which are becoming of greater concern amongst underwriters. This is the latest trend despite the fact that research has argued for more robust and comprehensive information for IPO trading.

From an underwriter point of view, it would be necessary for investor and issuer to study the implications of pricing anomaly on the IPO trading. Nonetheless, investor and issuer need to perceive the lack of control and trading behaviour from the irrational investor in IPO subsequent trading. Furthermore, more research has to be undertaken to evaluate whether IPO pricing anomaly in the emerging market, does in fact perform in a "stagging" way in comparison to advance capital market, as this will influence the growth of the economy.

In conclusion, the outcomes from the survey of past literature show that there are numerous opportunities ahead to the study of the IPO pricing anomaly. This will

necessitate researcher to have a deeper understanding of contemporary trading behaviour to evaluate IPO, but also the distinctive nature of business fundraising.

CHAPTER 3: IPO PRICING ANOMALY: THE IMPACT OF GLOBAL FINANCIAL CRISIS ON IPO INITIAL RETURNS

3.1 Introduction

The stock market plays an important role of resource allocation by allowing capital to flow into industries that need funds for expansion, growth, and diversification. In the context of emerging markets, funds are needed than ever before for various commercial projects as the purchasing power of middle-class increases in line with the pace of globalization. In order to attract institutional and retail investors to participate in Initial Public Offering (IPO), offer price has been lowered by the issuers. This has attracted many researchers to study the issue of IPO underpricing. Many studies have shown that initial return of IPO shares, on average, are significant in which the offer price of IPO shares are substantially lower than the closing price on the first day of trading (McDonald & Fisher, 1972; Ibbotson, 1975; Ritter, 1984; Koh & Walter, 1989; Kim, Krinsky, & Lee, 1993; Mohan & Chen, 2001; Kim, Kish, & Vasconcellos, 2002; Kim, Kish, & Vasconcellos, 2004; Loughran & Ritter, 2004; Kerins, Kutsuna, & Smith, 2007; Krishnamurti & Thong, 2008; Chambers & Dimson, 2009; Tan, Dimovski, & Fang, 2015).

In normal circumstances, a high level of underpricing attracts more investors to subscribe to the IPO. According to Yong (2007), many variables have been tested and used to explain the level of underpricing such as oversubscription, the winner's curse, earning management, ownership structure, firm size, IPO type, venture capital and corporate governance (Wang, Wang, & Lu, 2003; Kim et al. 2004). Among these variables, the OSR is found to explain the underpricing of the IPO. However, the

demand of investors on IPO can also be affected by an economic event such as the Asian Financial Crisis in 1997/98 and the GFC in 2008/2009.

According to Lucia and Bernadette (2012), the financial crisis started immediately after the US mortgage prices dropped significantly in 2006 and 2007, and caused substantial losses in the subprime mortgage crisis. The aftermath of Lehman's shock in September 2008 led to the eventful occurrence of the GFC which affected the world financial markets including Malaysia in 2008 and 2009.

However, there is limited existing literature has examined the impact of financial crisis on IPO initial return. Hence, this study aims to fill the research gap in the context of an emerging market. Malaysian IPO makes an interesting subject to study the IPO issue. Firstly, the Malaysian stock market as grown to be the world's fourth largest center for IPOs in 2012 with the total capital raised around USD 7.56 billion, overtaking financial hubs like Tokyo and London according to data compiled by Bloomberg. Secondly, among the 17 new IPOs, three new issues, namely Felda Global Ventures Holdings Bhd. (FGV), IHH Healthcare Bhd. (IHH) and Astro Malaysia Holdings Berhad (ASTRO) raised a total amount of USD 6.8 billion in 2012.

In our study, the underpricing of IPOs based on initial return (offer-to-close) of which is essential to determine the impact of the financial crisis are compared with the initial return from pre and post-crisis periods. In this respect, the relationship between the financial crisis and IPO underpricing can be measured. Lastly, this study will examine whether the GFC serves as a moderator in affecting the relationship between underpricing of IPO and oversubscription ratio. This study contributes to the extant

literature on IPO underpricing amidst GFC as investors are interested to know whether the crisis exerts any impact on new financing in emerging markets.

While finance literature has recorded the incidence of underpricing on the first day of IPO debut. This may not be the case during the GFC when the price is traded below the offer price. This certainly affects the investor demand as well as the sentiment in the trading activities. Hence, it is a common practice that underwriters attempt to stabilize the IPO price on the first day of trading.

As market sentiment changes along the day, investors dispose the IPO issue at the highest price or lowest price on the first trading day. Hence, liquidity in trading activities is essential for IPO. The trading activities of IPO are more active when investors are able to dispose of the highest price or potential investors are able to buy at the lowest price.

If the stock market offers greater transparency in terms of IPO trading information, the market will be able to attract more investors and provide lower liquidity risk. For instance, international financial hubs such as Tokyo and London are more transparent in terms of trading information and hence, more companies are interested to do their IPOs in these markets, especially in the post-crisis period when the global economy is recovering.

European stock markets are the top IPO performer among the global stock markets in 2014, followed by the US stock markets and Asia-Pacific stock markets. However, Malaysian IPO initial return is affected by numerous factors such as the decline in crude

oil prices, volatility of crude palm oil prices and the depreciation of Ringgit Malaysia against US dollars.

Albeit the above discussion, the corporate action of an IPO is still the most important factor. For instance, higher subscription of an IPO allows an investor to obtain abnormal returns as the IPO offer price is set below the intrinsic value by the issuer. In addition, investors may liquidate the share on the first day of trading to gain a quick profit (McDonald & Fisher, 1972; Ritter, 1984; Kim et al. 1993; Koh & Walter, 1989; Mohan & Chen, 2001; Loughran & Ritter, 2004; Ljungqvist, 2007; Kerins et al. 2007; Krishnamurti & Thong, 2008; Chambers & Dimson, 2009).

The study of intraday IPO initial return is pertinent because investors are allowed to dispose of their share in the highest or lowest price on the first trading day. This study addresses how the GFC affects the intraday IPO initial return (offer-to-high) and (offer-to-low). This study also investigates the moderating role of the GFC that affects the relationship between IPO initial return and subscription ratio.

In this study, the intraday IPO initial return is measured based on initial returns (offer-to-high) and (offer-to-low). In this respect, the two relationships are measured: First, intraday IPO initial return (offer-to-high) and GFC; and Second, intraday IPO initial return (offer-to-low) and GFC. This study presents new ideas on intraday IPO initial return amidst the GFC in the context of emerging market. It will contribute to the extant literature of IPOs as a valuable source of reference based on the empirical findings.

3.2 Literature Review

IPO underpricing is found in many financial markets. Based on a comprehensive survey done in 1990 on IPOs in 25 countries, Loughran et al (1994) found that among the Asian countries, the percentage of IPOs with underpricing was 17.6% in Hong Kong, 32.5% in Japan, 78.1% in Korea, 80.3% in Malaysia, 27% in Singapore and 45% in Taiwan. This demonstrates the importance of studying this issue as it involves the behavior of risk, reward, and incentives.

Numerous studies have examined the relationship of IPO initial return in various capital markets such as the US and Asian countries (Chang, Chiang, Qian, & Ritter, 2017; Ibbotson et al. 1994; Ritter & Welch, 2002). For instance, according to Loughran et al. (1994), a study of 25 Asian countries in 1990, they reported the highest IPO initial return with 80.3 per cent in Malaysia, 78.1 per cent in Korea, 45 per cent in Taiwan, 32.5 per cent in Japan, 27 per cent in Singapore, 17.6 per cent in Hong Kong.

The primary aim for IPO is to raise capital as the funding is vital for business expansion and investment. In this respect, a good IPO initial return helps the issuer to obtain better bargaining power in a new project in the competitive market. However, the IPO initial return can be affected by various factors such as initial aftermarket trading volume (Miller & Reilly, 1987; Schultz & Zaman, 1994; Ellis et al. 2000; Ellis, Michaely, & O'Hara, 2002; Aggarwal, 2003; Bayley et al. 2006), underwriter reputation (Carter & Manaster, 1990; Chemmanur & Fulghieri, 1994; Nanda & Yun, 1997; Carter, Dark, & Singh, 1998; Dunbar, 2000), capital structure and liquidity (Brennan & Frank, 1997), market conditions (Ritter, 1984; Ritter, 1991; Ibbotson et al. 1994; Carey & Steen, 2006; Ellis, 2006).

From the financing point of view, firms which carry out IPO will have an additional fund for their business operation and expansion and reduce the risk of relying on debts such as commercial papers or bank loans for their funding needs. In addition, successful IPOs enable firms to establish their reputation, and in the long run, the firms will have more incentive to adopt industry best practice, better manufacturing technology, produce a quality product, and attain higher ROI as to attract additional capital in the future. From the study of Huang, Lee, Pan, & Nguyen (2016), government regulation towards industry and trading are positively correlated with IPO underpricing, especially for the information, services and manufacturing industries.

Some researchers have looked at IPO underpricing in the context of different market conditions. According to Ritter (1991), “hot issue market" is defined as periods with a large number of IPOs together with a high level of underpricing. In contrast, Ibbotson et al (1994) shows in cold issue market", issuers face difficulty selling stock at any price even with a low level of underpricing.

In a related study based on the data from Hong Kong between August 1995 and July 1999, Carey and Steen (2006) find there is a significant relationship between the level of underpricing and market conditions. Notably, “hot market" shows a higher level of underpricing as compared to “cold market". They conclude that the scenario of “cold market" is likely to happen during the financial crisis when investor’s confidence is low. According to Chudik and Fratzscher (2011), Syllignakis and Kouretas (2011), there is a higher level of uncertainty in the stock market during the financial crisis period and it could cause a negative impact on the financial markets and economies, especially in the stock market.

In addition, some scholars have addressed the impact of the GFC on the stock market (Bartman & Bodnar, 2009; Dooley & Hutchison, 2009; Billio & Caporin, 2010; Chudik & Fratzscher, 2011; Syllignakis & Kouretas, 2011). These studies reported that volatility of stock markets went extremely high during the crisis, the correlation between different stock markets became more intensified, and there were cases of spillover in volatility from one market to another across different times and places. In the study of Hussein and Zhou (2014), they reported there exist time-varying initial return and cross sectional IPO initial return volatility. It is also reported that IPOs with higher conditional return volatility reflect the existence of information asymmetry.

In contrast, it was observed that the co-movement of IPO initial return in the equity market diminished during the crisis period. Hence, our study intends to fill the gap in the literature by looking at the financial crisis and its impact on IPO underpricing when the confidence of investors was at their lowest level.

While the underpricing can be explained by different dimensions such as offer-to-close, offer-to-open, offer between the advertising period to closing date and offer between the announcement date to closing date (Ritter, 1991; Ibbotson et al. 1994; Ritter & Welch, 2002; Lowry et al. 2010; Chahine & Saade, 2011).

This paper uses the definition of the initial return (offer-to-close) to measure IPO underpricing. This is similar to Yong (2007) who has done a detailed analysis on IPO underpricing of the offer price to the closing price on the first day of trading. From there, the number of underpricing of the IPO was reported to be more 30% on the first day of trading.

In addition, numerous scholars use different variables such as oversubscription ratio, IPO type, asymmetric information, lockup agreements, long term earning growth rates and board of listed companies to explain the underpricing of the IPO (Yong & Isa, 2003; How et al. 2007; Yong, 2009; Chang, Kim, Kim, & Thorton, 2011; Gao & Siddiqi, 2012; Jin, Li, & Zheng, 2016). During the financial crisis, retail investors do not prefer to hold the IPO issue due to uncertainty in the market. They prefer to sell off the IPO issue when the trading starts on the first day of the listing as they worry the price will go lower than the debut price.

3.3 Data and Methodology

The study looks into 144 issues of fixed-price IPOs which are listed on Bursa Malaysia from 1 January 2006, to 31 December 2011. A cross sectional data collected by observing the IPO closing price, opening price and OSR at the same particular year of listing. All the information on IPO, offer price, closing price can found from the Bursa Malaysia website while the OSR can be obtained from the newspaper on the next day of IPO debut.

According to studies by Saadaoui (2015), Forseth, Royrvik, & Clegg (2015), Gendron and Smith-Lacroix (2015), the GFC took place from August 2007 to September 2008. Hence, for this study, the data of IPOs have been divided into three sub-periods, i.e. pre-crisis, crisis and post-crisis as shown in Figure 3.1. The pre-crisis period spans from January 2006 to July 2007, the crisis period spans from August 2007 to September 2008 and finally, the recovery in an economy during the post-crisis period has been observed from October 2008 to December 2011.

Figure 3.1: Sub-periods used for the study

Note: GFC denotes Global Financial Crisis
Source: Authors' own sketch

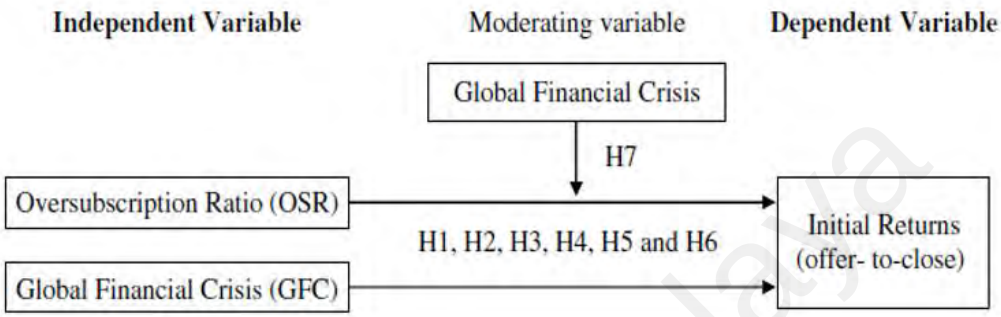


Figure 3.2: Conceptual Framework of Initial Returns (offer-to-close)

In order to have a better understanding of the effect of the financial crisis, this thesis also examines the moderating effect of the financial crisis on IPO initial return and OSR. The conceptual framework and relevant hypotheses shown in Figure 3.2.

As shown in equation (1) the initial return of IPO is measured using initial return offer-to-close [IR(OTC)] as the dependent variable. The initial return on stock i, is calculated as a percentage change in price from offer price to the closing price on the first day of trading ($IR(OTC)_i = (CP_i - OP_i) / OP_i \times 100$). On the other hand, independent variable consists of IPO oversubscription ratio, which measures investors' demand for the new issue of the IPO. Lastly, the moderating variable is the financial crisis. Equations (2) to (4) show the separate model for three sub-periods, namely pre-crisis, crisis and post-crisis.

In order to increase the efficiency and degrees of freedom for the model, only one regression model that incorporates dummy variables for pre-GFC and post-GFC is

estimated. The intercept represents the effect of the GFC and the coefficients of dummy will capture the difference between pre-GFC and GFC for the former, and post-GFC and GFC for the latter.

$$IR(OTC)_i = \alpha_0 + \alpha_1 OSR_i + \alpha_2 Dum_{PRE} + \alpha_3 Dum_{POST} + \alpha_4 OSR_{i.} * Dum_{PRE} + \alpha_5 OSR_i * Dum_{POST} + \varepsilon_i \quad (1)$$

Where:

$IR(OTC)_i$ is initial return (offer-to-close) that denotes the percentage change in price from the offer price to the closing price on the first day of trading of the ith company

OSR_i is oversubscription ratio that denotes the number of times an IPO issue is either over-demanded or under-demanded by the group of investors of the ith company

Dum_{PRE} is dummy variable that represents the sample period before the GFC

Dum_{POST} is the dummy variable that represents the sample period after the GFC

$OSR_i * Dum_{PRE}$ represents the interaction between oversubscription ratio and dummy for the period of pre-GFC from January 2006 to July 2007 of the ith company

$OSR_i * Dum_{POST}$ represents the interaction between oversubscription ratio and dummy for the period of post-GFC from October 2008 to December 2011 of the ith company

During pre-crisis period, substitute the dummy, Dum_{PRE}

$$IR(OTC)_i = (\alpha_0 + \alpha_2) + (\alpha_1 + \alpha_4) OSR_i + \varepsilon_i \quad (2)$$

During GFC period, $Dum_{PRE} = 0$, $Dum_{POST} = 0$

$$IR(OTC)_i = \alpha_0 + \alpha_1 OSR_i + \varepsilon_i \quad (3)$$

During post-GFC, substitute the dummy, $Dum_{POST} = 1$, other = 0 into equation (1)

$$IR(OTC)_i = (\alpha_0 + \alpha_3) + (\alpha_1 + \alpha_5) OSR_i + \varepsilon_i \quad (4)$$

Figure 3.2 shows the conceptual framework of how hypotheses are built based on the expected relationship between independent and dependent variables. This paper adopts the theory of finance from initial public offer underpricing (Dawson, 1987a, Dawson, 1987b) and examines the following hypotheses:

H1: There is a significant initial return for the pre - crisis period,

H2: There is a negative initial return for crisis period,

H3: There is a significant initial return for the post - crisis period,

H4: There is significant impact of oversubscription ratio on initial return during pre-crisis period,

H5: There is positive impact of oversubscription ratio on initial return during global financial crisis,

H6: There is significant impact of oversubscription ratio on initial return during post-crisis period,

H7: Global financial crisis moderates the relationship between initial return and oversubscription ratio.

Based on the above, except crisis period, it is expected that initial return for IPO should be significant during pre-crisis and post-crisis periods, and hence, H1, H2 and H3 are tested. Furthermore, it is expected that throughout the three sub-periods, there will be significant oversubscription as investors will demand new issue of IPOs irrespective whether it is crisis period or not, therefore H4, H5 and H6 are tested. H7 is used to examine to what extent GFC influences the relationship between initial return and OSR. GFC serves as a moderating variable to test whether the relationship is being enhanced or weakened between initial return and OSR. It is commonly believed that GFC will worsen the demand of investors on new IPOs. Due to poor market sentiment, the initial return is expected to be negative and OSR is also expected to be lower.

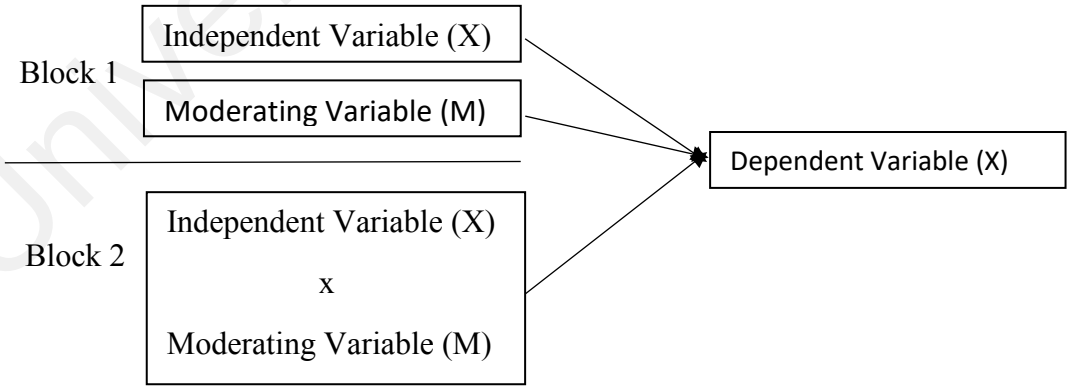
H7 is tested using hierarchical regression in equations (5) and (6). There are two vital arguments, firstly, the market condition such as the GFC prompts investor to sell the IPO on the first trading day, IR (OTC); and secondly, the market condition such as GFC will affect investor demand for IPO prior to the listing, hence OSR will be affected. These two arguments are supported by Chong, Yuan, & Yan (2010) where the degree of IPO underpricing is positively correlated with different market

conditions. Moreover, IPOs which are cross-listed in two different countries have greater level of underpricing.

For the hierarchical regression in equations (5) and (6), OSR represents the independent variable while the initial return is the dependent variable. GFC is treated as a moderating variable by looking at the interaction effect between OSR and GFC.

There are two statistical blocks are used to examine the hierarchical regression of moderation effect of the GFC as is illustrated and explained as follows:

Block 1: The independent variables including the moderator are entered into the regression model simultaneously. Both classes of variables are treated as predictors or independent variables of the dependent variable as illustrated in the block 1 and block 2. Although the moderator is included in the model, the centre of interest is always on the main independent. At block 1, the independent variables should not necessarily be influencing the dependent variable (Baron & Kenny 1986). This helps the process to examine the interaction of the independent variables and the moderator in the block 2.



In the block 2, the moderating effect, the independent variables and the moderating variable, is incorporated into the model. This step empirically aims to answer the question of whether there is a moderating effect of the moderating variable

between the independent variables and dependent variable and whether there is a need to reject or accept the moderating hypothesis.

The presence of a moderator is supported if the p-value of the interaction between M and X (M x X) is found to be significant. Meanwhile, the pattern of the moderating effect is interpreted based on the change seen in the t-statistics and the coefficient sign of the independent variables. To summarise, this study suggests the following:

Block 1:

$$IR(OTC)_i = \gamma_0 + \gamma_1(OSR_i) + \gamma_2 Dum_{GFCi} + \varepsilon_i \quad (5)$$

Block 2:

$$IR(OTC)_i = \theta_0 + \theta_1(OSR_i) + \theta_2 Dum_{GFCi} + \theta_3 OSR_i * Dum_{GFCi} + \varepsilon_i \quad (6)$$

Where

$IR(OTC)_i$ is initial return (offer-to-close) that denotes the percentage change in price from the offer price to closing price on the first day of trading of the ith company

OSR_i is oversubscription ratio that denotes the number of times an IPO issue is either over-demanded or under-demanded by the group of investors of the ith company

$DUM_{GFCi} = 0$ represents the dummy for period without financial crisis from January 2006 to July 2007 (pre-crisis period) and from October 2008 to December 2011 (post-crisis) in equation (6) of the ith company

$DUM_{GFCi} = 1$ represents the dummy for period of financial crisis from August 2007 to September 2008 of the ith company

$OSR_i.DUM_{GFCi}$ represents the interaction between oversubscription ratio and dummy for the period of financial crisis of the ith company

3.4 Empirical Results (offer-to-close)

Table 3.1 reports the descriptive statistics, results of initial return (offer-to-close) of 144 fixed-price IPOs listed on the Malaysian stock market from January 2006 to December 2011. The results are divided into three parts, of which are identified as the pre-GFC, GFC and post-GFC periods.

As mentioned in an earlier section, the initial return (offer-to-close) is measured as the percentage change in the price of the offer price to the closing price on the first day of trading. Hence, a significant return (underpricing) indicates the particular stock is issued below the offer price. This means the stock price at the closing of the first trading day is higher than the offer price. In other words, the higher the initial return the greater the underpricing of IPOs. In contrast, a negative return (overpricing) indicates the particular stock is issued above the offer price. This means the stock price at the closing of the first trading day is lower than the offer price.

From Table 3.1, the mean and median of initial return of 144 fixed-price IPOs for the entire period from 2006 to 2011 are 13.50% and 6.76%, respectively. However, if the 22 IPO issues during GFC period are excluded, there is higher mean and median of initial return of 15.78% and 8.48%. During pre and post-GFC periods, the distribution of initial return is skewed to the right as the mean is higher than the median. There are

Table 3.1: Descriptive statistics for the initial return (offer-to-close) for different sub-periods

Year	n	Mean	Median	Std. Dev	Min.	Max.
Pre-Global Financial Crisis						
2006	39	20.03**	13.94	35.32	−40.64	139.02
01/2007 to 07/2007	18	36.84**	21.13	36.90	−10.95	100.00
Average		**25.34**	**17.14**			
During Global Financial Crisis						
08/2007 to 12/2007	8	10.61	12.42	14.03	−13.64	33.60
01/2008 to 09/2008	14	−4.79	−4.68	18.59	−30.67	42.86
Average		**0.81**	**3.09**		−30.67	42.86
Post-Global Financial Crisis						
10/2008 to 12/2008	3	−22.46	−20.00	11.39	−34.88	−12.50
2009	13	9.46	8.62	18.82	−15.24	49.00
2010	28	1.03	0.50	23.14	−65.44	76.00
2011	21	18.94	8.77	42.27	−39.21	148.48
Average		**7.42**	**3.29**		−65.44	148.48
Overall						
2006–2011	144	**13.50****	**6.76**	33.07	−65.44	148.48
2006–2011 (excluding GFC)	122	**15.78****	**8.48**	34.63	−65.44	148.48

Note: * and ** denote 5% and 1% level of significance respectively.

some IPOs which offer higher underpricing than others. Comparing the three periods, investors could earn 25.34% of initial return in the pre-GFC period, followed by 7.42% during the post-GFC period, and 0.81% during GFC period. Based on Table 3.2, it can be observed that only coefficient for the dummy of pre-crisis period is at 1% level of significance with 23.55%. The initial return for crisis period is recorded at minus 5.99%. Nonetheless, the return in post-crisis has recovered to 8.08%.

Table 3.3 shows the result of the joint hypothesis test. It is evidently clear that the initial return is significant during the pre-crisis period (H1). In addition, there is clear impact of OSR on the initial return during pre-crisis and post-crisis period (H4 and H6).

Though the initial return for the post crisis period is positive 2.09% (-5.99%+8.08%), it is not statistically significant (H3). This is could be due to weak recovery in the economy.

Table 3.2: Results of regression for the initial return (offer-to-close)

	Coefficient	**t-statistic**
Constant	-5.99	-0.74
OSR_i	0.69	1.38
Dum_{PRE}	23.55**	2.50
Dum_{POST}	8.08	0.89
OSR_i*Dum_{PRE}	-0.48	-0.95
OSR_i*Dum_{POST}	-0.46	-0.91
Diagnostic test		
Durbin-Watson	2.04	
R-square	0.20	
F-value	7.09**	

Note: * and ** denote 5% and 1% level of significance respectively. The sample period consists of 144 observations of which are divided into pre-crisis (January 2006 to July 2007), crisis period (August 2007 to September 2008) and post-crisis period (October 2008 to Dec 2011)

In addition, H2 and H5 are not statistically significant. This implies that first, the demand (OSR) of new IPO issues has decreased during GFC, and this is because issuer

Table 3.3: Results of Joint Hypothesis (F-test) and Single Hypothesis (t-test)

Hypothesis		F-value	t-test	P-value
H1	$\alpha_0 + \alpha_2 = 0$	13.2460***		0.0004
H2	$\alpha_0 = 0$		-0.74	0.4604
H3	$\alpha_0 + \alpha_3 = 0$	0.2623		0.6094
H4	$\alpha_1 + \alpha_4 = 0$	8.0766***		0.0052
H5	$\alpha_1 = 0$		1.38	0.1708
H6	$\alpha_1 + \alpha_5 = 0$	10.0392***		0.0019

Note: * and ** denote 5% and 1% level of significance respectively.
H1 to H6 are null hypotheses

has no intention to go for listing in weak economy. Second, good IPOs are scarce and investors are willing to pay for such investment as they may deliver positive initial return during the period of financial crisis.

Table 3.4 shows the results of hierarchical regression. It is noted that OSRs have a significant relationship with initial return. OSR plays an important role to explain the underpricing of the IPO. The higher the ratio reflects higher demand for the new IPO, and hence, a higher offer price that leads to substantially higher closing price than the offer price on the first trading day.

Table 3.4: Results of hierarchical regression of initial return (offer-to-close)

	Initial Returns (Offer-to-Close)	
Independent Construct	(Block 1) Coefficient	(Block 2) Coefficient
Constant	8.61**	8.75**
	(2.72)	(2.30)
OSR_i	0.24**	0.24**
	(4.67)	(4.89)
$DumGFC_i$	−10.18	−14.73*
	(−1.42)	(−1.67)
$OSR_i * DumGFC_i$	—	0.45
	—	(0.88)
Adj-R-square	0.16	0.01 (R^2 change)
F-value	13.11	0.78 (F change)
p-value	0.00	0.38

Notes: Significance at 5 per cent and 1 per cent level as indicated by * and ** respectively. The value in parentheses is t-statistic.

From blocks 1 and 2, it is clear that the interaction of OSR and financial crisis is not significant. Hence, H7 is not valid and it can be concluded that the financial crisis does not moderate the relationship between OSR and initial return.

During the period of financial crisis, it is believed that the market sentiment is bad, initial return from new IPO and OSR will be negative, and hence firms are unwilling to do the new listing in the stock market. However, based on the results of this study, it is found that OSR is significant and positive (Tables 3.4) and initial return is not necessarily negative (Table 3.2).

Hence, it can be concluded that some investors are keen to participate in the new IPO issue regardless it is in crisis or non-crisis period. While market sentiment could be negative during the crisis period, some investors still look for good firms to invest. Hence, reputable firm with a good track record will be the choice of investors.

Notably, this study finds: First, IPO underpricing provides an average of 17-25% (Table 3.1) of initial return to investors during pre-crisis period; Secondly, IPO underpricing provides an average of 1-3% (Table 3.1) of initial return during crisis period and 3-7% (Table 3.1) for the post-crisis period; Thirdly, the financial crisis does not act as a moderator that worsens the relationship between initial return of IPO and oversubscription ratio. Lastly, this study dispels the notion that investors should totally shun IPO during crisis period as there are still positive initial return among the new issues.

3.5 Further Analysis

3.5.1 IPO Initial Return (high-low intraday)

Market sentiment for IPO was at its worst period during the GFC. The collapse of the subprime mortgage market in the U.S. triggered by the fall of property price in 2007, followed by the bankruptcy of Lehman's brother on 15 September 2008 of which had sent the shock wave to the global financial markets. As a result, issuers of new IPO opt to postpone their new listing during the crisis period.

Bad market sentiment caused investors to lose their confidence to subscribe to the new IPO. For instance, in the case of Malaysia, the total number of new IPOs declined from 57 to 22 as compared between crisis and pre-crisis periods. Similarly, the IPO returns also decreased sharply from 30 to 11 per cent. However, after the market has started to recover from April 2009, it is reported by Bloomberg that Malaysian stock market was able to raise USD 7.56 billion from IPOs in 2012 with prominent IPO issues like Felda Global Ventures (FGV) and IHH Healthcare Bhd and Astro Malaysia Holdings Bhd.

3.5.2 Data and Methodology

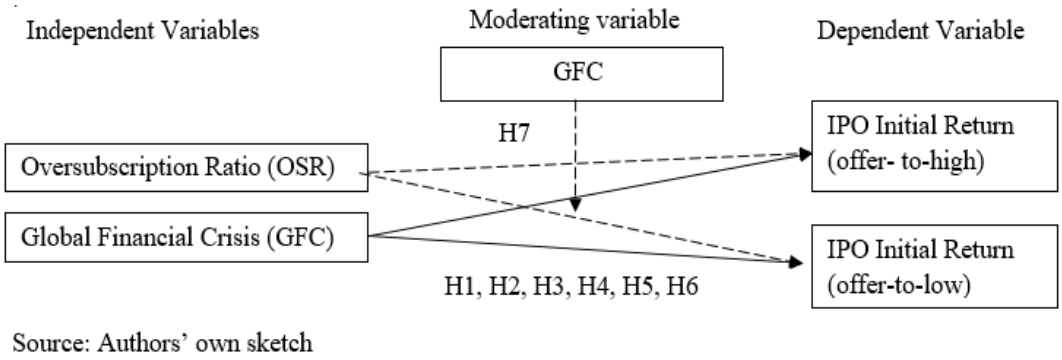
In general, the return of the IPO is obviously to be mitigated during the financial crisis. According to Chahine and Saade (2011), Chang et al. (2011), How et al. (2007), Ibbotson et al. (1994), Lowry et al. (2010), Ritter (1991), Ritter and Welch (2002), Yong (2007), the return of the IPO initial return can be explained by numerous dimensions such as offer-to-open, offer-to-close, offer-to-high, offer-to-low, offer between the announcement date to closing date, offer between the advertising period

to closing date. Hence, this study uses the measurement of intraday IPO initial return (offer-to-high) and (offer-to-low) to measure IPO initial return.

This thesis examines the impact of GFC and enhances the understanding of intraday IPO initial return. Also, it aims to fill the research gap in the literature by analyzing more specific issues during the financial crisis as the investor's confidence level is at the bottom. According to Forseth et al. (2015), Gendron and Smith-Lacroix (2015), Saadaoui (2015), the GFC started from the early August 2007 to the mid of September 2008.

This thesis uses three different sub-periods to reflect various market conditions such as pre-financial crisis, during the financial crisis and post-financial crisis. The first sub-period started from January 2006 to July 2007, the second sub-period started from August 2007 to September 2008 and the last sub-period started from October 2008 to December 2011. The time frame used allows sufficient time for the change of market conditions. For instance, in the post-GFC period, the economy has undergone some recovery from October 2008 to December 2011. Beyond that, there was a debt crisis in Europe in 2012 of which was partly attributable to the investment in subprime bonds by European banks. Hence, this research excludes the data from 2012 onwards as to avoid the issue of measurement of the impact of debt crisis in Europe on IPO.

In addition, this study enriches the understanding of the moderating effect of the financial crisis to the intraday IPO initial return and oversubscription ratio. This study examines the role played by the financial crisis from a more comprehensive perspective. The conceptual framework is presented in Figure 3.3.



Source: Authors' own sketch

Figure 3.3: The Conceptual Framework of IPO Initial Return (Intraday)

In this study, the intraday IPO initial return is defined as offer-to-high, IP(OTH) and offer-to-low, IP(OTL). IP(OTH) is calculated as the percentage change in price from the offer price to the highest price on the first trading day. IP(OTL) is calculated as the percentage change in price from the offer price to the lowest price on the first trading day.

The return of IPO initial return is ($IR_i = (CP_i - OP_i) / OP_i \times 100$). In addition, the dependent variables consist of IPO initial return as measured by return (offer-to-high) and (offer-to-low). Independent variables consist of OSR as measured by demand, and lastly, the moderating variable is measured by the dummy of GFC. Based on the above conceptual framework in Figure 3.3, the following hypotheses are developed. H1, H2, and H3 are developed to study the intraday IPO initial returns (offer-to-high) and (offer-to-low) in pre-GFC, during GFC and post-GFC. Hence, each of the hypothesis will be tested for both IPO initial return (offer-to-high) and (offer-to-low).

H1: There is a positive intraday IPO initial return in pre-GFC.

H2: There is a positive intraday IPO initial return for GFC.

H3: There is a positive intraday IPO initial return in the post-GFC.

H4: There is a positive relationship between intraday IPO initial return and oversubscription ratio in pre-GFC.

H5: There is a positive relationship between intraday IPO initial return and oversubscription ratio during GFC.

H6: There is a positive relationship between intraday IPO initial return and oversubscription ratio during post-GFC.

H7: GFC moderates the relationship between intraday IPO initial return and oversubscription ratio.

In normal circumstances, the investor will be more careful in subscribing the IPO issue during GFC. They are more pessimistic about the future market conditions as the environment becomes worst when uncertainty increase. Hence, aggressive investors will sell the IPO at the highest price and risk-averse investors will sell at the lowest price on the first day of trading.

In general, financial crisis affects stock performance and this could lead to the low confidence level of the investors. As a result, the subscription ratio will be mitigated as the demand to buy IPO is decreased. Moreover, issuers are not interested to opt for IPO listing during the GFC. Hence, H4, H5, and H6 are established to study the relationship between intraday IPO initial return and OSR in pre-GFC, during GFC and post-GFC. The relationships of H4, H5, and H6 can be tested by looking at the coefficient of subscription ratio.

However, the strength of the relationship is still vague as no accurate estimation to what extent GFC influences the relationship between intraday IPO initial return and oversubscription ratio. Hence, H7 is developed to study the strength of the relationship that to achieve greater accuracy and consistency during the financial crisis.

This study uses 144 fixed price offer IPOs data listed on the Bursa Malaysia from January 1, 2006, to December 31, 2011. A cross sectional data collected by observing

the IPO closing price, opening price, highest price, lowest price and OSR at the same particular year of listing. This period is chosen to study the change of the market condition due to the financial crisis. The data are computed from Bursa Malaysia and various newspaper reports.

To analyze the impact of GFC to the effect of IPO initial return, this paper uses regression model of intraday IPO initial return (offer-to-high) and (offer-to-low) with the GFC as the dummy.

$$IR(OTH)_i = \alpha_0 + \alpha_1 OSR_i + \alpha_2 Dum_{GFCi} + \alpha_3 OSR_{i.} * Dum_{GFCi} + \varepsilon_i \quad (7a, 7b)$$

$$IR(OTL)_i = \beta_0 + \beta_1 OSR_i + \beta_2 Dum_{GFCi} + \beta_3 OSR_i * Dum_{GFCi} + \varepsilon_i \quad (8a, 8b)$$

Block 1:

$$IR(OTH)_i = \gamma_0 + \gamma_1 (OSR_i) + \varepsilon_i \quad (9)$$

Block 2:

$$IR(OTH)_i = \gamma_0 + \gamma_1 (OSR_i) + \gamma_2 OSR_i * Dum_{GFCi} + \varepsilon_i \quad (10)$$

Block 1:

$$IR(OTL)_i = \theta_0 + \theta_1 (OSR_i) + \varepsilon_i \quad (11)$$

Block 2:

$$IR(OTL)_i = \theta_0 + \theta_1 (OSR_i) + \theta_2 OSR_i * Dum_{GFCi} + \varepsilon_i \quad (12)$$

Where:

$IP(OTH)_i$ is intraday IPO initial return (offer-to-high) denotes the percentage change in price from the offer price to highest price on the first trading day of the *i*th company

$IP(OTL)_i$ is intraday IPO initial return (offer-to-low) denotes the percentage change in price from the offer price to lowest price on the first trading day of the *i*th company

OSR_i is oversubscription ratio denotes the number of times an IPO issue either over-demanded or under-demanded by the group of investors of the *i*th company

$Dum_{GFCi} = 0$ represents the dummy for the period without financial crisis from January 2006 to July 2007 (pre-GFC) and October 2008 to December 2011(post-GFC) of the *i*th company

$Dum_{GFCi} = 1$ represents the dummy for the period of financial crisis from August 2007 to September 2008 of the *i*th company

OSR_iDum_{GFCi} represents the interaction between oversubscription ratio and dummy for the period of GFC of the *i*th company

GFC has been added to equation (10) and (12) as a moderator to examine the interaction effect between intraday IPO initial return and oversubscription ratio. There are two essential arguments (i) investors liquidate the IPO at the highest point, IP(OTH) and at the lowest point, IP(OTL) on the first trading day*;* (ii) GFC affects investor's interest to subscribe the IPO prior to the listing, *OSR*.

For the equations (9) and (11), the block 1 is to control the OSR variable that is not affected by the GFC in explaining the intraday IPO initial return. The observed effect of intraday performance is independent.

For the equations (10) and (12), the block 2 is the order-of-entry, where GFC is considered before looking at others. It shows the per cent of the variability in the intraday IPO initial return that can be accounted by the GFC.

3.5.3 Empirical Results (high-low intraday)

Table 3.5 and 3.6 indicate the descriptive results of intraday IPO initial return (offer-to-high) and (offer-to-low). The sample consists of 144 fixed-price offer IPOs listed on the Bursa Malaysia from January 2006 to December 2011. The results of the descriptive statistics comprise the periods of pre-GFC, during GFC and post-GFC.

The intraday IPO initial return is calculated from the percentage change in the price of the offer price to the highest (offer-to-high) and lowest price (offer-to-low) on the first trading day. An IPO initial return of positive return indicates the share price traded on the first day of trading is higher than the offer price. In contrast, an IPO initial return

of negative return indicates the share price traded on the first day of trading is lower than the offer price. The higher the positive return represents the better the intraday IPO initial return, in short, the share price traded on the first day of trading is higher than the offer price.

Table 3.5 and 3.6 show the descriptive results of the mean and median of intraday IPO initial return of 144 fixed price offer IPOs from 2006 to 2011. The results of the mean and median of intraday IPO initial return (offer-to-high) are 25.05 and 13.08 per cent; (offer-to-low) are 3.63 and 1.72 per cent respectively. However, if the 22 IPOs during the GFC are excluded, there is higher mean and median of IPO initial performance.

Table 3.5. Descriptive statistics of intraday IPO initial return (offer-to-high) for pre-GFC, during GFC and post-GFC

Year	n	Mean	Median	Std. Dev	Min.	Max.
Pre-GFC						
2006	39	21.53**	10.56	45.41	-54.55	153.56
01/2007 to 07/2007	18	46.99**	25.00	48.34	-9.52	140.00
Average		29.57	22.45		-54.55	153.66
During GFC						
08/2007 to 12/2007	8	19.36**	17.80	9.84	6.06	35.20
01/2008 to 09/2008	14	6.07	3.88	16.59	-18.67	52.86
Average		10. 91	9.88		-18.67	52.86
Post-GFC						
10/2008 to 12/2008	3	1.19	0	2.06	0	3.57
2009	13	18.07*	4.76	26.27	2.00	83.00
2010	28	17.48	4.01	48.10	0	228.19
2011	21	7.99**	5.35	9.44	0	41.18
Average		13.78	4.40		0	228.19
Overall						
2006-2011	144	25.05**	13.08	46.95	-54.55	307.41
2006-2011 (excluding GFC)	122	27.60**	15.09	50.19	-54.55	307.41

Note: Significance at 5 per cent and 1 per cent level as indicated by * and ** respectively.

In addition, the spread of the IPO initial performance (offer-to-high) and (offer-to-low) are skewed to the right as indicated by the mean is higher than the median during pre-GFC. Hence, there are some IPOs which offer higher returns than others. Among

the three market conditions, investors could earn around 7.48 to 29.57 per cent of intraday IPO initial return in the pre-GFC.

In contrast, the investors still enjoy some profit approximately -5.51 to 10.91 per cent during GFC and -4.12 to 13.78 per cent in the post-GFC. The spread of the intraday IPO initial return (offer-to-high) and (offer-to-low) are skewed to the right as indicated by the mean is higher than the median during post-GFC. However, the spread of the intraday IPO initial return (offer-to-high) is skewed to the right but (offer-to-low) is skewed to the left during the GFC.

Table 3.6 Descriptive statistics of intraday IPO initial return (offer-to-low) for pre-GFC, during GFC and post-GFC

Year	n	Mean	Median	Std. Dev	Min.	Max.
Pre-GFC						
2006	39	0.29	-1.91	36.00	-60.00	121.95
01/2007 to 07/2007	18	23.06**	10.46	30.97	-10.48	92.50
Average		7.48	5.56		-60.00	121.95
During GFC						
08/2007 to 12/2007	8	5.59	7.60	11.73	-16.67	19.20
01/2008 to 09/2008	14	-11.29**	-13.66	13.31	-34.67	14.29
Average		-5.51	-4.56		-34.67	19.20
Post-GFC						
10/2008 to 12/2008	3	-13.65	-7.14	11.27	-26.67	-7.14
2009	13	-4.54	-6.00	10.63	-19.05	25.35
2010	28	3.69	-2.67	36.49	-21.67	180.50
2011	21	-12.90**	-9.56	14.56	-60.48	0
Average		-4.12	-6.00		-60.48	180.50
Overall						
2006-2011	144	3.63	1.72	29.56	-60.00	148.48
2006-2011 (excluding GFC)	122	5.22*	2.48	31.26	-60.00	148.48

Note: Significance at 5 per cent and 1 per cent level as indicated by * and ** respectively.

In other words, there are lesser IPOs with positive returns but the intraday IPO initial return decrease due to the GFC significantly. Hence, this phenomenon has discouraged

new fund to flow into the stock market and as a result, there is no new IPO is issued for the first half-year of 2009.

The purpose of this analysis is to study the influence of GFC. There is an overlapping of GFC period as this has provided a more accurate analysis from pre-GFC to GFC period and from GFC to post-GFC period.

Table 3.7. The regression results of intraday IPO initial return (offer-to-high) and (offer-to-low)

	Model 7a IPO Initial Return (offer-to-high)		Model 8a IPO Initial Return (offer-to-low)
α_0	21.49**	β_0	3.56
	(3.32)		(0.71)
$\alpha_1 OSR_i$	0.22*	$\beta_1 OSR_i$	0.11
	(2.20)		(1.38)
$\alpha_2 Dum_{GFCi}$	-16.78	$\beta_2 Dum_{GFCi}$	-16.33
	(-1.33)		(-1.67)
$\alpha_3 OSR_i * Dum_{GFCi}$	0.41	$\beta_3 OSR_i * Dum_{GFCi}$	0.67
	(0.60)		(1.27)
Observations	79	Observations	79
Durbin-Watson	1.75	Durbin-Watson	1.81
R-square	0.11	R-square	0.08
F-Value	3.04*	F-Value	2.25
	Model 7b IPO Initial Return (offer-to-high)		Model 8b IPO Initial Return (offer-to-low)
α_0	10.87*	β_0	-0.99
	(2.19)		(-0.32)
$\alpha_1 OSR_i$	0.64**	$\beta_1 OSR_i$	0.18**
	(7.36)		(3.33)
$\alpha_2 Dum_{GFCi}$	-6.16	$\beta_2 Dum_{GFCi}$	-11.77
	(-0.56)		(-1.72)
$\alpha_3 OSR_i * Dum_{GFCi}$	-0.01	$\beta_3 OSR_i * Dum_{GFCi}$	0.59
	(-0.02)		(1.55)
Observations	87	Observations	87
Durbin-Watson	2.71	Durbin-Watson	2.30
R-square	0.41	R-square	0.17
F-Value	19.34**	F-Value	5.84**

Notes: The indication of * and ** shown is the 5 per cent and 1 per cent significance level. The value in parentheses is t-statistic. For model 7, the 79 observations are from the sample period for pre-GFC starts from January 2006 to July 2007 and GFC starts from August 2007 to September 2008. For model 8, the 87 observations are from GFC starts from August 2007 to September 2008 and sample period for post-GFC starts from October 2008 to December 2011.

The use of GFC in two different periods has given a consistent result. For instance, the average IPO performance (offer-to-low) of -11.99 percent is consistent for both periods in model 8. This also means the influence of the GFC is the same either from pre-GFC to GFC period or from GFC to post-GFC period. Therefore, both models should include the same GFC period in the analysis.

The results obtained from Table 3.7, in model 7a, the IPO initial return (offer-to-high) for pre-GFC is 21.49 per cent meanwhile for OSR increases by 1 time, and the IPO initial return (offer-to-high) will increase 0.22 per cent, on average the IPO initial return (offer-to-high) is 5.34 per cent (21.49+0.22-16.78+0.41) during GFC. In contrast, the IPO initial return (offer-to-low) for pre-GFC is 3.56 per cent meanwhile for OSR increases by 1 time, and the IPO initial return (offer-to-low) will increase 0.18 per cent, on average the IPO initial return (offer-to-low) is -11.99 per cent (3.56+0.11-16.33+0.67) during GFC. Hence, H1, H2, H4, and H5 are supported.

In model 8a and 8b, it is observed for IPO issued from October 2008 to December 2011, the IPO initial return (offer-to-high) for post-GFC is 10.87 per cent meanwhile for OSR increases by 1 time, and the IPO initial return (offer-to-high) will increase 0.64 per cent, on average the IPO initial return (offer-to-high) is 5.34 per cent (10.87+0.64-6.16-0.01) during GFC.

In contrast, the IPO initial return (offer-to-low) for post-GFC is -0.99 per cent meanwhile for OSR increases by 1 time, and the IPO initial return (offer-to-low) will increase 0.18 per cent, on average the IPO initial return (offer-to-low) is -11.99 per cent (-0.99+0.18-11.77+0.59) during GFC. Hence, H2, H3, H5, and H6 are supported.

The results shown are more interesting for the interaction term between GFC and OSR which is not statistically significant for both model 7 and 8 although the results show the economic significance as 1 unit increase in OSR, the IPO initial return (offer-to-high) will increase by 0.63 per cent (0.41+0.22) and 0.63 (0.64-0.01) per cent and (offer-to-low) will increase by 0.78 (0.67+0.11) and 0.77 (0.59+0.18).

The explanation is built when there are few IPOs which receive higher attention in demand during the GFC that provides higher intraday IPO initial return to investors. Therefore, the good quality of IPOs is scarce and lead to the willingness of an investor to pay for such IPOs. At a glance, H1, H2, H3, H4, H5, and H6 are significant valid as there is a confident reduction in intraday IPO initial return due to the GFC.

Table 3.8. Results of hierarchical regression of intraday IPO initial return (offer-to-high)

Independent Construct	IPO Initial Return (offer-to-high)	
	Model 9 (block 1) coefficient	Model 10 (block 2) Coefficient
Constant	17.08**	17.12**
	(4.35)	(4.34)
OSR_i	0.53**	0.52**
	(8.12)	(8.04)
Dum_{GFCi}	-11.33	-12.41
	(-1.28)	(-1.13)
OSR_i*Dum_{GFCi}	-	0.11
	-	(0.17)
R^2	0.34	-
R^2 change	-	0.00
F-value	36.03	-
F change	-	0.03
p-value	0.00	0.87

Notes: The indication of * and ** shown is the 5 per cent and 1 per cent significance level. The value in parentheses is t-statistic.

Table 3.9. Results of hierarchical regression of intraday IPO initial return (offer-to-low)

Independent Construct	IPO Initial Return (offer-to-low)	
	Model 11 (block 1) coefficient	Model 12 (block 2) coefficient
Constant	2.86	3.03
	(1.05)	(1.12)
OSR_i	0.21**	0.21**
	(4.76)	(4.62)
Dum_{GFCi}	-10.11	-15.80*
	(-1.64)	(-2.09)
OSR_i*Dum_{GFCi}	-	0.57
	-	(1.29)
R^2	0.17	-
R^2 change	-	0.01
F-value	14.10	-
F change	-	1.66
p-value	0.00	0.20

Notes: The indication of * and ** shown is the 5 per cent and 1 per cent significance level. The value in parentheses is t-statistic.

For the hierarchical regressions in Table 3.8 and 3.9, the OSR is the independent variable while IPO initial return is the dependent variable. OSR is put as block one and GFC is put as block two in each of the hierarchical regression models. GFC plays as a moderating variable by examining the interaction effect between intraday IPO initial return and OSR. The result of the moderating effect of the GFC is provided in Table 3.8 and 3.9.

Moreover, it is observed that the OSR has a positive relationship with intraday IPO initial return from model 9 to 12 of Table 3.8 and 3.9. OSR plays a vital role to explain the intraday IPO initial return. We also conclude that the higher the indicator reflects higher OSR for the IPO demand, and thus, the higher debut price of an IPO that leads to a substantially higher opening price on the first day of trading.

From the results obtained from model 10 and model 12, it can be observed that the interaction effect of OSR and GFC is not significant. Therefore, hypothesis 7 is not

valid and to the extent, it can be concluded the GFC does not moderate the relationship between OSR and intraday IPO initial return even it gives an impact on the stock market. Our result indicates, the GFC does not make the situation worse, investors are still able to gain some positive returns, this is because when good IPOs are being offered, investors are willing to subscribe. A summary of hypotheses tested in above is shown in Table 3.10 below.

Table 3.10: Summary of Hypothesis Testing

Hypothesis	Expected Sign	IPO initial return (offer-to-high)	Hypothesis supported	IPO initial return (offer-to-low)	Hypothesis supported
H1	+	+ (α_0, Eq. 7a)	Supported	+ [β_0, Eq. 8a]	-
H2	+	- (α_2, Eq. 7a)	-	- [β_2, Eq. 8a]	-
H3	+	+ (α_0, Eq. 7b)	Supported	+ [β_0, Eq. 8b]	-
H4	+	+ (α_1, Eq. 7a)	Supported	+ [β_1, Eq. 8a]	-
H5	+	+ (α_3, Eq. 7a)	-	+ [β_3, Eq. 8a]	-
H6	+	+ (α_1, Eq. 7b)	Supported	+ [β_1, Eq. 8b]	Supported
H7	+ Moderating effect	+ (γ_2, Model 10) (block2)	-	+ [θ_2, Model 12] (block2)	-

This result shows the effect of the GFC on intraday IPO initial return. It provides an argument for IPO initial return being lower during the GFC. For instance, one of the pioneer of IPO research, Rock (1986) concludes IPO firm provides the uninformed investor a greater discount through initial return which help to increase the demand for GFC.

Likewise, Aggarwal and Rivoli (1990), Ljungqvist, Nanda and Singh (2006) argue that IPO initial return is positively related to long-run underperformance due to the investor irrationality. In another study, Cornelli and Goldreich (2003) find that

oversubscription for an IPO is positively correlated with IPO initial return. They also report that there is a huge variability in IPO initial return across different markets.

3.6 Conclusion

It can be concluded that GFC has affected the intraday IPO initial return. However, GFC plays a vital role in explaining the reduction of intraday IPO initial return but it does not moderate the relationship between intraday IPO initial return and oversubscription ratio.

This study contributes the knowledge of financial crisis to the extant literature of IPO studies. Firstly, the GFC does affect the intraday IPO initial return. Secondly, intraday IPO initial return provides 7 to 30 per cent (Table 3.5 and Table 3.6) of returns to investors for the pre-GFC; -5 to 11 per cent (Table 3.5 and Table 3.6) of returns during GFC and -4 to 14 per cent (Table 3.5 and Table 3.6) of returns for the post-GFC. Thirdly, the GFC does not act as a moderator that worsens the relationship between intraday IPO initial return and oversubscription ratio. Lastly, this study dispels the notion that investors should totally shun IPO during GFC period as there are still positive intraday returns among the IPOs.

In addition, the empirical results are robust as both results from the dummy variable regression and hierarchical regression yield similar conclusion. The future research may consider extending the coverage period from pre-crisis to post-crisis of the debt crisis in Europe as financial market recovers from the crisis.

CHAPTER 4: IMPACT OF OVERSUBSCRIPTION RATIO AND TRADING VOLUME ON IPO FIRST THREE-DAY INITIAL RETURN

4.1 Introduction

One of the functions of the IPO market is to provide a platform for the activity of sale and purchase of the newly issued share. The presence of stock exchange allows the investor to convert the investment into cash whenever they need and encourages the investor to trade and invest in short or long time horizon without any hesitation. In the context of the IPO participation, the substantial trading volume reflects higher liquidity and demand, especially for newly issued share.

In order to attract more participation from institutional and retail investors to involve in share market trading, IPO offer price has been lowered by the issuers. According to Krigman et al (1999), this is known as the initial return "substantial money is left on the table" and IPO initial return where the closing price is higher than the offer price on the first trading day.

With the "substantial money is left on the table", this has become the interest for the researcher to study the issue of IPO initial return. Numerous studies have indicated that the IPO initial return is significant over a decade. It is observed that the IPO offer price is lower than the closing price on the first trading day (McDonald & Fisher, 1972; Ibbotson, 1975; Ritter, 1984; Koh & Walter, 1989; Kim et al. 1993; Mohan and Chen, 2001; Loughran & Ritter, 2004; Kerins et al. 2007; Krishnamurti & Thong, 2008; Chambers & Dimson, 2009)

Besides the higher IPO initial return, the trading volume will also increase. For instance, a rational investor will optimise the portfolio after the allocation of IPO. This instance can be observed from the higher OSR of an IPO. The investor may wish to acquire more shares due to insufficient allocation or liquidate their small allocation at a higher market price on the first trading day.

The existing literature has insufficiently examined the impact of trading volume on IPO initial return. For instance, the decision from the investor whether to hold or dispose of a particular IPO is unpredictable. Therefore, this paper aims to fill the research gap in the context of an emerging market. Malaysian IPO makes an interesting subject to study the IPO issue. The motivation for this paper is from two critical arguments. First, the Malaysian IPO is different as compared to the U.S. market. For instance, the U.S. underwriters involve more frequently in price stabilisation. In contrast, in Malaysia, the engagement of underwriter in price stabilisation is only to obtain high initial return and demand in the secondary market (Wong, 2005).

Second, the Malaysian IPO is unique in terms of allocation, which is a private placement offering. For instance, the underwriter identifies a group of institutional investors such as banks, mutual funds, insurance companies, pension funds and gives the priority for them to subscribe to IPO. This activity is known as the private placement for institutional investors and will attract more retail investors to participate in the IPO trading.

According to Aggarwal and Conroy (2000) and Kaustia (2004), the IPO trading volume is defined as the "cumulative amount over the first trading day" or "the number of shares traded daily". The IPO trading volume fluctuates substantially over time. It

affects the fundraising for a firm and investor sentiment to trade (Lowry, 2003). Hence, this is vital to know the level of investor optimism when dealing with trading volume fluctuations.

This study will examine whether trading volume serves as a moderator in affecting the relationship between the dependent and independent variables. In this paper, trading volume as measured by the interest of participation for an investor. Hence, trading volume, oversubscription ratio, firm age, and firm size are used to determine the impact of the first three-day initial returns. This paper contributes to the extant literature on IPO trading volume in the context of IPO in an emerging market.

The remainder of this paper is organised as follows. Section 4.2 reviews the past literature, followed by data and methodology. Section 4.4 discusses the results. The last session concludes the study.

4.2 Literature Review

The research of IPO initial return is found in many financial markets. However, trading volume has received limited attention. According to Ibbotson and Jaffe (1975), Ibbotson, Sindelar, and Ritter (1988) and Ibbotson et al (1994) show there is a substantial fluctuation in IPO trading volume, but there is no study on the underlying causes of this fluctuation. This indicates the importance of studying this issue as it involves the variation in IPO volume.

The study from Lowry and Schwert (2002) show that higher IPO trading volume brings a higher initial return. They conclude that information is essential to create well-

informed investor to trade in an IPO market that brings a higher initial return. Hence, the greater transparency of information will attract potential company opts for listing.

Besides, the studies from Lee, Shleifer, & Thaler (1991), Lerner (1994), Rajan and Servaes (1997), Rajan and Servaes (1997) and Pagano, Panetta, & Zingales (1998) show IPO trading volume has an impact to the different level of market irrationality. The results are consistent with Lerner, Shane and Tsai (2003) suggest that low IPO trading volume causes private company unable to access the capital market to obtain the fundraising.

One of the exciting research areas for IPO trading volume is flipping activity. Flipping activity is defined as the disposal of share by the investor to gain a quick profit on the first trading day (Aggarwal, 2003). According to Ellis et al (2000), Aggarwal (2000), Ellis et al (2002), Aggarwal (2003) show that the trading volume for an IPO is equivalent to the 70% of share sold on the first trading day.

Although IPO trading volume is large, the composition of volume can vary. However, there are also other factors that will influence the composition of trading. Lowry (2003) shows that trading volume is positively related to the demand for capital. In another work Kaustia (2004), it is found that first-day turnover support has a positive relationship with trading volume.

In another study, Ellis (2006) finds that the underwriter reputation has a positive relationship with trading volume. There is a common belief that if the investor who obtains the IPO and dispose of within the first few days, it will create a higher trading volume. The IPO trader who aims to buy and sell within a day causes the price and

volume fluctuate (Geczy et al. 2002). In contrast, Aggarwal (2003) shows flipping activity accounts for only 15% of the total shares sold which is insignificant for the total trading volume.

In addition, according to Ritter (1991), Ibbotson et al (1994), Ritter and Welch (2002), Lowry et al (2010), Chahine and Saade (2011), the IPO initial return can be explained by different dimensions such as from offering to closing, offering to first day opening, offering between the promotion to closing and offering between the announcement date to closing date. This paper study uses the initial return (offer-to-close) to measure the first three-day IPO initial return.

A high level of initial return attracts higher demand from investor to subscribe to the IPO. According to Yong (2007), numerous variables have been tested to explain the different level of initial returns such as firm age, oversubscription ratio, winner's curse, earning management, asymmetric information, ownership structure, heuristic representation, firm size, type of IPO, economic event, venture capital, board of listing and corporate governance (Tversky & Kahneman, 1974; Carter & Manaster, 1990; Ritter, 1984; Yong & Isa, 2003; Wang et al. 2003; Kim et al. 2004; How et al. 2007; Yong, 2009; Chang et al. 2011; Leow & Lau, 2018a; Leow & Lau, 2018b). All the variables are found to explain the initial return at a different level. However, the IPO initial return also can be affected by the interest of participation of investor such as trading volume.

In most of the IPO markets, there is no authorised party allowed to interfere in aftermarket trading. However, with a significant initial return, it affects the selling decision of investors and leads to higher trading volume. Therefore, this study examines

the relationship between variables such as initial return, oversubscription ratio, firm age, firm size and trading volume. Moreover, this study is different from previous literature by focusing on the trading volume which is the interest of participation for an investor on the first trading day.

4.3 Data and Methodology

This study uses 310 fixed-price IPOs which are listed on Bursa Malaysia from January 1, 2006, to December 31, 2016. A cross sectional data collected by observing the IPO opening price, firm size, trading volume, day one closing price, day two closing price and day three closing pricing and OSR at the same particular year of listing. All the information on IPO such as firm size, trading volume, offer price, day one closing price, day two closing price and day three closing pricing can be found from the Bursa Malaysia website. The firm age can be found from the IPO prospectus. The OSR can be obtained from the newspaper on the next day of IPO debut. In order to have a better understanding of the investor's participation, this study also examines the moderating role of the trading volume on IPO initial return. The conceptual framework and relevant hypotheses are shown in Figure 4.1.

As shown from equation 4.1 to 4.3, the IPO initial return is measured by initial return offer-to-close as the dependent variable. The initial return for an IPO is $(IR(OTC)_i = (CP_i – OP_i) / OP_i \times 100)$. It is calculated as a percentage change in price from the offer price to the closing price on the first three-day of trading. Besides, independent variables consist of oversubscription ratio, which measures investors' demand for the new issue of the IPO, firm age is the number of years since establishment to its listing of the IPO and firm size is the total market capitalisation of an IPO.

$$D1IR_i = \alpha_0 + \alpha_1 OSR_i + \alpha_2 LogFA_i + \alpha_3 LogFSZ_i + \alpha_4 LogTV_i + \varepsilon_i \quad (4.1)$$

$$D2IR_i = \beta_0 + \beta_1 OSR_i + \beta_2 LogFA_i + \beta_3 LogFSZ_i + \beta_4 LogTV_i + \varepsilon_i \quad (4.2)$$

$$D3IR_i = \sigma_0 + \sigma_1 OSR_i + \sigma_2 LogFA_i + \sigma_3 LogFSZ_i + \sigma_4 LogTV_i + \varepsilon_i \quad (4.3)$$

Lastly, the moderating effect of the trading volume is examined. Equation 4.4 to 4.6 show the separate model for initial return and moderating effect of trading volume with OSR, Firm Age and Firm Size on the first three-day trading.

$$D1IR_i = \gamma_0 + \gamma_1 OSR_i + \gamma_2 LogFA_i + \gamma_3 LogFSZ_i + \gamma_4 LogTV_i + \gamma_5 OSR * LogTV_i + \gamma_6 LogFA_i * LogTV_i + \gamma_7 LogFSZ_i * LogTV_i + \varepsilon_i \quad (4.4)$$

$$D2IR_i = \delta_0 + \delta_1 OSR_i + \delta_2 LogFA_i + \delta_3 LogFSZ_i + \delta_4 LogTV_i + \delta_5 OSR_i * LogTV_i + \delta_6 LogFA_i * LogTV_i + \delta_7 LogFSZ_i * LogTV_i + \varepsilon_i \quad (4.5)$$

$$D3IR_i = \lambda_0 + \lambda_1 OSR_i + \lambda_2 LogFA_i + \lambda_3 LogFSZ_i + \lambda_4 LogTV_i + \lambda_5 OSR_i * LogTV_i + \lambda_6 LogFA_i * LogTV_i + \lambda_7 LogFSZ_i * LogTV_i + \varepsilon_i \quad (4.6)$$

Where:

$D1IR_i$ is day one initial return (first day of the initial trading return) that denotes the percentage change in price from the offer price to the closing price on the first trading day of the *i*th company. (Dawson, 1987a; Dawson, 1987b)

$D2IR_i$ is day two initial return (second day of the initial trading return) that denotes the percentage change in price from the offer price to the closing price on the second trading day of the *i*th company. (Dawson, 1987a; Dawson, 1987b)

$D3IR_i$ is day three initial return (third day of the initial trading return) that denotes the percentage change in price from the offer price to the closing price on the third trading day of the *i*th company. (Dawson, 1987a; Dawson, 1987b)

OSR_i is oversubscription ratio that denotes the number of times an IPO issue is either over-demanded or under-demanded by the group of investors of the *i*th company. (Yong, 1996)

$LogFA_i$ is firm age that denotes the number of years since establishment to its listing of the ith company. A log transformation is applied because of its positive skewness. (Carter & Manaster, 1990; Ritter, 1984)

$LogFSZ_i$ is the firm size that denotes the number of the unit offers multiply by the offer price of the *i*th company. A log transformation is applied because of its positive skewness. (Kaustia, 2004)

LogTVi is *the* trading volume that denotes the activity of selling and buying of the *i*th company. A log transformation is applied because of its positive skewness. (Lowry, 2001)

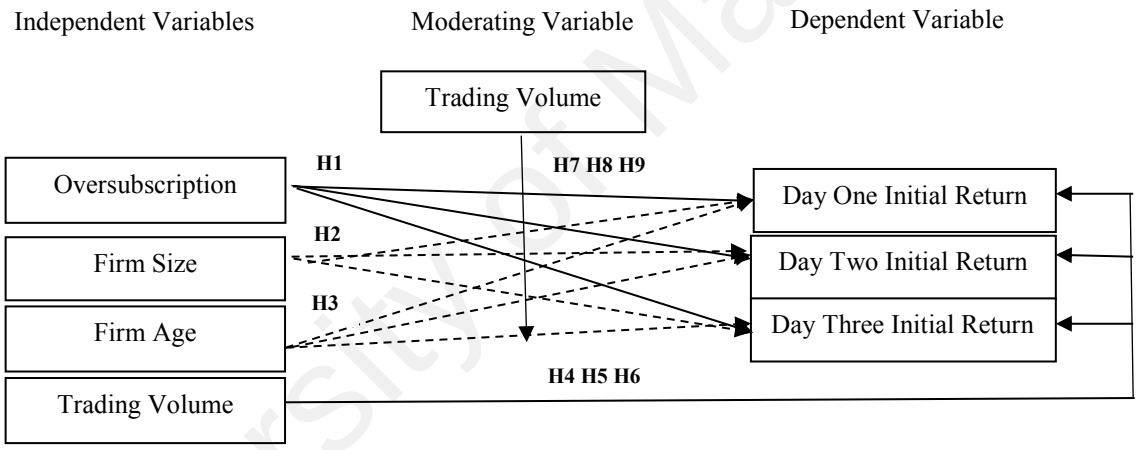


Figure 4.1: Conceptual Framework for First-Three Day of Initial Return

Source: Authors' own sketch
Note: dotted lines represent control variables

Figure 4.1 shows the conceptual framework of how hypotheses are built based on the expected relationship between the independent and dependent variables. This paper adopts the theory of finance from IPO initial return (Dawson, 1987a; Dawson, 1987b) and examines the following hypotheses:

H1: There is a positive relationship between oversubscription and IPO day one initial return.

H2: There is a positive relationship between oversubscription and IPO day two initial return.

H3: There is a positive relationship between oversubscription and IPO day three initial return.

H4: There is a positive relationship between trading volume and IPO day one initial return.

H5: There is a positive relationship between trading volume and IPO day two initial return.

H6: There is a positive relationship between trading volume and IPO day three initial return.

H7: There is a moderating effect of trading volume to the relationship of oversubscription and IPO day one initial return.

H8: There is a moderating effect of trading volume to the relationship of oversubscription and IPO day two initial return.

H9: There is a moderating effect of trading volume to the relationship of oversubscription and IPO day three initial return.

Based on the above hypotheses, it is expected that OSR should be ***significant*** for IPO initial return and hence, H1, H2 and H3 are tested. Besides, it is expected that higher trading volume will have a higher initial return of IPO and hence, H4, H5 and H6 are tested.

H7, H8 and H9 are used to examine to what extent the trading volume influences the relationship between initial return and oversubscription ratio. The trading volume serves as a moderating variable to test whether the relationship is being enhanced or weakened between the initial return and oversubscription ratio. It is commonly believed that the higher trading volume will enhance the demand of investors on IPO.

H7, H8 and H9 are tested using hierarchical regression in equations 4.4, 4.5 and 4.6. There are two essential arguments. Firstly, the investor is allowed to dispose of the

IPO immediately, especially on the first three-day of trading. Secondly, the disposal of IPO will create a vast trading volume regardless of the market condition. This will affect the investor demand for IPO before the listing.

For the hierarchical regression in equations 4.4, 4.5 and 4.6, oversubscription represents the independent variable while the initial return is the dependent variable. OSR is put in equation 4.1, 4.2 and 4.3 in each of the hierarchical regression models, while trading volume is put in equation 4.4, 4.5 and 4.6. Trading volume is treated as a moderating variable by looking at the interaction effect between oversubscription and initial return.

4.4. Empirical Results

Table 4.1 shows the descriptive statistics, results of initial return from 310 fixed-price IPOs listed in the Malaysian stock market from January 2006 to December 2016. The results are divided into three parts, of which are identified as day one initial return, day two initial return and day three initial return.

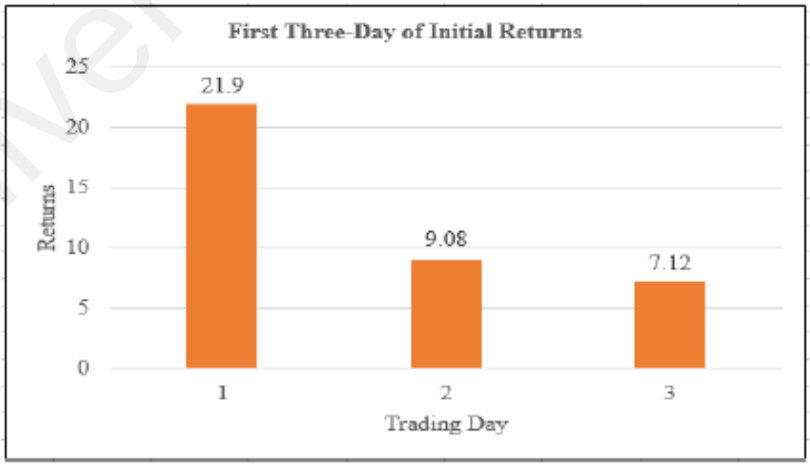


Figure 4.2: First Three-Day of Initial Return

As mentioned in an earlier section, the initial return is measured the percentage change in price from the offer price to the closing price on the first trading day of the *i*th

company. Therefore, a positive initial return shows that the IPO is issued below the offer price. This means the IPO closing price is higher than the offer price on the first trading day. In contrast, a negative initial return shows that the IPO is issued above the offer price. This means the IPO closing price is lower than the offer price on the first trading day.

From table 4.1, the mean and median of oversubscription are 26.03 and 12.38 per cent respectively; the mean and median of day one initial return is 21.90 (Table 4.1) and 8.38 per cent respectively; the mean and median of day two initial returns are 9.08 (Table 4.1) and -4.39 per cent respectively; the mean and median of day three initial return are 7.12 (Table 4.1) and -7 per cent.

The distribution of the initial return is skewed to the right as the mean is higher than the median. The results show IPOs which offer higher returns on the first trading day as compared to day two and day three initial returns. Besides, the initial returns diminish from day one to day three.

Table 4.1: Descriptive statistics for the first-three day initial return

Construct	n	Mean	Median	Std. Dev	Min.	Max.
Oversubscription	310	26.03	12.38	40.98	-34.22	377.96
LogFirm Size	310	8.29	8.18	0.48	7.60	9.91
LogFirm Age	310	0.87	1.00	0.53	0.00	1.95
LogTrading Volume	310	7.21	7.36	0.85	4.23	8.80
Day One Initial Return	310	21.90	8.38	65.70	-70.70	861.78
Day Two Initial Return	310	9.08	-4.39	106.22	-92.42	1204.33
Day Three Initial Return	310	7.12	-7.00	101.76	-92.57	1188.00

Based on table 4.2, it can be observed that the coefficient of OSR is 0.41 at 1 per cent level of significance in day one initial return. The results are consistent with day two initial return and day three initial return. It can be observed that the coefficient of OSR is

0.44 and 0.40 at 1 per cent level of significance respectively. However, the results show that trading volume is not significant for the three-day initial return.

Table 4.2: Results of regression for the initial return

Day One Initial Return			Day Two Initial Return			Day Three Initial Return		
Variables	**Coefficient**	**t-statistic**	**Variables**	**Coefficient**	**t-statistic**	**Variables**	**Coefficient**	**t-statistic**
Constant	0.81	0.02	*Constant*	54.95	0.62	*Constant*	49.83	0.59
OSR_i	0.41***	4.34	OSR_i	0.44***	2.88	OSR_i	0.40***	2.69
$LogFA_i$	0.12	0.04	$LogFA_i$	-9.49**	-1.93	$LogFA_i$	-8.60*	-1.82
$LogFSZ_i$	0.14	0.05	$LogFSZ_i$	-0.90	-0.19	$LogFSZ_i$	-0.91	-0.21
$LogTV_i$	0.45	0.23	$LogTV_i$	-1.31	-0.41	$LogTV_i$	-1.14	-0.37
Diagnostic test			**Diagnostic test**			**Diagnostic test**		
Durbin-Watson		2.00	Durbin-Watson		2.00	Durbin-Watson		1.99
VIF		0.80-1.25	VIF		0.80-1.25	VIF		0.80-1.25
R-square		0.07	R-square		0.04	R-square		0.04
F-value		5.19***	F-value		3.28***	F-value		2.89**

Note: Significance at 10%, 5% and 1% level as indicated by *, ** and ***, respectively.

Table 4.3: Results of hierarchical regression of initial return

Variables	Day One Initial Return		Day Two Initial Return		Day Three Initial Return	
	Model 4.1 Coefficient	Model 4.4 Coefficient	Model 4.2 Coefficient	Model 4.5 Coefficient	Model 4.3 Coefficient	Model 4.6 Coefficient
Constant	0.81	-1468.11**	54.95	1796.11	49.83	1577.27*
	(0.02)	(-2.55)	(0.62)	(1.90)	(0.59)	(1.74)
OSR_i	0.41***	1.53	0.44***	2.10	0.40***	2.43
	(4.34)	(1.02)	(2.88)	(0.85)	(2.69)	(1.02)
$LogFA_i$	0.12	4.82	-9.49**	-83.83**	-8.60*	-79.75*
	(0.04)	(0.18)	(-1.93)	(1.97)	(-1.82)	(-1.95)
$LogFSZ_i$	0.14	76.49**	-0.90	-86.89*	-0.91	-76.24
	(0.05)	(2.56)	(-0.19)	(-1.77)	(-0.21)	(-1.62)
$LogTV_i$	0.45	82.57**	-1.31	-97.39*	-1.14	-85.25*
	(0.23)	(2.57)	(-0.41)	(-1.85)	(-0.37)	(-1.69)
$OSR_i*LogTV_i$	-	-0.07		-0.10	-	-0.12
	-	(-0.74)	-	(-0.68)	-	(-0.86)
$LogFA_i*LogTV_i$	-	-0.21	-	4.40*	-	4.21*
	-	(-0.14)	-	(1.72)	-	(1.72)
$LogFSZ_i*LogTV_i$	-	-4.26**	-	4.71*	-	4.11
	-	(-2.56)	-	(1.73)	-	(1.57)
Durbin-Watson	2.00	2.02	2.00	1.97	1.99	1.96
R-square	0.07	0.09	0.04	0.06	0.04	0.06
F-value	5.19***	3.94***	3.28***	2.79***	2.89**	2.52**

Note: Significance at 10%, 5% and 1% level as indicated by *, ** and ***, respectively. The value in parentheses is t-statistic.

The results indicate that investors are keen to subscribe to the newly issued share, it brings to higher demand for IPO. They prefer to hold for the short term rather than long term and dispose of the IPO during the first three trading day. Besides, the active participation from the high demand does not influence the buy and sell decision from the investor. Hence, H1, H2 and H3 are valid but H4, H5 and H6 are not valid.

As shown in Table 4.3, from the three different initial returns, it can be observed that the interaction of all independent variables with trading volume is not significant except for $LogFSZ_i$*$LogTV_i$ in model 4.4, $LogFA_i$*$LogTV_i$ and $LogFSZ_i$*$LogTV_i$ in model 4.5 and $LogFA_i$*$LogTV_i$ in model 4.6. Hence, H7, H8 and H9 are not valid, and it can be concluded that the trading volume does not moderate the relationship between OSR and initial returns. This result is different with earlier results where show significance for the three days initial return.

4.5 Conclusion

Investor participation in IPO trading is vital in the stock market. It is believed that lower trading volume and OSR cause the initial return to being lower, and hence investors are encouraged to subscribe to new IPO and trade on the first trading day. However, based on the results of this study, it is found that OSR is positive and trading volume is not necessarily positive (Table 4.2) on the three trading days. Hence, it can be concluded that investors are not keen to participate in the subsequent trading after the listing of IPO.

Notably, this paper finds: Firstly, IPO provides an average of 21.90 per cent (Table 4.1) of initial return to investors on the first trading day, 9.08 per cent (Table 4.1) of initial return on the second trading day and 7.12 per cent (Table 4.1) of return on the

third trading day. Secondly, there is a positive relationship between the OSR and initial return and no relationship between the trading volume and initial return for the three-day $LogTV_i*OSR_i$. Thirdly, the trading volume does not act as a moderator that worsens the relationship between the OSR and initial return. Lastly, this study shows that investors should actively participate in the subsequent trading of an IPO. Higher trading volume will spur higher liquidity and demand. Besides, the empirical results are robust as both results from the multiple regression and hierarchical regression yield a similar conclusion.

CHAPTER 5: THE INTERACTION EFFECT OF HEURISTIC REPRESENTATION ON IPO ANOMALY: EVIDENCE FROM FLIPPING ACTIVITY

5.1 Introduction

The IPO research in aftermarket trading has obtained considerable attention in recent years, especially in the U.S. These studies mainly focused on the aspect of price stabilization by IPO underwriter. The process of price stabilization is called flipping activity where the disposal of share by the IPO subscriber on the first trading day. In Australia, this is known as "stagging" activity, but this issue only has limited attention in Malaysia.

According to Hanley et al. (1993), Aggarwal (2000), Ellis et al. (2000), Aggarwal et al. (2002) and Fishe (2002), IPO underwriter plays an essential role in the flipping activity. They serve as the market maker who stabilize the downward pressure of share price from flipping activity by the IPO subscriber. Therefore, the net buying from the underwriter in the aftermarket trading could stabilize the IPO price, especially during the weak IPO offering (Carter and Dark, 1993).

In the weak IPO offering, the flipping cost is expensive for underwriters, and this is known as IPO inventory risk. When the inventory risk becomes higher, investors will have less interest to buy the share in the secondary market, and hence lesser IPO subscription. According to Correra (1992), underwriters always at "war against IPO flippers" to reduce IPO inventory risk. They deter flipping activity from those flippers who dispose of the shares in a short period.

Besides, Hanley et al. (1996) highlight that flipping activity creates problem to the IPO syndicate. For instance, co-managers involve in IPO distribution and aftermarket trading. They acquire 8.7% of the shares offered on the first trading day. Meanwhile, the underwriter is 58.8% (Ellis et al., 2000). This helps co-managers to allocate the shares more effectively and leads to price stabilization, especially during weak IPO offering. For flippers, they reduce the searching cost and encourages more long-term investors (Hanley et al., 1996).

In this paper, there are two considerations in flipping activity: First, the underwriter discourages an investor from selling share from the subscription on the first trading day. If there is a higher liquidation, the flipping activity will cause the poor IPO initial return; Second, if the flipping activity is inactive, there will be no aftermarket trading, and the demand of subsequent trading will be reduced, causes lesser price movement.

The motivation of this study is from two critical arguments. First, the flipping activity in Malaysian IPO is different as compared to the U.S. market. For instance, the U.S. underwriters involve more frequently in price stabilization in aftermarket trading. In contrast, flipping activity in Malaysia is common, but this is supported by the high initial return and demand in the secondary market. According to Wong (2005), though IPO price support is illegal, the underwriter and IPO syndicate still involve in aftermarket trading.

Second, the Malaysian IPO is unique in terms of allocation, which is a private placement offering. For instance, the underwriter identifies a group of institutional investors such as banks, mutual funds, insurance companies, pension funds, and gives the

priority for them to subscribe to newly issued share. This is known as a non-public offering which helps to support the downward pressure of share price.

According to Shiller (2003), the representative heuristic is defined as a "tendency for people to categorize events as typical or representative of a well-known class". The representative heuristic asserts that individuals assess the likelihood of an event to occur by similar outcomes of its stereotypes (Kahneman and Tversky, 1982). Hence, it is convenient for investors to reply to this type of heuristic for judgment and prediction.

This study will examine whether heuristic representation serves as an interaction role in affecting the relationship between the dependent and independent variables. In our study, flipping activity as measured by trading volume is used to determine the impact of an initial return, oversubscription ratio, firm age, offer period, firm size and heuristic representation. This study contributes to the extant literature on IPO flipping activity with heuristic representation in the context of IPO in an emerging market.

The remainder of the paper is organized as follows. Section two reviews the past literature, followed by data and methodology. Section four discusses the results. The last session concludes the study.

5.2 Literature Review

Numerous research in aftermarket trading (a proxy for flipping) have been conducted to explain the flipping behaviour together with IPO initial return. In the early studies by Miller and Reilly (1987), Schultz and Zaman (1994), they show a positive relationship between initial return and flipping activity. The results are consistent with

Ellis et al. (2000) and Aggarwal (2003) who confirm the positive relationship between initial return and flipping activity.

Boehmer and Fishe (2000) argue that IPOs are costly to obtain greater liquidity in aftermarket trading. They explain that the underwriter sets a lower offer price intentionally to receive better demand and initial return. This induces the flipping from low valuation investors to high valuation investors that lead to high post-listing liquidity and initial return of the IPO. In most of the IPO markets, the underwriter does not have the authority to interfere in aftermarket trading. However, with a significant initial return, it affects the selling decision of investors and leads to lower flipping activity.

There are many studies done in the U.S. market on IPO flipping activity (Krigman et al., 1999; Bash, 2001; Aggarwal, 2003; Gounopoulos, 2006). Krigman et al. (1999) and Bash (2001) study the relationship between pricing error and flipping activity of the long-term IPO initial return. Their results show that flipping activity is not the main factor that causes poor aftermarket performance. However, flipping is negatively explained by initial return and market capitalization.

The flipping activity is not limited to retail investors but also available for institutional investors. According to Benveniste and Spindt (1989), there is a negative relationship between initial return and institutional flipping. The result is similar to Krigman et al. (1999) and Bash (2001), both findings show that flipping activity is more significant during the negative initial return, especially during the weak IPO offering.

Besides, Aggarwal (2003) uses 617 IPOs sample from May to June 1998; the results show that institutional investors flip more than retail investors in hot IPO. In

contrast, Gounopoulos (2006) shows that institutional investors flip more than retail investors in cold IPO and when a larger size is issued. These findings conclude that institutional investors are also aggressive in IPO flipping activity, indicating a response to the IPO initial return.

In Malaysia context, studies from Chong et al. (2009) and Chong (2009) find the flipping activity in the aspect of behaviour finance from 1991 to 2003 with a total sample of 132 IPOs. Their results show that the noise effect and disposition effect has a positive relationship with flipping activity, and there is a negative relationship between issue size and flipping activity. Their results are consistent with Islam & Munira (2004).

The studies from Sapian et al. (2012) and Abdul-Rahim et al. (2013) find the flipping activity is significantly related to initial return, institutional investors, and offer size. Their results conclude that higher initial return and higher institutional participation bring higher flipping activity; Meanwhile, larger issue size brings lower flipping activity.

Besides, Chong et al. (2011) show that there is a negative relationship between heuristic representation and flipping activity. The result is consistent with Shefrin and Statman (1993) and Shiller (2003). hey show that heuristic representation influences the decision making from an investor from the perspective of behavioral finance.

In the stock market, heuristic representation is a judgment bias that can help an investor to estimate a stock is either winner or loser, and the market is either bull or bear which according to past events. The study from Tversky and Kahneman (1983) shows the intuitive prediction based on the similarity of the evidence and possible outcome that cause the judgement bias for an investment.

Shefrin and Statman (1993) also indicate the heuristic representation lead an investor to be more optimistic due to experiences on the past gains and pessimistic due to experiences on the past losses. Heuristic representation helps to make a quick decision, but it can be risky for investment because not all information is carefully considered, and resulted with the fallacy. Bayley et al. (2006) show a positive relationship between heuristic representation and the investor's decision to flip from both Australian institutional investor and individual investor.

Besides, according to Che-Yahya *et al*. (2014), they study the sentiment of shareholders through the impact of the lock-up period to the flipping activity. This study focuses on the different length of time affects the different sentiments of the major shareholders to hold on to the IPO. They found a negative relationship between lock-up period and flipping activity. This is because a more extended lock-up period causes significant shareholders to hold the shares for good IPO.

Our study is different from Che-Yahya *et al*. (2014). First, judgment bias exists when an investor or shareholder is allowed to liquidate the IPO on the first trading day. Second, the sentiment of the investor or shareholder may change because they are more concerned about the share performance rather than business performance.

Besides, Leow and Lau (2018a) study the investor's sentiment on the first day of trading during the GFC. The results show that investors still able to gain about 1 to 3 per cent of returns during the crisis period among the new issues on the first day of trading, even the investor's sentiment is low. The market sentiment for IPO was at its worst period during the GFC, and the investors did not want to hold on to the IPO. According to Leow

and Lau (2018b), a more detailed study on the high-low intraday performance of IPO during the GFC. The result indicates a total return of -5 to 11 per cent during the crisis period. It can be concluded that there is still a positive return as an investor's sentiment is low during the crisis period.

Therefore, this study examines the relationship between variables such as initial return, oversubscription ratio, firm age, offer period, firm size and heuristic representation. Moreover, this study is different from previous literature by focusing on the interaction effect of heuristic representation which is the judgment bias when an investor is allowed to liquidate the IPO on the first trading day.

5.3 Data and Methodology

This paper uses 186 IPOs which are listed on Bursa Malaysia from January 1, 2006, to December 31, 2016. A cross sectional data collected by observing the IPO offer price, closing price, offer period, unit offer, firm age, trading volume and OSR at the same particular year of listing. The IPO information such as offer price, closing price, offer period and unit offer can be obtained from Bursa Malaysia website; Firm age can be obtained from the annual report; Over-subscription ratio and trading volume can be found from the newspaper on the next day of IPO debut.

In order to have a comprehensive understanding of the impact of heuristic representation on the flipping activity, this paper examines the interaction effect of the heuristic representation on the relationship between an independent variable and dependent variable. The conceptual framework and relevant hypotheses are shown in Figure 5.1.

In equation 5.1, the dependent variable is IPO flipping activity as measured by the liquidity, FA_i = (volume/unit offer) x100. Besides, the independent variables consist of IPO initial return, oversubscription ratio, firm age, offer period, firm size and heuristic representation. In equation 5.2, the interaction effect of heuristic representation is measured by the equally weighted initial return of IPO, ($IR(OTC)_i = (CP_i - OP_i) / OP_i$ x 100). It is calculated as the average on the percentage change in price from offer price to the closing price on the first day of trading.

$$FA_i = \alpha_0 + \alpha_1 IR_i + \alpha_2 OSR_i + \alpha_3 LogAGE_i + \alpha_4 LogOP_i + \alpha_5 LogSize_i + \alpha_6 HR_i + \varepsilon_i \quad (5.1)$$

$$FA_i = \beta_0 + \beta_1 IR_i + \beta_2 OSR_i + \beta_3 LogAge_i + \beta_4 LogOP_i + \beta_5 LogSize_i + \beta_6 HR_i + \beta_7 IR_i * HR_i + \beta_8 OSR_i * HR_i + \beta_9 LogAge_i * HR_i + \beta_{10} LogOP_i * HR_i + \beta_{11} LogSize_i * HR_i + \varepsilon_i \quad (5.2)$$

Where:

FA_i is flipping activity that denotes the percentage of trading volume divided by the number of shares issued on the first day of trading of the *i*th company. (Aggarwal, 2003)

IR_i is the initial return that denotes the percentage change in price from the offer price to the closing price on the first day of trading of the *i*th company. (Dawson, 1987)

OSR_i is oversubscription ratio that denotes the number of times an IPO issue is either over-demanded or under-demanded by the group of investors of the *i*th company. (Yong, 1996)

$LogFA_i$ is the firm age that denotes the number of years since establishment to its listing of the *i*th company. A log transformation is applied because of its positive skewness. (Carter and Manaster, 1990; Ritter, 1984)

$LogOP_i$ is offer period that denotes the duration of the subscription of the *i*th company. A log transformation is applied because of its positive skewness. (Guo and Brooks, 2009)

$LogFSZ_i$ is the firm size that denotes the number of the unit offers multiply by the offer price of the *i*th company. A log transformation is applied because of its positive skewness. (Wasserman, 2003)

HR_i is heuristic representation denotes the equally weighted initial return for the three most recent new issues listed before the IPO listing. (Tversky and Kahneman, 1974; Shiller, 2003; Bayley et al., 2006)

Figure 5.1 shows the conceptual framework of the hypotheses developed based on the expected relationship between the independent variable and dependent variable. This study uses the theory of finance from IPO initial return and examines the following hypotheses:

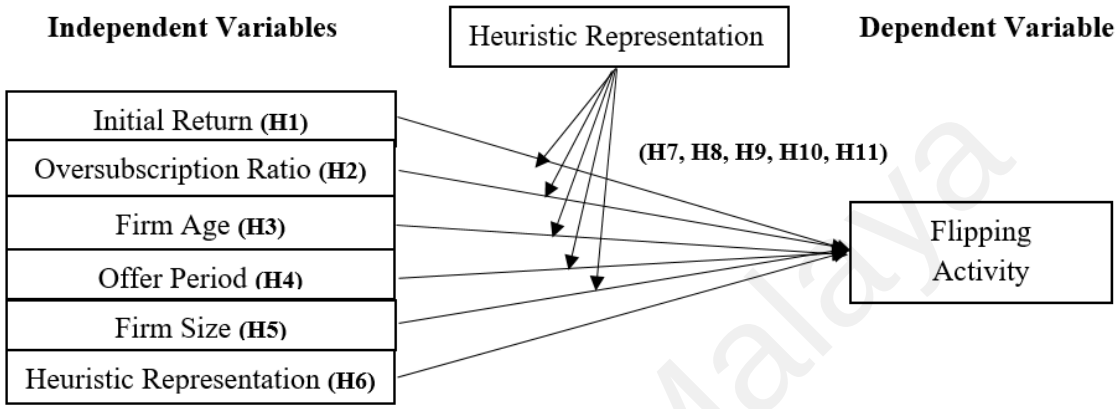


Figure 5.1: Conceptual Framework of Flipping Activity and Heuristics Representation

Source: Authors' own sketch

H1: There is a positive relationship between initial return and flipping activity.

H2: There is a positive relationship between the oversubscription ratio and flipping activity.

H3: There is a negative relationship between firm age and flipping activity.

H4: There is a positive relationship between the offer period and flipping activity.

H5: There is a negative relationship between firm size and flipping activity.

H6: There is a positive relationship between heuristic representation and flipping activity.

H7: There is an interaction effect of the initial return and heuristic representation to the flipping activity.

H8: There is an interaction effect of the oversubscription ratio and heuristic representation to the flipping activity.

H9: There is an interaction effect of the firm age and heuristic representation to the flipping activity.

H10: There is an interaction effect of the offer period and heuristic representation to the flipping activity.

H11: There is an interaction effect of the firm size and heuristic representation to the flipping activity.

From the hypotheses, H1 to H6 are used to test in equation 5.1, we expect that initial return, oversubscription ratio, offer period and heuristic representation should have the ***positive*** relationship with flipping activity and firm age and firm size have the negative relationship with flipping activity.

H7 to H11 is used to test in equation 5.2 to examine to what extent heuristic representation influences the relationship between initial return, oversubscription ratio, firm age, offer period, firm size and flipping activity. The judgement of investor is varied when subscribing to the IPO, and this causes the demand will be increased or decreased. It is believed that the interaction with the heuristic representation will have an impact on the flipping activity on the first day of trading.

5.4 Empirical Results

Table 5.1 shows the mean and median of all variables of the 186 IPOs for the entire period from 2006 to 2016. As observed, all variables except age are skewed to the right, as the mean is higher than the median. This is because some of the IPOs offer higher

Table 5.1: Descriptive statistics for the flipping activity and heuristic representation

	n	Mean	Median	Std. Dev	Min.	Max.	Jarque-Bera
Variables							
Flipping Activity	186	19.21	12.59	22.43	0.00	170.70	1099.63***
Initial Return	186	16.35	6.52	49.08	-57.30	369.50	4834.43***
Oversubscription Ratio	186	19.27	9.91	31.77	-12.97	315.17	13731.21***
Age	186	14.94	11.50	14.37	0.50	90.00	16.39***
Offer Period	186	10.63	9.00	3.78	5.00	26.00	29.16***
Size (million)	186	1342.46	151.56	4699.21	19.56	40400.00	53.97***
Heuristic Representation	186	16.41	9.92	29.17	-22.46	124.85	232.40***

Note: *, ** and *** denote 10%, 5% and 1% level of significance respectively

return when there is greater demand than supply. Both initial return and OSR are volatile with a higher standard deviation of 49.08 and 31.77, respectively. This is because some IPOs have negative initial return and oversubscription ratio. Since the regression result does not suffer from the autocorrelation (Table 5.3 and 5.4 where the Durbin-Watson is more than 1.8), hence normality of the residuals is not an issue of the model.

Table 5.2 presents the correlations analysis between the explanatory variables. Notably, the variables such as IPO flipping activity, initial return, oversubscription ratio, firm age, offer period, firm size and heuristic representation used in the analysis are not highly correlated. Therefore, there is no multicollinearity in the model.

Table 5.2: Correlation between the explanatory variables

Variables	IR	OSR	Age	OP	Size	HR
IR	1.00					
OSR	0.22	1.00				
Age	0.07	0.29	1.00			
OP	0.10	-0.06	0.10	1.00		
Size	-0.06	-0.08	0.09	-0.05	1.00	
HR	0.61	0.33	0.05	-0.02	0.01	1.00

Table 5.3: Regression. Dependent variable: Flipping Activity

Independent Variable	Coefficient	t statistic
Constant	116.79	5.19***
IR	0.01	0.35
OSR	0.16	3.15***
LogAGE	4.00	1.36
LogOP	-10.89	-0.95
LogSize	-11.05	-4.78***
HR	-0.06	-0.84
Diagnostic test		
Durbin-Watson	1.89	
VIF	1.03-1.80	
R-square	0.21	
F-value	7.83	
P-value	0.00	

Note: *,** and *** denote 10%, 5% and 1% level of significance respectively.

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As observed in Table 5.3, the range of the VIF is less than five, and Durbin Watson statistic is near to 2. The OSR has a positive and significant relationship with flipping activity. When the demand increases by one time and the IPO flipping activity will increase by 0.16 per cent. This is because higher demand makes investors flip more to liquidate the IPO on the first trading day. The result is consistent with Sapian et al. (2012) and Abdul-Rahim et al. (2013).

Besides, the coefficient for firm size is -11.05 at 1 per cent level of significance. The result shows that firm size has a negative relationship with flipping activity. When the firm size increases by one time and the IPO flipping activity will decrease by 11.05 per cent. This is because the larger scale of the IPO firm, it is more stable in terms of performance, and the risk from the business operation is lower. This attracts substantial investors to hold the larger scale IPO rather than dispose of it, hence lower flipping

Table 5.4: Results of interaction effect of heuristic representation on the flipping activity

Independent Variable	Coefficient	t-statistic
Constant	98.01	3.80***
IR	0.08	1.00
OSR	0.34	3.81***
LogAGE	3.25	0.91
LogOP	-2.37	-0.18
LogSize	-10.07	-3.85***
HR	0.09	0.12
IR HR*	-0.0005	-0.59
OSR HR*	-0.0029	-2.49***
LogAGE HR*	0.05	0.46
LogOP H.R.*	-0.52	-1.15
LogSize HR*	0.04	0.52
Diagnostic test		
Durbin-Watson	1.91	
R-square	0.20	
F-value	5.30	
P-value	0.00	

Note: *,** and *** denote 10%, 5% and 1% level of significance respectively.

activity. The result is consistent with Chong et al. (2009), Chong (2009) and Islam and Munira (2004). Overall, on average, the flipping activity is 98.96 per cent (116.79+0.01+0.16+4-10.89-11.05-0.06). Therefore, H2 and H5 are supported, but H1, H3 and H4 are not supported.

Table 5.4 shows the results of the interaction effect of heuristic representation. OSR plays an important role to explain the flipping activity of the IPO. The higher OSR reflects higher investor demand for an IPO, a higher flipping activity that leads to higher liquidation on the first trading day. Besides, the larger scale of firm size reflects the capital for an IPO. Hence, a vast paid-up capital will lead to investors to hold on an IPO, and not keen to liquidate on the first trading day.

The result shows that the OSR and the firm size are the main factors to explain the flipping activity. However, with the interaction effect of the heuristic representation with OSR, when the demand increases by one time and the IPO flipping activity will

Table 5.5: Hypotheses and Summary of Results

Hypotheses	Factors	Predicted Sign	Hypotheses Supported
H1	IR	+	-
H2	OSR	+	Supported
H3	Age	-	-
H4	OP	+	-
H5	Size	-	Supported
H6	HR	+	-
H7	IR x HR	+	-
H8	OSR x HR	-	Supported
H9	Age x HR	-	-
H10	OP x HR	+	-
H11	Size x HR	-	-

Notes: The dependent variable is flipping activity. The factors consist of initial return (IR), oversubscription ratio (OSR), firm age (Age), offer period (OP), firm size (Size) and heuristic representation (HR). +ve indicates an expectation on the positive relationship while –ve indicates an expectation on the negative relationship. Hypotheses supported by each variable is based on the value reported in table 5.3 and table 5.4.

decrease by -0.0029 per cent. This contradicts with the results in Table 5.3, because when the sentiment of the investor has changed (heuristic representation), the IPO demand causes lower flipping activity. It also means that investor is more pessimistic about trading when the sentiment of the investor is weak and causes the investor has changed their trading behaviour (flipping activity).

In the Malaysian financial market, the demand is essential to encourage investors or speculators to subscribe to an IPO, especially on the first trading day. This is resulted in the high trading activity of the IPO. Potential buyers and sellers will trade actively and create higher liquidity to the secondary market. However, the change of investor's sentiment plays an essential role to affect the IPO demand, and the flipping activity will be affected. Therefore, H8 is supported, but H7, H9, H10 and H11 are not supported.

Table 5.5 shows a summary of hypotheses tested. Only IPO OSR and firm size influence the flipping activity. However, there is an interaction effect of heuristic representation to the relationship between the OSR and flipping activity.

5.5 Conclusion

In IPO issuance, it is believed that underwriter can gauge the sentiment of different investors, and hence is more proficient in understanding demand and price setting of subsequent trading activities. The success of an IPO depends on the condition of the financial market. However, based on the results of this study, it is found that OSR is positive, firm size is negative, and the initial return is not the primary concern in trading. Hence, it can be concluded that investors are keen to participate in the new IPO issue regardless of the sentiment of investors.

Notably, this study finds: First, the distribution of initial return, oversubscription ratio, firm age, offer period, firm size, heuristic representation, and flipping activity are positively skewed; Secondly, OSR has a positive relationship with flipping activity. This is because higher demand makes investors flip more to liquidate the IPO on the first trading day. In contrast, firm size has a negative relationship with flipping activity. Larger IPO firm tends to show better performance, and the risk from business operation tend to be lower. Thirdly, heuristic representation influences the relationship between OSR and flipping activity.

Lastly, this study dispels the notion that investors are active in subsequent trading but not necessarily obtain profit from the liquidation. Besides, the empirical results are robust as both results from the multiple regression and interaction effect yield a similar conclusion.

CHAPTER 6: ALTERNATIVE TOOLS OF FINANCING TO TRADITIONAL IPO: CASE STUDIES FROM MALAYSIA

6.1 Introduction

6.1.1 Special Purpose Acquisition Company

The introduction of the reverse merger of a company known as Special Purpose Acquisition Company (SPAC) to Malaysian financial market as a means of accumulating funds from investors can be considered as a new trend in the emerging Asia. Some investors would contend this as a form of a non-traditional Initial Public Offerings (IPOs). According to Jenkinson and Sousa (2011), SPAC is established with the intention of asset acquisition, merger, and other business combination. It provides greater liquidity for the flow of fund and trading volume through the stock market, and this financing tool enhances the market efficiency.

As shown in Figure 6.1, new SPACs have been established since 2011, and over the years, this idea has slowly gained popularity. Albeit a small growth from 2011 to 2016, to-date, there are five SPACs which are listed on the Malaysian stock exchange. The first four SPACs are oil and gas companies while the recent SPAC is in the food and beverage industry.

The first SPAC listed on the Bursa Malaysia is Hibiscus Petroleum Berhad. It was listed on the Main Market on 25th July 2011. The main business activity of Hibiscus Petroleum Berhad is the exploration and production of oil and gas. In 2012, Hibiscus Petroleum had made acquisition of business and asset that would pave the way for the company to become an independent oil and gas exploration and production player in

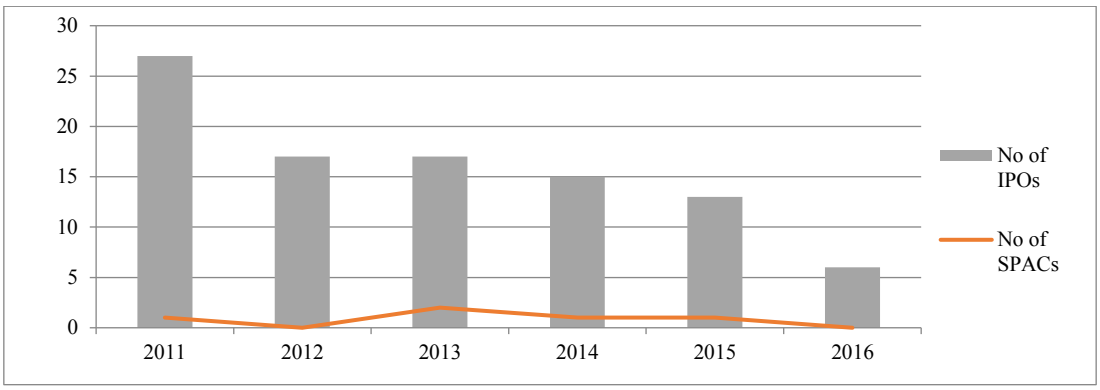

Figure 6.1: Number of Malaysian IPOs compared to SPAC IPOs

Source: Authors' own sketch based on Bursa Malaysia, Securities Commission and Bloomberg (as at March 31, 2016)

future. It has no income or operation from the business prior to the initial public offering (IPO), and the exposure of risks is higher for underpricing compared to the traditional IPO.

According to the Malaysian Stock Exchange (also known as Bursa Malaysia), SPAC is defined as a company which has no income or operation from business prior to the initial public offering (IPO). Under the present guideline, a SPAC must make its initial acquisition (also known "qualifying acquisition") within 36 months from its initiation or IPO, else the SPAC must be liquidated and the proceeds held in a trust account, and be distributed back to the shareholders on a pro-rata basis. It is clearly stated that at least 90 per cent of the gross proceeds from a SPAC's IPO must be deposited in a trust account. Details of a listing requirement are stated in table 5.2.

It is no doubt that SPAC is a new breakthrough as it provides another alternative tool to raise fund and caters for another segment of investors which have higher risk appetite as compared to traditional IPOs. SPAC attracts the flow of investors' monies into the market and hence increases the market liquidity. However, there has not been

Table 6.1: Key Listing Requirement of SPAC

Aspect	Main Market
Listing Board	SPAC is allowed on Main Market only
Place of Incorporation	Must be incorporated in Malaysia under the Companies Act, 1965 The Securities Commission Malaysia may allow SPAC incorporated in a jurisdiction outside Malaysia the requirements set out under Additional Criteria for Primary Listing of Foreign Companies are complied with
Minimum Fund Raised	RM150 million
Management Team Credibility	Members of its management team have the experience, qualification and competence to:- ↘ Achieve the SPAC's business strategy; and ↘ Perform their individual roles, including understanding of the nature of their obligations and those of the SPAC
Management Team Ownership	Must in aggregate own at least 10% in the SPAC on the date of its listing
Moratorium on Securities	Management team's entire interest from date of listing until completion of the qualifying acquisition Upon completion of the qualifying acquisition, sell down is allowed on a staggered basis over a period of two years
Management of Proceeds	Must place at least 90% of the gross proceeds raised in a trust account and may only be released by the custodian upon termination of the trust account At least 80% of the amount in trust account to be used for qualifying acquisition
Qualifying Acquisition	Must complete qualifying acquisition within 36 months from the listing date

Source: Bursa Malaysia (http://www.bursamalaysia.com/market/listed-companies/listing-on-bursa-malaysia/listing-criteria/, accessed 1 June 2016)

any documented study done on SPAC in Malaysia despite its existence since 2011. Hence, this study intends to bridge the gap between the research in this area.

Malaysian SPAC IPO has evolved as an interesting subject to study the financing issue from the perspective of Financial Management. Firstly, according to Bloomberg, Malaysian stock market has raised a total capital of USD 7.56 billion in 2012 and has grown to be the world's fourth largest market for IPOs.

Secondly, Malaysian SPAC IPO is the pioneer in the Southeast Asia region. It has also recorded some successful transaction for companies such as Hibiscus Petroleum and EcoWorld International. For the former, after the completion of the acquisition of a 35% stake in Lime Petroleum Plc (Norway) in April 2012, Hibiscus Petroleum has become a full-fledged oil and gas exploration and production company.

In addition, Hibiscus Petroleum Berhad is the first company which has been discharged from the SPAC and re-listed to the Industrial Products under the Main

Market. For the latter, the first SPAC property proposed by EcoWorld International has also ceased to be SPAC because the company is able to meet the new listing requirement.

The paper aims to account for the recent development of SPACs in Malaysia with respect to the companies listed and their key indicators. In addition, the paper intends to evaluate the usefulness of SPAC as an alternative financing vehicle in an emerging market like Malaysia. The remainder of the paper is organized as follows. Section 6.2 reviews the past literature followed by the methodology on how SPAC is listed in stock exchange. Section 6.4 discusses a number of SPACs in Malaysia. The last section concludes the study.

6.2 Literature Review

6.2.1 SPACs as public listed companies

The past studies on SPAC are sparse; however, it is a successful alternative financing in the recent financial innovation. It becomes one of the important sectors for U.S. IPO market since 2003. In 2008, SPACs achieved one-third of the U.S. IPO market in terms of a number of offerings and fund raised. The fund raised from SPACs is sold through IPO which consists of common stock and a free detachable warrant. As usual, warrants can be traded immediately on the first trading day. The fund raised from IPO is used for business combination.

The main assets for SPAC are the fund raised, experience and skill of the management team. The primary objective of SPAC is to seek for a business combination. With regard to this, the underwriter has obtained financial interest to

purchase additional units at a premium to the offer price in SPAC; therefore they assist in advising a business combination.

6.2.2 SPAC Features

The activity of business combination requires huge capital, SPACs serve as an alternative financial tool for IPO fundraising. It is essential to provide management team a different way to acquire target company, access to potential investors, provide more choices for investor and capitalize on their expertise (Hale, 2007).

Davidoff (2008) describes the distinctive characteristics of SPACs and Sjostrom (2008) studies the legal features of the SPACs. In this regard, Securities Commission of Malaysia is the inaugural to implement a dedicated soft law to SPACs through Bursa Malaysia in 2011. The soft law ensures greater transparency to SPACs' investors in terms of the implementation process, its duration, capital structure and moratorium periods (D'Alvia, 2014). Therefore, it is suggested that the soft law approach is the best guidelines to control economic issues such as to protect the investor from moral hazard and asymmetric information.

In other focal points, the SPAC's future demand and the prospect can be influenced by asymmetric information such as management skills and staff knowledge. It is essential for SPAC as the business nature is very much relying on the investment and acquisition of assets. According to Jog and Sun (2007), SPAC insiders and public investors without sufficient information about firm's prospects such as management skills and staff knowledge cause the low initial return on average to investors. On the other hand, Jenkinson and Sousa (2011) mention risk-free investment is defined as the

funds allocated to the trust account and SPACs are the combinations of risk-free investments with a potential future acquisition.

According to Schultz (1993), Chemmanur and Fulghieri (1997), Garner and Marshal (2005) focus on other aspects such as stakeholders' incentives, institutional structure, SPAC performance, SPAC success factors. Schultz (1993) finds SPAC commits to issue additional stocks during the exercise of the warrant in future. It is because the size of SPAC is relatively small, low earnings, a low value of assets and agency cost problem between managers and stakeholders.

Chemmanur and Fulghieri (1997) also agree with Schultz (1993) that SPAC IPOs solve information asymmetry problems in terms of the fair price of SPAC and inherent risks. Similar to Garner and Marshal (2005) agree to Chemmanur and Fulghieri (1997), Schultz (1993) results, they find the first-day performance is higher because of SPAC firms allocate the bigger proportion of firm value to its warrants during IPO.

6.2.3 SPACs Performance

The first-day performance is important for the issuers, underwriters, stakeholders, and investors. Most of the studies focus on the issue of IPO pricing. The issue of pricing causes the under-pricing or over-pricing on the first day of trading. Therefore, SPAC is getting substantial attention from investors due to the different listing requirement as compared to traditional IPO. Jog and Sun (2007), Boyer and Baigent (2008), Rodrigues and Stegemoller (2012) show SPACs have a low initial return. They conclude that the poor performance can cause higher uncertainties about SPAC firm's future demand and prospect.

In addition, according to Jog and Sun (2007), they find a lower IPO underpricing with negative post-SPAC IPO return and positive returns for SPAC management. More studies from Jog and Sun (2007) and Boyer and Baigent (2008) find SPAC issue provides a very low average initial return as compared to other traditional IPOs (Ritter & Welch, 2002; Loughran & Ritter, 2004; Gao, Ritter, & Zhu, 2011). This is a norm as the SPACs without stable business income and sophisticated operation prior to the listing; subsequently, it accelerates the uncertainty about the future demand and prospects of the ability to generate profit.

An early study from Rock (1986) shows the information asymmetry of traditional IPO initial return that insiders have extraordinary information compared to public investors. However, Jog and Sun (2007) found neither investor has insider information about the SPAC's prospects. They found this is consistent with the little information. First, SPACs performance is slightly underpriced on average; Second, there is a lack of mispricing where the underwriter helps in matching the supply and demand of IPO under the over allotment option.

Boyer and Baigent (2008), and Jog and Sun (2007) report the size of SPACs IPOs is relatively small with average less than $100 million. Moreover, they also report a low asset value and low earning because SPACs are required to acquire new business to grow stronger. Therefore, they conclude SPACs are not experiencing any underpricing at the first day of trading (Chakraborty, Gervais, & Yilmaz, 2011). This finding is consistent with Lewellen (2009), Thompson (2010), Lakicevic and Vulanovic (2011), and Ignatyeva, Rauch, & Wahrenburg (2012) with a substantial sample of SPACs from US and European markets, the results show SPACs do not experience any underpricing. It causes a poor performance to investors. According to

Lewellen (2009) reports a month return of negative 2% and Jog and Sun (2007) report an approximately overall performance of negative 22% to those investors who hold common stock of SPACs.

Similar to the performance of post-merger announcement, Tran (2012) reports a low monthly return of 1.7% and Lakicevic and Vulanovic (2011) also report a negative return after the post announcement to common stockholders. It can be explained in the study of Datar, Emm, and & Ince (2012), they report that the performance of SPACs is inferior as compared to IPO firms. They explain that SPAC acquires companies which are highly leveraged, smaller in size, lower investment and growth opportunities as compared to IPO firms. Therefore, SPACs report a poor return in long term for SPACs.

6.2.4 SPACs Volumes

The study of IPO volume is interesting as it reflects the investors' sentiment and behavior of the share movement. According to Ibbotson and Jaffe (1975) and Ritter (1984) find the traditional IPO volumes is substantial during "hot issue". However, the studies on SPACs volumes still needed more attention.

6.2.5 SPACs Risk

SPAC structure reflects its risky investments, especially dealing with the confiscation of shareholders' fund. However, SPACs able to mitigate this risks and incorporate some protection for shareholders such as holding funds in trust, a limited time frame for assets acquisition, allowing conversion and shareholders are given voting right on the business acquisition.

In relating to the IPO initial return, Berger (2008) finds bigger market capitalization of SPACs is harder to identify a larger target for acquisition as it may cause shareholders estimate the firm value inaccurately before the target is announced. Therefore, size, time or conversion limits are the determinants for evaluating a firm's future combination for shareholders.

6.2.6 SPACs' Acquisition

According to Malmendier, Opp, and Saidi (2012), the potential of SPAC future acquisition reflects the value added and as well as for both target and bidder firms, it is subsequently brought to the synergies creation. Therefore, the IPO of SPAC is a value creation tool as the business scale can be expanded to the distinct level through international acquisition. Some further studies by Netter, Stegemoller, and Wintoki (2011), Faccio, John, and David (2006), and Officer, Poulsen, and Stegemoller (2009) reported acquisition completion by SPAC is about 63.50 per cent as compared to Jacobsen (2014) which reported 92 per cent from the acquisition of public and private targets. Malmendier et al. (2012) and Officer (2003) reported as an acquisition of public targets are about 88.7 per cent and 78 per cent.

According to Ljungqvist (2007), the IPO study on SPAC issue attracts less attention as compared to traditional IPOs, especially after the Europe Debt Crisis in 2011. However, many variables such as IPO demand, IPO type, asymmetric information, board of listed companies have been used to explain the performance of traditional IPO (Yong & Isa, 2003; How et al, 2007; Chang et al, 2011) in various dimensions such as offer-to-close, offer-to-open, offer between the advertising period to closing date and offer between the announcement date to closing date (Ritter, 1991; Ibbotson et al. 1994; Ritter & Welch, 2002; Lowry et al. 2010; Chahine & Saade, 2011).

Therefore, the study on IPO SPAC in Malaysia is a new idea that provides a huge opportunity to be added to the extant literature.

6.2.7 New empirical gap for SPACs in Malaysia

SPAC is an alternative tool of financing that enabled entrepreneur to raise funds for expand the business. This allows the capital market to have higher liquidity and offers an option for investor with lower risk of losing their money. However, the attraction of the SPAC is low, this section discusses some new empirical gaps for SPAC in Malaysia.

First, it is unfortunate that the first few SPACs in the oil and gas (O&G) industry are listed on Bursa Malaysia at a time when the sector and overall economy are experiencing one of the most volatile periods. Therefore, the collapse in oil prices did not help as investors and more wary of the qualifying asset acquisitions.

Second, SPACs' is a 'newness' of financing, the grasp of the concept is still low, not only among investors but also regulators and certain financial industry players.

Third, due to the "lower risk" factor and higher returns as compared with fixed deposit, most investors were not interested in the long-term prospects of the business.

6.3 Framework of SPAC

6.3.1 Recent development of Malaysian SPACs

SPAC as an alternative means to IPO has attracted investors' attention from leading financial institutions and established sovereign wealth funds, especially in the

aftermath of plummeting oil prices. A lot of oil and gas companies which involved in exploration and production are divesting their non-core assets. This new listing framework of Bursa Malaysia has enabled new companies which do not have a track record to be given opportunities to raise fund and subsequently make a qualified acquisition.

With the five SPACs listed in Bursa Malaysia, four are under oil and gas industry and one from food and beverage industry. The former are Hibiscus Petroleum Berhad, CLIQ Energy Berhad, Sona Petroleum Berhad and Reach Energy Berhad while the latter is Red Sena Berhad. There are also some potential SPACs which have been rejected by Bursa Malaysia in the recent times.

From figure 6.2, the total gross proceeds raised is RM2,299 million with the average deal size of RM1842 million. Among these SPACs IPO, the highest gross proceeds raised is RM914 million in 2013, followed by RM750 million in 2014, RM400 million in 2015, and RM235 million in 2011. Surprisingly, there is no SPACs IPO in the year 2012 as the debt crisis in Europe has affected the IPO market.

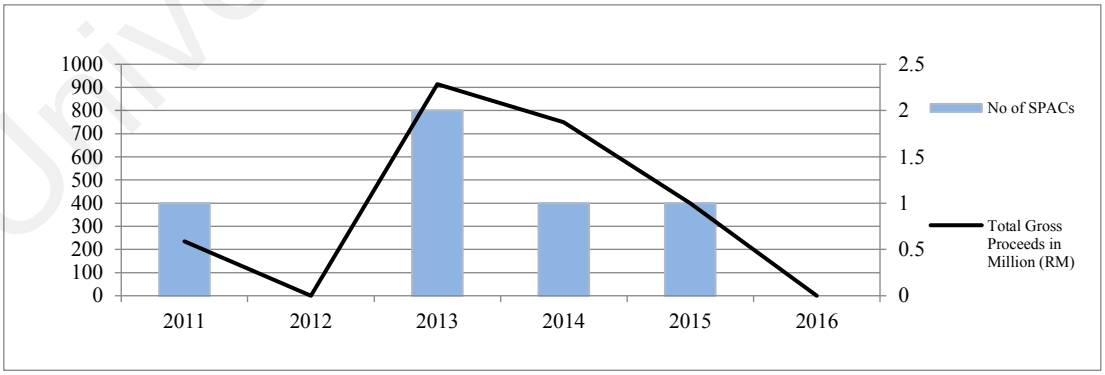

Figure 6.2: Malaysian SPACs: Funds raised by period 2011- 2016

Source: Authors' own sketch based on Bursa Malaysia, Securities Commission and Yahoo finance (as at March 31, 2016)

In addition, the proceeds from IPO which are intended for assets acquisition or business opportunity must comply with the new listing requirement strictly regulated by Security Commission Malaysia. Figure 6.3 shows two SPACs are seeking for a new acquisition, two SPACs have announced an acquisition target, and one SPAC has completed the acquisition.

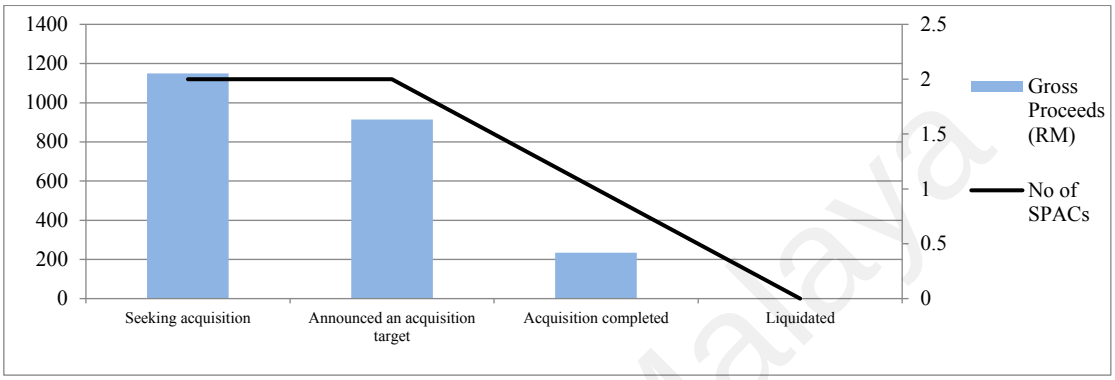

Figure 6.3: Malaysian SPACs status

Source: Authors' own sketch based on Bursa Malaysia, Securities Commission and yahoo finance (as at March 31, 2016)

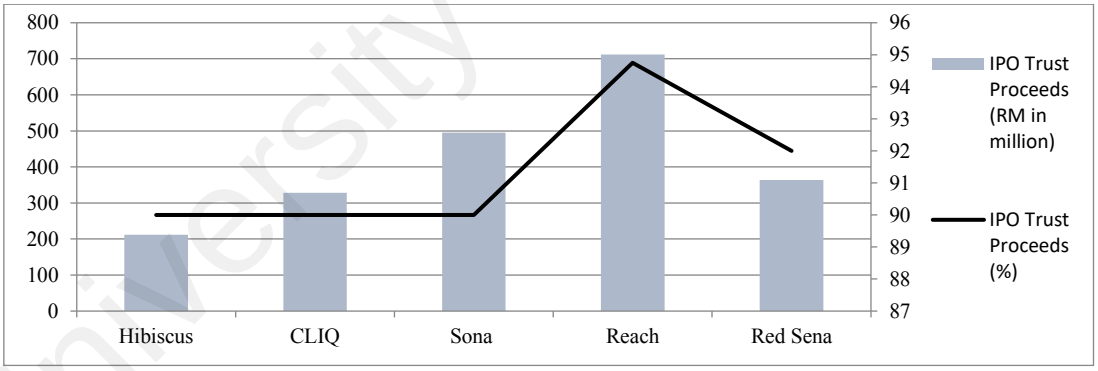

Figure 6.4: Malaysian SPACs with IPO trust proceed

Source: Authors' own sketch based on Bursa Malaysia, Securities Commission and yahoo finance (as at March 31, 2016)

In the wake of the failure of SPACs to acquire new assets within three years as stated in the statutory requirement, there is liquidation for SPACs. Liquidation is a process to refund the capital to the shareholders. The total guaranteed capital is at least 90 per cent of the total proceeds from IPO of which is retained under the IPO trust. The

purpose is to reduce the risk exposure to the shareholders as the SPACs companies without financial track record prior to the acquisition.

As shown in Figure 6.4, among the SPACs, Reach Energy contributed approximately of 94.75 per cent (equivalent to RM712 million) out of the total proceeds raised from the IPO to the IPO trust. The contribution of IPO trust is the highest amount as compared to Red Sena IPO trust of 92 per cent (equivalent to RM364 million), followed by Hibiscus Petroleum Berhad, CLIQ Energy and Sona Petroleum of a total of 90 per cent to the IPO trust.

6.3.2 The life cycle of Malaysian SPAC

Figure 6.5 shows the formation and processes of a SPAC. As shown in the figure, SPAC must seek the approval from the shareholders to acquire the qualifying asset or else it will face the fate of being liquidated. This could be a form to protect the interest of shareholders but at the same time, this condition restricts the management team's decision to exercise their wisdom. This could also hinder the CEO to exercise his stewardship in implementing the strategy for the survival of the companies.

6.3.3 Time frame for the SPAC IPO

Figure 6.6 indicates the timeframe for the IPO of a Malaysian SPAC called Reach Energy Berhad. According to Securities Commission, SPAC is given a maximum time frame of three years to acquire new qualifying asset after IPO. The company was listed on 15 August 2014. The SPAC offer price was RM0.75 with a free detachable warrant, warrant strike price was RM0.75. The total proceeds with more than 90% are capital guaranteed and to be returned shareholder in the event of liquidation.

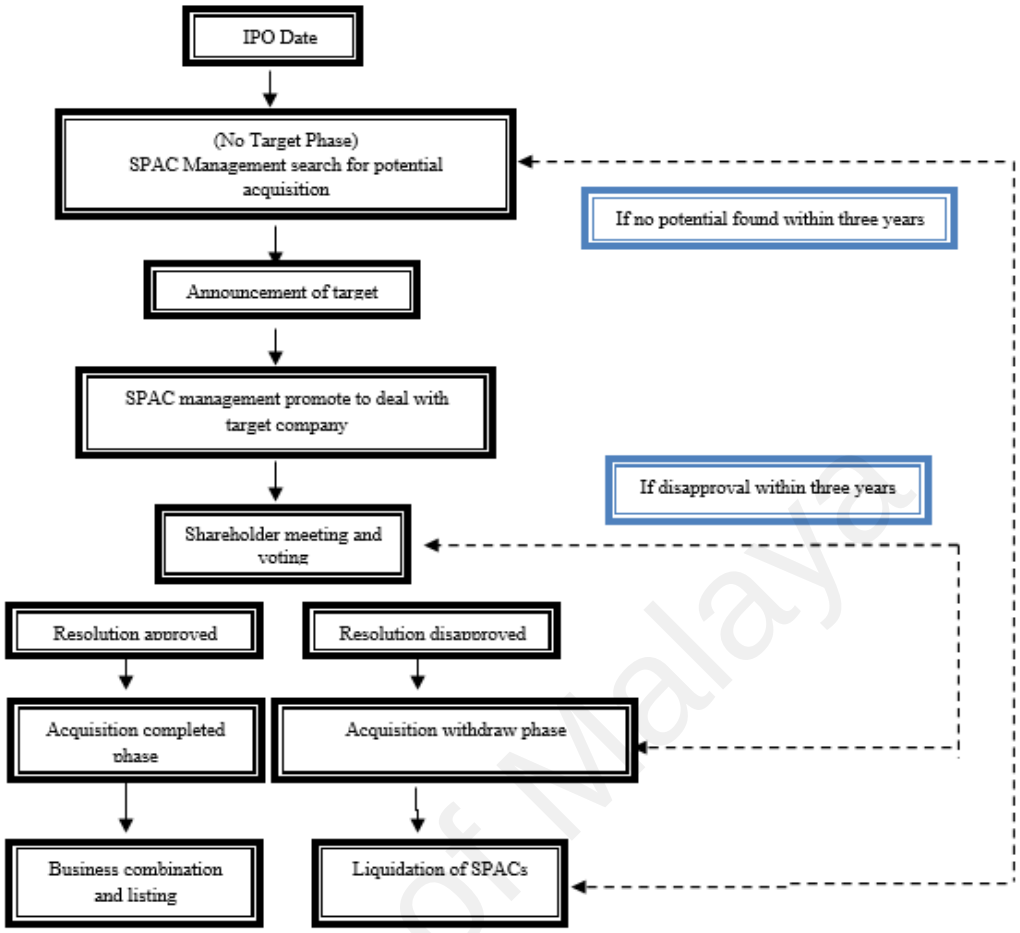

Figure 6.5: The flowchart on the formation and liquidation of SPAC

Source: Authors' own sketch based on information from Bursa Malaysia and Securities Commission

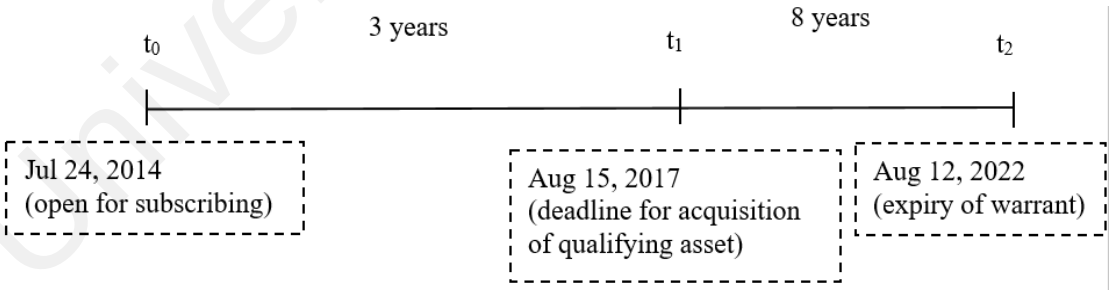

Figure 6.6: A complete time frame for the IPO of a Malaysian SPAC

Source: Authors' own sketch based on information from Bursa Malaysia and Securities Commission

6.4 Results of Case studies

This paper utilizes case study approach in view of the small number of SPACs. Public information, as well as annual reports, are used to analyze the performance of the respective SPACs.

6.4.1 Hibiscus Petroleum Berhad

Hibiscus Petroleum Berhad is the pioneer SPAC in South-East Asia and listed on Bursa Malaysia under Main Market on 25 July 2011. The IPO of Hibiscus consists of 418 million ordinary shares at the debut price of RM0.75 per share at RM0.01 par value. Successful subscribers obtain one free detachable warrant for each ordinary share subscribed. The total capital raised from the IPO is RM235 million and approximately of the 90% of the capital raised is retained in the IPO trust. The primary aim of Hibiscus is to achieve assets or business acquisition.

The figures below indicate share price performance, the initial return of IPO for the first day of trading is 6 per cent; in other words, the closing price on the first day of trading is higher than its debut price. The total IPO trading is near to 26 million volume which is equivalent to about 24.88 per cent from the total market trading volume.

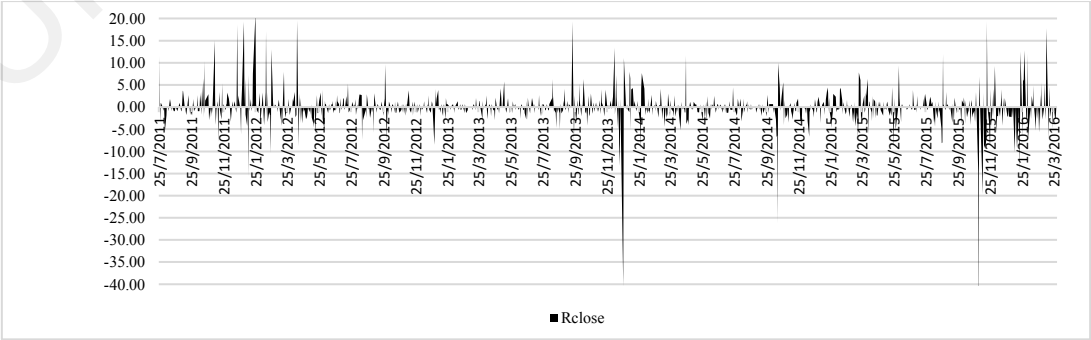

Figure 6.7: Daily return of Hibiscus SPAC

Source: Bursa Malaysia, Securities Commission and Bloomberg (as at March 31, 2016)

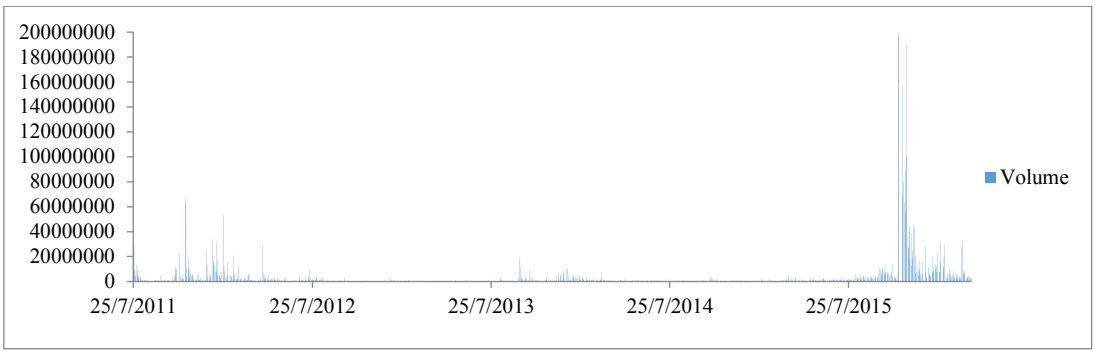

Figure 6.8: Daily closing price and volume of Hibiscus SPAC

Source: Authors' own sketch based on Bursa Malaysia, Securities Commission and Bloomberg (as at March 31, 2016)

Moreover, Hibiscus Petroleum is the first successful SPAC to meet the new listing requirement after the completion of the acquisition of a 35% stake in Lime Petroleum Plc in April 2012. The proposal of acquisition is approved by the Securities Commission and shareholders. Therefore, the company becomes a full-fledged oil and gas exploration and production company.

With the success story of Hibiscus Petroleum, the IPO of SPAC gains higher confidence level from foreign and local investors.

6.4.2 CLIQ Energy Berhad

The second SPAC, CLIQ Energy Berhad was listed on the Main Market on April 10, 2013. The IPO of CLIQ consists of 200 to 667 million ordinary shares at the debut price of RM0.75 per share with the par value of RM0.01. Similar to Hibiscus shareholders, successful subscribers obtain one free detachable warrant for each ordinary share subscribed. The total capital raised from the IPO is RM364 million and approximately 90 per cent of the capital raised is retained in the IPO trust. The purpose of CLIQ Energy is to achieve assets or business acquisition within three years set by the Securities Commission.

Figure 6.9 shows the performance of the share price, the initial return of IPO for the first day of trading is 14 per cent; in other words, the closing price on the first day of trading is higher than its debut price. As compared to Hibiscus Petroleum, CLIQ Energy provides greater returns on the first-day trading. The total IPO trading is near to 46 million volume which is equivalent to about 33.28 per cent of the total market trading volume.

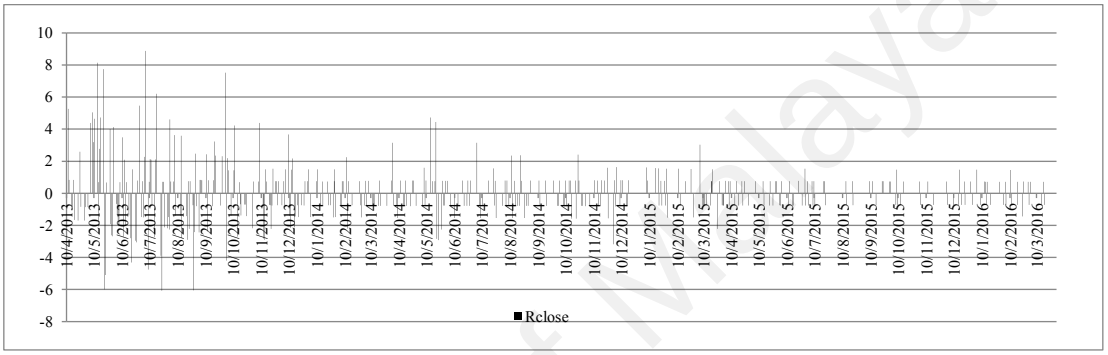

Figure 6.9: Daily return of CLIQ Energy SPAC

Source: Authors' own sketch based on Bursa Malaysia, Securities Commission and Bloomberg (as at March 31, 2016)

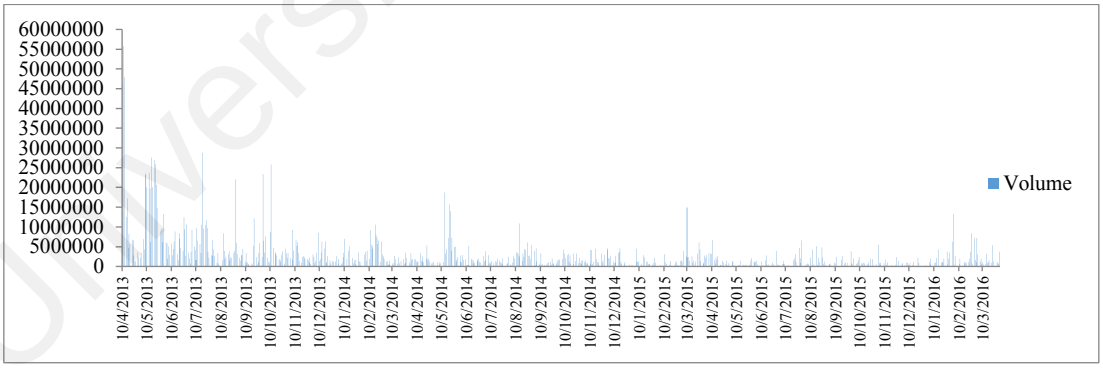

Figure 6.10: Daily closing price and volume of CLIQ Energy SPAC

Source: Authors' own sketch based on Bursa Malaysia, Securities Commission and Bloomberg (as at March 31, 2016)

According to Focus Malaysia dated March 11, 2016, CLIQ Energy is unlikely to meet its deadline to secure a qualifying asset before April 9, 2016. However, Securities Commission has refused to extend the time frame for CLIQ Energy to acquire a

qualifying asset. There are stringent measures to protect the shareholders. Prior to the failure of acquisition, CLIQ Energy has submitted the potential target to the Securities Commission, eventually failing to get approval for the purchase of energy assets in Kazakhstan due to incomplete information. CLIQ Energy will eventually be liquidated and proceeds will be refunded to shareholders.

6.4.3 Sona Petroleum Berhad

The third SPAC named Sona Petroleum Berhad was listed on Bursa Malaysia in Main Market on July 30, 2013. The IPO of Sona consists of 1.1 billion ordinary shares at the debut price of RM0.50 per share with the par value of RM0.01. Interestingly, Sona is the first SPAC to be allowed to issue a huge number of shares. Similar to Hibiscus and CLIQ, successful subscribers get one free detachable warrant for each ordinary share subscribed. The IPO has raised RM550 million funds and 90 per cent of the capital raised is retained under the IPO trust.

Figure 6.11 shows the share price performance, the initial return of IPO for the first day of trading -6.67 per cent which is the closing price on the first day of trading is lower than its debut price. As compared to Hibiscus Petroleum, CLIQ Energy provides lesser returns in the first-day trading. The total IPO trading is near to 78 million volume which is equivalent to about 28.20 per cent of the total market trading volume.

According to Focus Malaysia dated March 18, 2016, Sona Petroleum Berhad has announced a proposed acquisition of Stag Oilfield at a cost of $25 million. The acquisition of Stag Oilfield is the company second attempt to secure qualifying assets.

In 2015, it terminated a deal to buy a stake in two oil and gas blocks in the Gulf of Thailand from London-listed Salamander Energy for US$280 million.

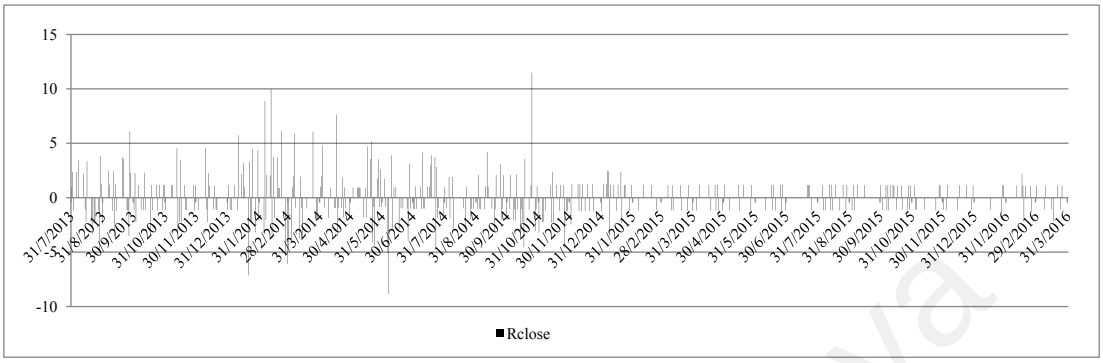

Figure 6.11: Daily return of Sona Petroleum SPAC

Source: Authors' own sketch based on Bursa Malaysia, Securities Commission and Bloomberg (as at March 31, 2016)

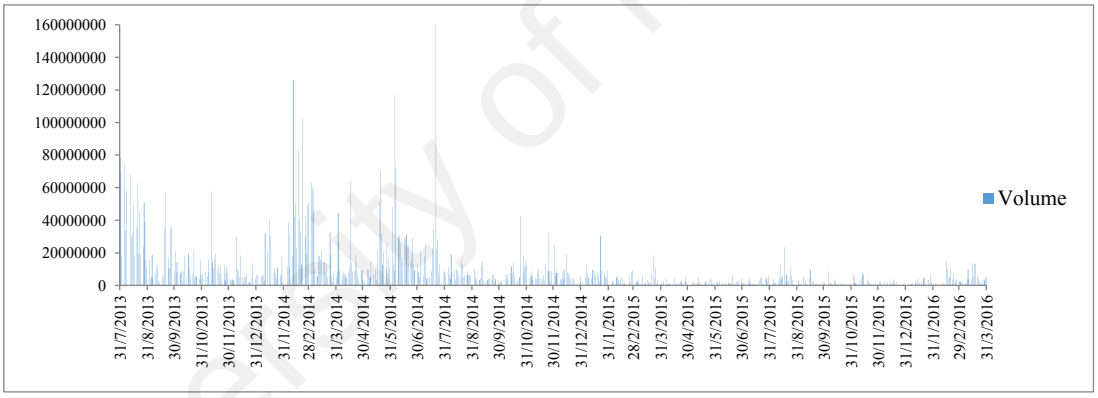

Figure 6.12: Daily closing price and volume of Sona Petroleum SPAC

Source: Authors' own sketch based on Bursa Malaysia, Securities Commission and Bloomberg (as at March 31, 2016)

6.4.4 Reach Energy Berhad

On August 15, 2014, Reach Energy Berhad with 1.0 billion ordinary shares at the debut price of RM0.75 per share with par value of RM0.01 was listed on the Main Market of Bursa Malaysia. Reach is the largest SPAC listed in Bursa Malaysia to date and also the second SPAC to allow issue a huge number of shares. Similar to others,

successful subscribers get one free detachable warrant for each ordinary share subscribed.

The IPO raised RM750 million and 94 per cent of the capital raised is retained under the IPO trust. Prior to its IPO, the business has no financial track record from its business operations but the management team has about 30 years of experience in the oil & gas sector worldwide. Similarly, the objective of Reach Energy is to achieve assets or business acquisition within three years.

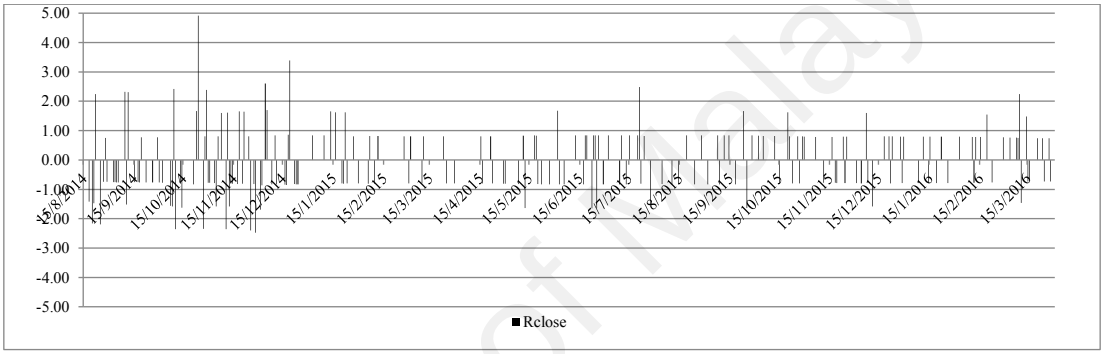

Figure 6.13: Daily return of Reach Energy SPAC

Source: Authors' own sketch based on Bursa Malaysia, Securities Commission and Bloomberg (as at March 31, 2016)

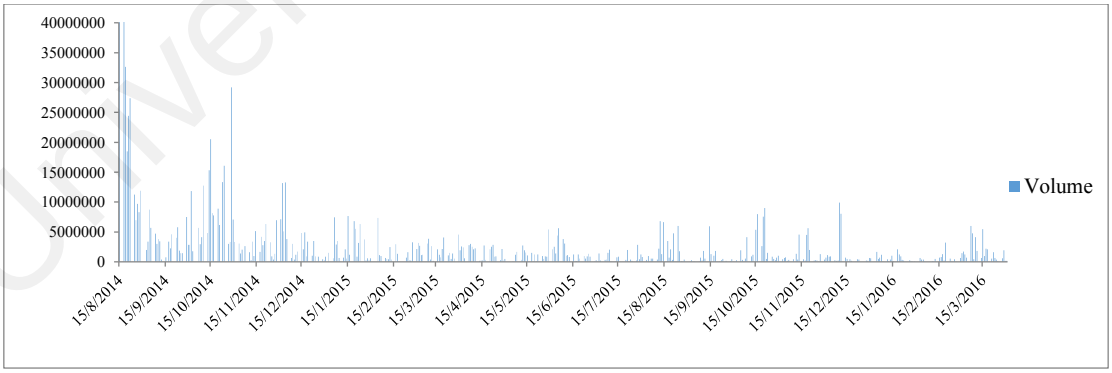

Figure 6.14: Daily closing price and volume of Reach Energy SPAC

Source: Authors' own sketch based on Bursa Malaysia, Securities Commission and Bloomberg (as at March 31, 2016)

Figure 6.13 shows the share price performance, the initial return of IPO for the first day of trading -6.00 per cent i.e. its closing price on the first day of trading is lower

than its debut price. The total IPO trading is nearly 29 million in volume and about 370% compared to market volume.

According to the press released by Reach Energy on March 2016, Reach management has announced a tripartite conditional agreement with Palaeontol Cooperative U.A. and MIE Holding Corporation for a proposed acquisition of oil and gas producing fields. In addition, MIE Holding Corporation is a corporation listed on the Main Board of the Hong Kong Stock Exchange. The proposal of the acquisition consists of 60% equity interest in Palaeontol B.V for a total acquisition price of USD154.9 million. Palaeontol B.V is a wholly-owned subsidiary of Palaeontol Cooperative U.A.

6.5 Conclusions

6.5.1 Weaknesses of SPAC

Table 6.2 provides the comparison among the current SPACs in Malaysia. Due to the current listing requirement as discussed in section 4, it is evidently clear that there are a few issues which are perceived to be negative factors by investors. Among the issues are:

Firstly, investors should be aware that SPAC is akin to participating in venture equity where unlike traditional IPOs, SPAC IPOs may promise a higher return to investors. However, like other venture capital, the eventual success of IPO listing is not certain.

Table 6.2: A comparison between listed SPACs

	Hibiscus Petroleum	CLIQ Energy	Sona Petroleum	Reach Energy
IPO Proceeds	RM235 million	RM364 million	RM550 million	RM750 million
Issue Price	75 sen	75 sen	50 sen	75 sen
Market Cap	RM913.70	RM397.50	RM740.60	RM958.37
Management's subscription price per share	1 sen	2 sen	3 sen	7.5 sen
Management investment pre-IPO	RM1.05 million	RM1.72 million	RM2.82 million	RM19.17 million
Target of QA	Exploration, development, and production	Development and production	Exploration, development, and production	Development and production
Regions of interest	Asia and Oceania	South Asia, Middle East, East Asia and Oceania	Southeast Asia, Middle East, and Africa	Asia-Pacific
Moratorium on Securities				
Management team (shares and warrants)	Up to completion of QA	Up to completion of QA	Up to one full year of audited revenue	Up to one full year of audited operating revenue
Initial investor shares	Up to completion of QA	Up to completion of QA	Up to completion of QA	Up to completion of QA
Initial investor warrants	-	-	-	Up to completion of QA

Source: The Edge Malaysia, May 16, 2014

Secondly, unlike traditional IPOs, SPACs are companies without an adequate financial track record for investors to make a decision. Henceforth, investors rely on the reputation of the management because it serves as a fundamental reference for investors to make a decision.

Thirdly, the recent drop in WTI crude oil price in the World Market from USD100 to USD 30 per barrel post a great challenge to Oil and Gas companies. Since most of the SPACs are from Oil and Gas industry, it is a question whether they would like to proceed to the stage of making a qualified acquisition. Due to the uncertain macroeconomic environment, there is a higher possibility for companies to meet with financial difficulty.

Fourthly, the time frame of three years set by the Malaysian Securities Commission for the SPAC to make qualified acquisition seems to be too restrictive. There is a greater tendency for the company being forced to purchase new assets at an inflated price due to the time limit. Therefore, the quality of the acquired asset is in a doubt and this increases the risk to the business.

Finally, when a SPAC makes a public announcement that it fails to make the acquisition, its share price will fluctuate. The volatility of share price allows the investors who intend to take advantage of the arbitrage play of the poor performance. Subsequently, if SPAC fails to acquire new assets, investors will get the refund back from SPAC liquidation. The above problems cause SPAC IPOs to be less attractive to investors. Hence, some measures must be changed to increase the market confidence.

6.5.2 Strength of SPACs

On the other hand, there are built-in mechanisms which can be considered as the advantages of SPACs. Among them are:

Firstly, SPAC provides better investors protection as compared to venture capital as the listing requirement states that a total of at least 90 per cent of the capital raised from IPO is retained under an IPO trust. In the event of SPAC liquidation, there is a capital guaranteed fund ready for the shareholders.

Secondly, if subscribers of SPAC successfully obtain the new IPO, investors are rewarded a free detachable warrant for each of the ordinary share subscribed. The purpose of providing a free warrant is to compensate the risk of investing in the SPAC and attract more investors to subscribe IPOs.

Thirdly, SPAC is given a timeframe of three years to acquire new assets which are sufficient for the business. Before the deadline, SPAC has the opportunity to explore different new qualifying asset.

6.5.3 Policy Implications

Unlike Malaysian market, SPAC is more popular in the US market where it is originated. As a relative safer product in a low-interest rate environment, US SPAC provides the avenue as an alternative tool to some of the investors to shift their monies from the hedge fund to SPACs.

In the context of Malaysian market, it is pertinent for investors to understand the product as it is different from traditional IPOs. Following the failure of CLIQ Energy and Sona Petroleum, policy makers should review of the term and conditions for the SPACs. If SPACs is liquidated properly, it shows that the SPAC is a workable model for a new listing framework. Shareholders will get back their money and future investors feel comfortable with the fact that the system works.

On the contrary, if policy maker allows an extension for those SPACs which fail to acquire new qualifying assets, it would destroy the market confidence. It is more viable to liquidate if the SPACs are unable to get the deal on time to protect shareholders and not put them at risk by entering into the last minute transaction.

In conclusion, industry players reckon that SPACs still have a bright future through its controlled experiment, stringent measurement and effective built-in mechanism with numerous safeguards to the processes of SPAC IPOs.

CHAPTER 7: CONCLUSION

7.1 Key Finding and Policy Implications

This chapter reviews some of the conclusions drawn from previous chapters on the study of the pricing anomaly of the IPO and the alternative tools of financing for the fund raising for the newly listed company. By reviewing these chapters, we also discuss any limitations that developed as a result of conducting the research in this area. Furthermore, the possible implications to underwrite, issuer and investors as well as market regulators as a result of the study of IPO pricing anomaly will be highlighted. Finally, the chapter will discuss future areas of research which could be studied.

To address the first and second problem statement, the results in chapter 3, 4 and 5 indicate OSR is positive and initial return is not necessarily negative. Hence, it can be concluded that some investors are keen to participate in the new IPO issue regardless it is in crisis or non-crisis period. While market sentiment could be negative during the crisis period, some investors still look for good firms to invest. Hence, reputable firm with a good track record will be the choice of investors.

The findings of the study show OSR has a positive relationship with flipping activity. This is because higher demand makes investors flip more to liquidate the IPO on the first trading day. In contrast, firm size has a negative relationship with flipping activity. This is because the larger scale of the IPO firm, is more stable in terms of performance, and the risk of business operation is lower.

Investors are allowed to liquidate the IPO on the first trading day. The liquidation depends on the various investor sentiments as the financial market condition changed such as US interest rate hike, financial crisis or profit announcement by the company. Thus, different investors will have different judgments on IPO trading and price when financial market condition changed. This will cause price fluctuation and investors may obtain a profit or suffer a loss.

From the findings, the underwriter can understand better the different investors' sentiment in terms of IPO demand and subsequent trading, This is important for a success of IPO when financial market condition changed. In addition, it also enhances the trading policy that addresses the false or misleading appearance of active trading in any securities on the stock Exchange and financial market.

To address the third problem statement, the results in Chapter 6 indicates unlike the Malaysian market, SPAC is more popular in the US market where it is originated. As a relative safer product in a low-interest rate environment, US SPAC provides the avenue as an alternative tool to some of the investors to shift their monies from the hedge fund to SPACs.

In the context of Malaysian market, it is pertinent for investors to understand the product as it is different from traditional IPOs. Following the failure of CLIQ Energy and Sona Petroleum, policy makers should review of the term and conditions for the SPACs. If SPACs is liquidated properly, it shows that the SPAC is a workable model for a new listing framework. Shareholders will get back their money and future investors feel comfortable with the fact that the system works.

On the contrary, if the policy maker allows an extension for those SPACs which fail to acquire new qualifying assets, it would destroy the market confidence. It is more viable to liquidate if the SPACs are unable to get the deal on time to protect shareholders and not put them at risk by entering into the last minute transaction.

In conclusion, industry players reckon that SPACs still has a bright future through its controlled experiment, stringent measurement and effective built-in mechanism with numerous safeguards to the processes of SPAC IPOs.

7.2 Theoretical Contribution

The theoretical concept in this thesis is a short run anomaly characterizing the IPO market. This phenomenon has inspired a large theoretical literature over decades trying to give a relevant and a convincing explanation to this IPO initial return. Pricing anomaly has intrigued academics and practitioners over the past three decades and has generated considerable research aimed at explaining the apparent incongruities with rational asset pricing. While this thesis has provided numerous analytical advances and empirical insights and a large list of explanations were presented, it is fair to say that this pricing anomaly is not satisfactorily resolved. It is still a puzzle sparking much academic attention until now and requiring other explanations and much considerable research effort.

The explanation based on the Asymmetric Information theory between the key parties which have been considered the most convincing study for decades by a large number of researchers. As shown in problem statement, the theoretical contribution of this thesis indicates the IPO issuers, bank underwriters and investors should totally shun IPO during crisis period as there are still positive initial return. Moreover, the

Behavioral theory suggest the presence of 'irrational' and "rational" investors are active in subsequent trading and trying to bid up the price of IPO shares beyond true value but not necessarily obtain from the liquidation.

7.3 Limitation

There is few limitations in this thesis. Firstly, the sample size used in the four main findings are different is because of the missing values in the variables. For instance, chapter 3 uses 144 fixed price offer IPOs data listed on the Bursa Malaysia from January 1, 2006, to December 31, 2011; Chapter 4 uses 310 fixed- price IPOs which are listed on Bursa Malaysia from January 1, 2006, to December 31, 2016 and Chapter 5 uses 186 IPOs which are listed on Bursa Malaysia from January 1, 2006, to December 31, 2016.

Second, the issue of the GFC has not been mentioned in Chapter 4 because the nature of the data used from January 1, 2006, to December 31, 2016 must be considered the investor's sentiment and has not been influenced by different market conditions. Therefore, the day 1 initial return, day 2 initial return and day 3 initial return will be more precise to achieve the objective of the research. However, the GFC can be included in future to cater for different market conditions.

7.4 Future Areas of Research

The evidence from the survey of literature indicates that investors, issuers and underwriters are placing an essential on the IPO. In fact, underwriters have focused and are looking to solve the problem of IPO pricing anomaly that is considered more complicated than the past decade. The example of pricing anomaly is the IPO initial return and flipping activity which are becoming more concern amongst underwriters.

This is the latest trend despite the fact that research has argued for more robust and comprehensive information for IPO trading.

From an underwriting point of view, it would be necessary for the investor and issuer to study the implications of pricing anomaly on the IPO trading. Nonetheless, investor and the issuer need to perceive the lack of control and trading behavior from the irrational investor in IPO subsequent trading. Furthermore, numerous research has to be studied to evaluate whether IPO pricing anomaly in the emerging market does in fact perform in a "stagging" way in comparison to advance capital market as this will influence the growth of the economy.

In conclusion, the outcomes from the survey of past literature show that there are numerous opportunities looking forward to studying the IPO pricing anomaly. This will necessitate researcher for a deeper understanding of contemporary trading behaviour to evaluate IPO, but also the distinctive nature of business fundraising.

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