

MASTER OF BUSINESS ADMINISTRATION

MANAGEMENT CENTER

INTERNATIONAL ISLAND UNIVERSITY MALAYSIA

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TITLE OF PROJECT PAPER :

INITIAL PUBLIC OFFERS' UNDERPRICING IN MALAYSIA – PRICING
EFFECTS AND AFTERMARKET PERFORMANCE

The undersigned certifies that the above candidate has fulfilled the conditions of the project paper in partial fulfillment of the requirement of the Master of Business Administration (MBA)

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Date: 12/8/2000

ACKNOWLEDGEMENTS

I would like to take this opportunity to thank all those who have helped me to complete this project paper. This project would have been an impossible task without the diligent guidance and assistance of my supervisor, Dr Obiyathulla Ismath Bacha. I extend my sincere gratitude and appreciation to you, Dr. Obiyathulla.

My sincere appreciation goes to the officials at the Securities Commission and Kuala Lumpur Stock Exchange in particular, Ms. Joyce Lee of Research and Publication department. Also, I would like to thank the technicians in-charge of the Bloomberg terminal in the University for providing me the much needed flexibility in using the system.

My deepest gratitude to my family, especially my wife, for being patient with me and giving me their moral support throughout this MBA program.

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ABSTRACT

This study examines the underpricing of initial public offers (IPO) to see if it has declined due to the policy change of the Security Commission. Since January 1996, the pricing of new shares for public offer has been deregulated – the companies making IPO no longer required to follow Price Earning (PE) ratios stipulated by the Security Commission. This study used data of almost all the IPOs listed on both the Kuala Lumpur Stock Exchange Main and Second Boards during the period from 1993 to 1999. There are three parts of this study : (1) computations of underpricing using 6 different initial return definitions; (2) event study and hypothesis testing on IPOs pre and post price deregulation; (3) comparisons of IPO performances in the short run of 12 months after listing using the mean cumulative abnormal return (MCAR). It is found that 3 out of the 6 initial return definitions for underpricing show small but significant declines post price deregulation. The computation of initial returns showed that even after the price deregulation, approximately 75% of the number of IPOs were still underpriced (having positive initial returns), and despite the decline, the average underpricing was still as large as 70%. The decline reaffirmed the effect of the pricing deregulation initiated by the Security Commission which was a major effort implemented to shift the regulation of capital market from merit-based regulation to disclosure-based regulation. Book-building and auctions were recommended as more effective pricing alternatives to reduce underpricing further than the fixed price currently practiced predominantly in Malaysia. The study also indicates that the less-underpriced IPOs post deregulation performed relatively better than the more-

underpriced IPOs pre deregulation during the first 12 months the listing date. The MCARs of the former are relatively higher than the later.

CHAPTER 1

INTRODUCTION

Most companies start out by raising equity capital from a small number of investors, with no liquid market existing if these investors wish to sell their shares. If a company prospers and needs additional equity capital, at some point the company generally finds it desirable to 'go public' by selling its shares to a large number of diversified investors. An Initial Public Offer (hereon referred to as IPOs) occurs when a security is sold to the general public for the first time. When the shares are publicly traded, this enhanced liquidity allows the company to raise capital on more favorable terms than if it had to compensate investors for the lack of liquidity associated with a private-held company. Existing shareholders can sell their shares in open-market transactions.

The best-known and well-documented pattern associated with IPOs is large initial returns accrued to investors who purchase the new issues at the offer price. The offer prices appear to be a deep discount of the initial listing day market prices, hence the term *underpricing*. Most studies have shown that the distribution of the initial return is highly skewed, with a positive mean and median near zero. Hence, issues of underpricing lead to how IPOs are priced. IPO pricing refers to valuing the IPO to determine the price of the shares to be offered for sale. In Malaysia, IPO pricing is being regulated by a Government authority (previously the Capital Issues Committee and currently the Security Commission).

1.1. Scope and Objectives of the Study

This research focuses on two major areas of study and they are :

- (a) Event study of Security Commission's pricing deregulation effect on IPOs underpricing defined by various raw and adjusted initial returns.

This section of the study is to establish the impact of Malaysia Security Commission's (hereon referred to as SC) revised guidelines on the pricing of the IPOs. The revised guidelines implemented in January 1996 has changed the price-setting mechanism of the IPOs and hence the amount of underpricing of IPOs. After January 1996, IPO prices were no longer required to follow the recommended Price Earning Ratio as stipulated by the SC. The initial returns (to the investors) reflect underpricing. Using event study methodology, various measures of initial returns of almost all the IPOs (excluding IPOs in 1996) in both the main and second board of Malaysia stock exchanges were computed for the period pre and post policy change. The statistics was then used to test the hypothesis that underpricing of the IPOs after the policy change on January 1996 had declined.

- (b) Study of pricing deregulation on IPOs after market returns performance

'After market' refers to the trading of IPOs after the listing day. The accumulated abnormal returns of the IPOs over the first twelve months after the listing date were computed to compare the differences before and after January 1996, in relation to the pricing deregulation effect and the duration from the listing date.

1.2. Justification of Study

The deregulation of pricing mechanism by the SC is the result of the shift from what is labelled as the merit-based regulation (MBR) to the disclosure-based regulation (DBR).

Merit-based regulation – SC regulates the offering of securities by assessing the investment merits and pricing of the offering. The regulators assume a paternalistic role which interpose itself between those seeking to raise funds and those seeking to invest in assessing the merit of the securities to be issued.

Disclosure-based regulation – The onus of assessing the merit of any securities rests with the investors whose money is being put at risk. The investors assess and determine the investment merits of the offering while the SC regulates the disclosure of material information.

This study hopes to confirm the effect of the shift from MBR to DBR for the development of efficient financial market. The shift of policy would at least transform the “get-rich-quick” mentality to more informed decisions, for the good of the market. Loughran et. al (1994) reported that many developing countries have experienced initial returns for their IPOs as large as 80%. These countries may wish to consider a similar price deregulation in order to reduce the level of underpricing.

This study will be among the few and relatively new studies on the impact of public policy changes on underpricing in Malaysia. It covers more IPOs over a

more recent period compared to previous similar studies in Malaysia. As compared to previous studies that might concentrate on one definition of underpricing, for example based on intrinsic value, the study examines underpricing in terms of the various definitions of initial returns.

CHAPTER 2

IPO, PRICING REGULATION AND UNDERPRICING

2.1. Initial Public Offers

In Malaysia, there are three types of new issues, namely: (1) public issue; (2) offer for sale; (3) combination or hybrid of both the offers for sale and public issue. With the first type, new shares are offered for subscription to the public for the first time, and as such it will result in an increase in the paid-up capital of the company. The second type refers to shares that have already been issued to original shareholders, who in turn offer their shares for sale to the public. As such, it does not change the company's paid-up capital and therefore the money received from the sale of the shares does not go to the company. The purpose of latter type of offer is to restructure the company's ownership distribution in order to meet the rules and regulations as set-up by the authority. Initial public offer (IPO) occurs when either increased shares or existing shares are sold to the public for the first time. Although an IPO can also involve debt as seen in other developed countries, in Malaysia, all IPOs involve equity security.

There are costs associated with the IPOs. In particular is the substantial one-time costs associated with the process of making the company public, categorized as direct and indirect costs. The direct costs include the legal, auditing, and underwriting fees. The indirect costs are the management time and effort devoted

to conducting the offering, and the dilution associated with selling shares at an offer price that is, on average, below what it should be worth (underpricing). These direct and indirect costs affect the cost of capital for firms going public. After the company is being publicly-traded, there are certain ongoing costs associated with the need to supply information on a regular basis to investors.

Although bank loan is the most important source of funding for most of Malaysian companies, IPO is becoming more important as an alternative to raise capital together with other instruments such as private debt securities. The government has put priority in its policy to emphasize on privatization by providing impetus to the growth of the equity market especially in the IPOs. The growth of the equity market is reflected through the capitalization of the Kuala Lumpur Stock

Table 2.1 Summary of Malaysia IPOs from 1989 to 1999

Year	Main Board	Second Board	Year total IPOs	New Capital Raised, Billion
1989	11	2	13	
1990	19	12	31	
1991	21	18	39	
1992	25	20	45	
1993	12	32	44	RM 0.84
1994	19	47	66	RM 2.22
1995	18	33	51	RM 4.21
1996	40	52	92	RM 3.86
1997	25	63	88	
1998	6	22	28	
1999	10	11	21	
Total No of IPOs over 89-99	206	312	518	

Exchange, where it increased substantially by an average annual rate of 38% in the 1992-96 period. An approximate RM10 billion, which was equal to 20% of the Malaysian gross national savings then, was raised in 1992. However, that

number went up to RM806.8 billion in 1996.

The number of IPOs appears to be influenced by the increase of stock returns in the market and the general economy's performance in that year. Generally, there were more IPOs in the 'up markets' than in the 'down markets'. Ritter (1997) labeled this as 'Hot Issues' markets. This IPO pattern shows that cycles exist in both the volume and the average initial returns of IPOs. The volume of IPOs shows a strong tendency for IPOs to be high following periods of high stock market returns, when new issues are selling at a discount to the book value.

2.2. Regulatory Requirement for IPO

Regulator - Security Commission

In 1993 the Government formed the Security Commission (SC) in line with the passing of Securities Commission Act. SC is the sole regulatory body to oversee the overall and orderly development of the capital market. With the formation of SC, the previously fragmented system of several regulatory bodies was centralized. The SC has absorbed the Capital Issues Committee's and the Panel of Takeover and Merger's roles. As such in the existing system, there are two regulatory bodies that regulate the Malaysian financial system: Bank Negara supervises and regulates the banking system and SC regulates the broader capital market.

Functions of SC

All companies must seek the approval of SC before undertaking a public offering of securities, with or without listing and quotation at KLSE. This includes using rights, bonuses and special issues, private placements, employees' share option schemes, schemes of compromise, amalgamation and reconstruction, acquisition of securities and assets, take-overs and mergers (including reverse take-overs and back-door listings). Other issuance such as debt securities and warrants – both convertible and call warrants - must be also approved by the SC first. In addition to the above mentioned functions, SC also ensures that the requirements of other regulatory bodies such as the Foreign Investment Committee (FIC), Bank Negara

Malaysia, the Director General of Insurance, the Ministry of International Trade and Industry (MITI), the Economic Planning Unit and Ministry of Finance are complied by the applicants.

SC also regulates the specifications of futures contracts, take-overs and mergers of companies and unit trust schemes. It supervises and monitors the activities of any exchange, clearing house and central depository. Besides regulating, SC also protects the interest of dealers of securities, futures contracts and ensures proper conduct amongst members of the exchanges and all registered persons. In addition, it ensures that all illegal, dishonorable and improper practices in securities and trading in futures contracts are avoided. It involves itself in all the improvements of the laws relating to securities or futures contracts including changes to the constitution, rules and regulations of any exchange and its clearing house.

Mechanics of "going public"

SC and Kuala Lumpur Stock Exchange (KLSE) impose certain regulations on all IPOs. Typically, a listing or IPO process involves appointments of professional advisers, preparation of listing strategy, application to the relevant authorities, invitation to the public, balloting and finally the listing and quotation of the shares.

2.3. IPO Pricing

In principle, valuing IPOs can be regarded as no different from valuing other shares by using discounted cash flow (DCF) analysis or comparable firm analysis. However, many IPOs are of relatively young companies involved in new businesses, such as high technology industries. Their historical accounting information is either limited or of limited use in projecting future profits and cash flows. Thus, comparable companies' valuation by the market is normally used.

Foreign Practices.

In the United States, the authority which issues clearance for companies to sell securities to the public is explicitly concerned with the full and accurate disclosure of material information, and does not attempt to determine whether a security is fairly priced or not. Many state security regulators in the past attempted to ascertain whether a security is fairly priced before allowing investors to purchase an issue. Subsequently, the National Securities Markets Improvement Act of 1996 has given blanket approval for all IPOs that list on the American Stock Exchange (Amex), New York Stock Exchange (NYSE), or the National Market System (NMS) of Nasdaq.

Malaysia's Pricing Guidelines

The Malaysian IPO pricing process recently underwent periods of change in terms of the SC requirement. From here on, the relevant periods are referred to as pre and post deregulation period.

Pre Deregulation Period - SC provided the prospective price earning (PE) multiples according to different economic sectors. Some of the PE multiples are shown below:

Table 2.3a – Price Earning Ratios Stipulated by SC

Sector	PE Multiples
Property	3.5-10.5
Services	4.0-11.0
Trading	4.0-11.0
Transportation	4.0-11.0
Contracting & Construction	4.5-11.5
Tourism (Including Hotels)	4.5-11.5
Insurance	5.0-12.0
Manufacturing	5.0-12.0
Agriculture	5.0-12.0
Gaming	6.0-13.0
Finance Companies	6.0-13.0
Stockbroking Companies	6.0-13.0
Plantations	7.5-14.5
Utilities	8.0-15.0
Banks	8.5-15.0

The issuing company's underwriter should apply the appropriate PE multiples to the earning based on the maintainable profits before tax less minority interest. Maintainable profits are defined as weighted average of profits of three years before and three years after the proposed listing date. The computation of maintainable profits is as follows:

Firstly a set of weights will be applied to the profits. The weights are as follows:

Table 2.3b – IPO Pricing - weights applicable to companies' profits

Year		Weights
Historical Profits - 3 years before proposed year of listing		
Year	1	1
Year	2	2
Year	3	3
Forecasted Profits - 3 years after listing		
Year	1	3
Year	2	2
Year	3	1

The issuing companies will have to list their historical profits for three years before the proposed listing date and the forecast profits for three future years. Then, the appropriate weights will be multiplied to the profits, and after that the weighted profits will be summed up and divided with the issued capital of the company. This will give the maintainable profit per share. It is then multiplied with the appropriate PE multiples given by the SC to get the IPO price. The weights are assigned according to an ascending order for the three years prior to listing because the third year profit is the most recent. The likelihood of future profits to be similar to the third year's is higher compared to a profit three years before the proposed listing date. Similar logic applies to the weights assigned to the profits after the proposed listing date. The weights to be applied are provided by the SC. In view of this, the price computation is subjected to SC review. Besides this, the SC ensures that a suitable PE multiple is applied before approving the price.

Before deciding the PE multiples to be applied, the issuing company will have to take into account a few factors. These are expenses in the future compared to the maintainable pre tax profits, net tangible asset value, quality of management, nature of business and types of product and services offered, past performance,

growth of the company, dividend paid and overall economic prospects.

Post Deregulation Period – After January 1996, the pricing of shares issued or offered for sale under initial public offerings has been de-coupled from the PE multiples imposed by the SC (hereon it also being referred to as deregulation). The change is one of the programs initiated by the SC in its move to gradually shift the regulatory oversight of the primary securities market from a merit-based to a disclosure-based system. Under the full disclosure system, the companies issuing IPOs, their corporate advisers and underwriters are given flexibility in determining the appropriate price without being guided by the PE multiples. SC no longer regulates the price determined by the company concerned. However, SC retains the right to review the pricing in consultation and requires the companies concerned to fully disclose information about the affairs of the companies and the securities which are being offered in their documents or prospectuses. In this respect, the authorities regulate the disclosure of information in securities offerings rather than offering itself. The onus of IPO is on issuers and advisers and no longer on authorities¹³ . According to officials of SC and KLSE, companies have opted for the premium to net tangible asset, future cash flow (intrinsic value per stock), PE multiple and other corporate finance techniques in order to determine the price of the IPO.

2.4. Underpricing

The new issue underpricing phenomenon exists in every nation that has a share market, although the amount of underpricing varies from country to country. A number of reasons have been advanced for the IPO underpricing phenomenon, with different theories focusing on various aspects of the relations between investors, issuers and the investment bankers taking the companies public. They are explained below.

Winner's Curse Hypothesis

Baron (1982) posits that an informational asymmetry between the underwriters and the issuers causes the large initial return. Rock (1986) also attributes underpricing to asymmetrically distributed information, but his claims are focused on the advantage informed investors enjoy over the uninformed. His model which was supported by the results of Koh and Walter (1989) and Ritter (1997) suggested that since a fixed number of shares are sold at a fixed offer price, rationing will result if demand is unexpectedly strong. Rationing in itself does not lead to underpricing. The informational-disadvantage investors attempt to buy shares when an issue is underpriced. This causes the amount of excess demand to be much higher when there is more underpricing. While the more-informed investors will be allocated only a fraction of the most desirable new issues, the uninformed investors are allocated most of the least desirable new issues. The latter faces a winner's curse: if they get all of the shares which they asked for, it is only because the informed investors do not want the shares. Faced

with this adverse selection problem, the less informed investors will only submit purchase orders if on average, IPOs are underpriced sufficiently to compensate them for the bias in the allocation of new issues.

Investment banker's monopsony power hypothesis

Muscarella and Vetsuypens (1989) found evidence that investment bankers underprice the shares in their own firms when going public. Benveniste and Spindt (1989) , Chemmanur (1994) and Sherman (1988) suggested that underpricing is a mechanism to induce investors to reveal private information.

Lawsuit avoidance hypothesis

Tinic (1988) argues that underpricing provides an insurance premium against potential legal action by disgruntled investors, and Hughes and Thaakor (1989) formalized this notion.

Signaling hypothesis

Finally, Allen and Faulhaber (1989), Grinblatt and Hwang (1989), and Welch (1989) argue that high quality issuers purposely underprice initial public offerings to pave the way toward a more successful seasoned offering in the future.

CHAPTER 3

LITERATURE REVIEW

This chapter presents a review of both the local and international literature on the topics related to the research areas of this study. It is divided as follows : (1) Studies on IPO underpricing as large initial returns, (2) Impact of public policy changes on underpricing, (3) Studies of IPOs after market (Secondary) performance, (4) Underpricing and other characteristic of IPOs.

3.1. Studies on IPO underpricing as large initial return

Earlier international studies have mixed findings, both positive as well as negative values of IPO's initial returns. Although most studies found positive returns, studies by Stigler (1964), and Shaw (1971) showed negative returns. Ritter's (1994) summarized initial returns for 30 countries, as shown in Table 3.1a.

In Malaysia, Yong et. al (1999) found an average initial return of 81.6% from all new issues listed on both the Main Board and the Second Board of the KLSE from January 1991 to December 1995. This average is substantially lower than the 166.7% reported by Dawson (1987), with 21 IPOs during 1978 – 1983 , 167.4% by Yong (1991), 114.6% by Ismail et al (1993), but slightly higher than 80.3% by Loughran et. al (1994) and 72.8% by Yong (1997), 224 IPOs during January 1990 to December 1994. This high returns are so attractive to the

investors that the over-subscription rate was 32.3 times for the 1991-95 IPOs. Some studies in Malaysia reviewed that the average over-subscription rate for these IPOs was 46 times (Dawson,1987 and Yong, 1991), 35 times over 16 years (Mohamad S. et. Al (1994).

Table 3.1a Average Initial Returns For 30 Countries

Country	Author(s) of Articles	Sample Size	Time Period	Ave. Initial Return
Australia	Lee, Taylor & Walter	266	76-89	11.90 %
Austria	Aussenegg	67	64-96	6.50 %
Belgium	Rogiers, Manigart & Ooghe	28	94-90	10.10 %
Brazil	Aggarwal, Leal & Hernandez	62	79-90	78.50 %
Canada	Jog & Riding; Jog & Srivastava	258	71-92	5.40 %
Chile	Aggarwal, Leal & Hernandez	19	82-90	16.30 %
China	Data and Mao	226	90-96	388.00 %
Finland	Keloharju	85	84-92	9.60 %
France	Husson & Jacquillat; Leleux & Muzyka	187	83-92	4.20 %
Germany	Ljungqvist	170	78-92	10.90 %
Greece	Kazantzis & Levis	79	87-91	48.50 %
HongKong	McGuinness; Zhao & Wu	334	80-96	15.90 %
India	Krisnamurti & Kumar	98	92-93	35.30 %
Israel	Kendel, Sarig & Wohl	28	93-94	4.54 %
Italy	Cherubini & Ratti	75	85-91	27.10 %
Japan	Fukuda; Dawson & Hiraki	472	70-91	32.50 %
Korea	Dhatt, Kim & Lim	347	80-90	78.10 %
Malaysia	Isa	132	80-91	80.30 %
Mexico	Aggarwal, Leal & Hernandez	37	87-90	33.00 %
Netherlands	Wessels; Eljgenhuijsen	72	82-91	7.20 %
New Zeala	Vos & Cheung	149	79-91	28.80 %
Portugal	Alpalhao	62	86-87	54.40 %
Singapore	Lee, Taylor & Walter	128	73-92	31.40 %
Spain	Rahnema, Fernandez	71	85-90	35.00 %
Sweden	Rydqvist	251	80-94	34.10 %
Switzerland	Kunz & Aggarwal	42	83-89	35.80 %
Taiwan	Chen	168	71-90	45.00 %
Thailand	Wethyavivorn & Koo-smith	32	88-89	58.10 %
United Kin	Dimson; Levis	2133	59-90	12.00 %
United Stal	Ibbotson, Sindelar & Ritter	13308	60-96	15.80 %

Sources: Loughran, Ritter, and Rydqvist (1994), updated version of Table 1

Mohamad S et. al (1994) used market adjusted average and the cumulative average market-adjusted returns over different time periods (e.g. first day, first week, first month, etc). Faudziah Z.A. et. al (1994) computed indices for relative price change and relative KLSE sectoral index change for all companies.