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THE NEW SHARES MARKET: REGULATORY INTERVENTION, FORECAST ERRORS AND CHALLENGES

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INTRODUCTION

A new issue is defined under Malaysian laws as the sale of unissued ordinary shares out of a previously closely held firm's authorised number of shares. Offers of existing issued shares are defined as sale of shares. Private placements, which are direct sale of unissued shares to designated investors, are permitted in limited cases and account for 5 to 10 percent of funds per year in the market. Therefore, the phrase 'new issues' has a restricted meaning in this country, and is consistent with the meaning of initial public offerings (or IPOs) of private companies and government-linked enterprises.

Investors, entrepreneurs, financial managers and financial intermediaries need to understand the market for initial public offerings or new share issues on the stock exchange because of its importance as a source of investment capital that helps in the nation's economic growth. New issue of shares as a source of investment capital on the KLSE has increased in importance over the years. Over the 1995-1996 period, a total of RM52 billion was raised through share issues. From 1997 to 2001, a total of 141 billion RM (28 billion per year) was raised in private capital, of which 73 billion (56%) was from issues of new shares. In 1998, there was a decline in the total amount of equity funds raised due to a financial crisis, but in 1999 alone, RM8 billion was raised through share issues. On average, for the 1973-2000 period this market provided more than 38 percent of the funds to Malaysian companies as public issues and offers for sale. However, total funds accumulated through new issues, as a percentage of the total funds raised in the Malaysian capital market, have declined from 26 percent in 1990 to 4 percent in 2000. This decline is largely attributed to the poor performance of the stock market and availability of more effective ways of raising capital by other means such as offer for sale, placement, tender offer and issue of private debt securities.

New issues market assist in deepening the capital market. Listing growth on the KLSE has been 20 percent per annum, starting with just 50 firms in 1960 to more than 800 firms (First and Second Board) in 2002. In terms of value, they were worth over RM807 billion in 1996 decreasing to RM553 billion in 1999 (the aftermath of the 1997 financial crisis). From the start of the government's privatization program (transfer of enterprise ownership from public to private) from March 1983 to 1998, 434 firms had been privatized. Of this, 40 firms worth more than RM100 billion had been listed on the Kuala Lumpur Stock Exchange, constituting almost 15 percent of the total market capitalization.

WHY DO FIRMS GO PUBLIC?

Malaysia, an emerging economy, has less than one percent of the total number of firms in the economy on its official stock exchanges. The average age of firms going public is 13 years and this is more than twice the number of years required for listing on the main board. Therefore, contrary to public opinion, firms seeking listing are not cashing out by going public.

In the UK, a developed economy, one percent of the total number of firms in the economy is listed on the official stock exchanges. In Europe, the average age of firms going public is 50 years compared to 6 years in the US (Loughran, Ritter and Rydqvist, 1994), which supports the idea that there are large and matured firms well qualified to be listed but have not made the decision to go public nor given the permission to list. The reported average short-term IPO underpricing of 9.5% and an over-subscription rate of 18.8 times for UK firms (Franks and Brennan, 1997) should be an added incentive for owners of private firms to increase the value of the firm. However, there is no evidence to support the notion that firms rush to go public just to increase the value of the firm.
Several possible reasons can be offered as to why a firm makes a decision to go public (or to get listed on the stock exchange). The common citations are diversification, growth financing, facilitating future re-issuance of shares, portfolio rebalancing, improved credit rating, increased productivity through employee stock ownership schemes and performance evaluation based on market value. Qualitative reasons often cited are attracting more qualified personnel, increased employee morale and increased bargaining power in negotiating with the firm stakeholders (Pargano, Panetta and Zingales, 1998; Rydqvist and Hogholm, 1995).

Going public could also be considered as a stage in the firm's growth process, which every firm is expected to experience in its life cycle with the management making a conscious decision to remain private or to go public. The firm's decision to go public has to be based on the cost and benefit perspective. Pargano (1993) provides some insights into the aspects of trade-off between costs and benefits of going public. The costs involve direct administration and underwriting costs, the underpricing costs, the annual disclosure costs, the costs of management time and effort, and the agency problems generated due to increased separation of ownership and control. The benefits are diversification, possibility of less costly access to the capital market (a key consideration), greater opportunity for equity financing, increased liquidity and being subjected to market mechanism for corporate control which mitigates the information asymmetry problem between investors and managers. Information symmetry reduces the moral hazard problem of management's consumption on the job at the expense of shareholders.

External factors beyond a firm's control such as the prevailing market conditions at the time of the decision might affect a firm's decision to go public. IPO cycles are positively correlated with business cycles, stock returns cycle, currency devaluations and regulatory

changes (Rees, 1996). For example, in economic boom times, good investment opportunities lead firms to equity finance through new issues. The reverse is true during economic downturns. Ibbotson (1975) argue that firms that are temporarily undervalued postpone equity issues until prices are corrected: in fact in developed markets, studies have shown that firms issue equity exactly when the shares are overvalued. Loughran and Ritter (1995) and Lewis (1993) show evidence of under-performance of IPOs long after going public which suggests that managers with the advice of underwriters issue at the right point of the cycle to exploit temporary over-valuation. Rydqvist and Hogholm (1995) also note that when stock prices increase, shareholders become wealthier and may want to increase consumption and diversification, realized through sales of shares forcing the owners of closely held private firms to go public. They also suggest that capital control regulations allowing greater participation of foreign investors in the equity market lead to a lower risk premium due to more diversified demand for shares, which in turn motivate more firms to go public. Similarly, the devaluation of currency increases the export earnings of firms and consequently increases stock prices and induces a higher level of IPO activity.

In Malaysia, besides all or a combination of the above mentioned motives to go public, the socio-economic motive of the New Economic Policy (NEP) has played an important role in the success of the new issues market. There is a desire to rebalance the ownership of the private investment capital along various ethnic groups. One effective way of achieving this objective is to ensure that for every new issue of shares, 30 percent is allocated to *Bumiputra* individuals and institutions, and the remaining 70 percent allocated to the public including *Bumiputras* through a share lottery system. For some observers, this has been the main catalyst for listing state-owned enterprises on the stock exchange. In terms of the total equity ownership of listed corporations in the country, the *Bumiputras* owned only 2.4 percent in 1970: the government through the NEP aims to achieve at least 30 percent ownership. As of 2001, the equity ownership has gone up to 23 percent.

However, firms might choose to remain private if they want to retain control over the firm, and are not in desperate need of investment capital because market conditions are not conducive. There may be, cheaper and more effective sources of investment capital. In some high tech industries, firms are not willing to comply with the mandatory disclosure of material information as part of the continuous listing requirement as this could benefit competitors and reduce the firm's competitive advantage, resulting in loss of control and perhaps even subject the firm to a hostile takeover.

Irrespective of the motivations to go public, this paper addresses selected pertinent issues concerning the new shares market on the Kuala Lumpur Stock Exchange (KLSE). Specifically, the issues of interest are the large underpricing of Malaysian IPOs, the regulatory explanation for the high underpricing premiums, the role of auditors in verifying the validity of the forecasted financial information reported in the prospectuses submitted to Securities Commission and the KLSE, and the challenges posed by forces of globalization on the Malaysian new issues market.

NEW SHARE ISSUES IN MALAYSIA

In Malaysia, it is mandatory for firms getting listed to engage the services of merchant bankers. The application is vetted by the Securities Commission (Capital Issues Committee and the Foreign Issues Committee prior to March, 1995), the Registrar of Companies and the Kuala Lumpur Stock Exchange ensure that new issues comply with the listing requirements. Regulators take elaborate care to approve new issues so as to ensure public interests are safeguarded. The approval process may take up to a year in a large placement! The average time for approval is between 24 to 32 weeks against much shorter time of 1 to 8 weeks in developed markets in Australia, United Kingdom and United States. Because of the longer time taken to approve new issue applications, there is the risk of stock market conditions changing relative to prices *fixed* at the time of applications. This is termed the *approval delay risk* in the new issues market.

Approval delay risk is much higher than in major markets, where the regulations are more flexible, and approval much speedier. While regulations in Malaysia ensure that no documentation is released to investors until application is approved, regulators in major markets permit investment bankers to offer new issues on a non-binding basis through the so-called *red herring offers* to obtain investor's assessment of the value of the offer. This allows investment banks to start *building-books* of potential customers before the application is approved. This is designed to reduce the extent of risk of (a) offer price being too high or too low and (b) estimating the likelihood of failure of off-take of new issues.

To reduce the risk of failure of the off-take of new issues, investment bankers *and* regulators have greater incentives to reduce offer prices in Malaysia's emerging market since the market conditions do change substantially between the time a price is determined and the actual time of approval.[1] One-way to fix this problem is a much lower offer price, resulting higher returns in new issues market, and lowering the risk of failure. This probably explains the very low underwriting fee of about one percent for managing a flotation compared with *three or more percent* in other markets. This risk of failure in off-take of issues is termed the *underwriting risk*. Low fixed prices reduce the underwriting risk as well.

New issue offers help to raise finance for expansion and provide an additional source of low-cost finance. Companies listed in the New York market raise capital at a lower cost, the savings amount to three-quarters of one percent per dollar of funds compared to unlisted companies. By the same logic, when owners of a company have considerable amounts of wealth invested in a company, and are interested in diversifying their portfolio to add liquidity to their investments, they usually offer new issues to reduce their own exposure to risk. Given this financial economics of owning a company, the owners of companies are willing to pass part of their profitable real investments in the company by reducing their proportion of shares in the company. It is found that insiders (that is, the existing shareholders of the company) offer an average of 30 percent of existing shares to outsiders, therefore, preferring to keep 70 percent for themselves. Hence, the new issue applicants

making a bid to own part of these 30 percent of equity of companies can therefore expect to obtain true value, and a higher return, than in alternative investments in the secondary market.

Purchase of shares listed in the secondary market cannot obtain this value. This is the *insider value factor*, which makes offer prices lower to yield a higher new issue return. A review of the prospectuses of all firms listed over 1975 to 2001 period indicates that management's main purpose for listing is to get funds for business expansion, which would not be possible without sharing a little of the value of the firm - releasing 30 percent of equity - with the outsiders, who apply for new issues. Note that this third factor should make new issues market more profitable, holding other things constant: the first two factors being the approval delay risk and underwriting risk. The longer-run annual return inclusive of dividends in the secondary market is 18 percent.[2]

Over-subscription of most new issues keeps feeding the frenzy for new issues. Earlier studies suggest an average over-subscription of 40 times (Dawson, 1987; Yong, 1991). However, the latest evidence (Ariff and Shamsher, 2002) shows an average over-subscription of 38 times for a period of 27 years (1975-2001). The evidence suggests that not a single new issue failed to provide a positive rate of returns over a 6-month holding period.[3] Thus, chasing after these new issues is considered prudent investment behaviour. This perception is also reinforced by reported findings that new issues are underpriced 7.5 times the average normal returns of 18 percent per annum in the stock market. In the 1980s, there was only one new issue overpriced (meaning the closing first day trading price was less than the offer price). In 1991 there was one issue and in 1997 there were nine new issues overpriced as a result of the share market decline after the 1997 financial crisis. This is almost insignificant number compared to the total issues that are predominantly underpriced. Consistent with other markets, most of the new issues are listed at the peak of market cycles, probably to reduce the underwriting risk. New issues are priced by the market at a much higher level than would be the case if the new issues were (i) equally likely to be issued in bull or bear markets and (ii) there is no frenzy in wanting to subscribe to new issues.

Due to the frenzy, there is price pressure during the initial few months, which keeps the prices artificially higher during this period. By the same token, one would expect the prices in the new issues market to attain normal levels after the initial period of some months. This is the *short-run price pressure or commonly known as the fad effect*. Only speculators stand to gain by buying and disposing over the short period when the prices are artificially high, whereas for the long-term investor, the relevant prices are the ones that prevail after the price pressure has abated. This long-term return for new issues is 21 percent per annum although the first day underpricing is 135 (!) percent (Shamsher *et al.*, 1993).

EXPLAINING NEW ISSUE PRICING ANOMALIES

There are six theoretical explanations widely offered in the literature for underpricing of listings: compensation for uncertainty about the future performance of the firms (Beatty and Ritter, 1986); ensuring successful flotation of new issues by investment bankers (Baron, 1982l; Tinic, 1988); reward for informed investors to participate (Rock, 1986); and costs for seasoning new issues (Ibbotson, 1975) are four (of the six) well known theories that had been extensively tested and affirmed in developed and emerging markets. Two other theories are asymmetric information (Leyland and Pyle, 1977) and fad hypothesis (Aggrawal and Rivoli, 1990). Leyland and Pyle (1977) suggest that given different sets of information available to decision-makers, and hence under conditions of asymmetric information, market participants will offer and bid systematically different prices.

Aggrawal and Rivoli (1990) suggest that the prices of new issues are generally set high because of the euphoria created by active promotion of new issues leading to formation of abnormally high prices in the *initial* period, which declines in the *long run*. Koh and Walters (1991) and Shamsher *et al.* (1993) also question the idea of underpricing by showing evidence that the so-called deep discount disappears or is reduced significantly when transaction and opportunity costs are discounted into the underpricing. Nevertheless, Loughran *et al.* (1994) reviewed the literature and suggest that underpricing is a well-established phenomenon.

Investment banking research documents the new issue pricing anomalies such as *overpriced* new issues (Ling and Ryngaert, 1997), the long-run price behaviour of new issues (Barber and Lyon, 1997; Jain and Kini, 1994), and new issue pricing behaviour in general (Loughran *et al.* 1994). However, much attention has not been paid as yet to explain the very large differences in the average underpricing in emerging markets. To appeal just to the emerging markets' high price volatility as the driving force for such high underpricing is a misconception. There is a need to ascertain if specific missing factors might be responsible for the high underpricing reported for Brazil, China, India and Malaysia.

A closer scrutiny of average underpricing in different markets shows a wide variation in the size of average underpricing ranging from as low as 9.7 percent in the United Kingdom (Buck *et al.*, 1981) and as high as 135 percent in Malaysia (Shamsher *et al.*, 1993). Also, the average underpricing in the more developed share markets is much lower than the average in the emerging/developing markets: a fact consistent with the low risk argument in the developed markets. The only explanation given for the large differences in the emerging markets is their higher risk arising from higher share price volatility. Several existing explanations emanating from the six theories on underpricing are *inadequate* to fully account for the wide variations reported particularly for the new issues in Malaysia (an emerging market) with the world's highest underpricing. For example, with all issues priced at deep discount in the tested market, none of the 12 merchant bankers in Malaysia have any risk of flotation or of not being successful.

For example, the average premiums earned by firms engaging the services of all the merchant banks for the 27-year period (1975-2001) is 87 percent (Ariff and Shamsher, 2002). Therefore, theories suggesting an investment banker's risk as driving underpricing are inappropriate for this economy. Nor is there a need for a 135 percent underpricing when similarly placed markets (like Singapore and India) are yielding no more than 36 percent and 76 percent underpricing respectively.

The average underpricing of selected developed and developing markets is summarised in Table 1. This table reveals in measurable terms the large differences in the underpricing of IPOs in selected markets with different stages of economic growth.

Table 1: Average Underpricing Relative to Long Run Average Returns in Selected Secondary Markets

MARKETS (1)	AVERAGE UNDERPRICING (2)	LONG RUN AVERAGE RETURNS (3)	RATIO OF (2)/(3)
AUSTRALIA	21.9 %	13.0 %	1.68 x
UNITED KINGDOM	9.7 %	8.0 %	1.21 x
UNITED STATES	18.9 %	12.4 %	1.52 x
Developed Markets	**16.8%**	**11.1%**	**1.51 times**
MALAYSIA	**135 %**	**18 %**	**7. 5 x**
SINGAPORE	36.5 %	16.0 %	2.28 x
INDIA	76.0%	28.0%	2.71 x
Emerging Markets	**82.5%**	**20.67%**	**3.87 times**

Source: Ariff and Shamsher (2002).

For example, the average value of underpricing in three selected *developed* markets is 16.8 percent. This is an average taken across Australia's underpricing of 21.9 percent (Finn and Higham, 1983), 9.7 percent from United Kingdom (Buck *et al.*, 1981) and 18.9 percent from United States (Ibbotson, 1975; Ritter, 1987; and Ibbotson et al., 1988). Comparing the 16.8 percent against the 11.1 percent long run average for the seasoned issues in these developed markets,[4] the average underpricing is 1.51 times greater than the average long run return of seasoned issues. Investors successfully subscribing to all the new issues in these developed capital markets would therefore expect to earn a 5.7 percent *premium* (i.e. 16.8 percent less 11.1 percent) in the new issues markets compared with an expected average return on seasoned issues.[5]

Equivalent comparative statistics on emerging markets is strikingly larger than developed markets. The average underpricing in three such markets is 82.5 percent. The source for this average is: underpricing of 36.5 percent in Singapore and 135 percent in Malaysia (Shamsher *et al.*, 1993) and 76 per cent in India (Ariff, 1999). The average return in the seasoned issues of these markets is 20.67 percent (Ariff *et al.*, 1998).

In summary, the underpricing *premium* over the seasoned issues is 82.5 percent and the ratio of underpricing to seasoned issue is 3.87 times or 387 percent in the emerging markets. The emerging markets appear to offer underpricing that is several times higher (3.87 times compared with 1.51 times) than developed markets. Obviously, there is excessive underpricing in the emerging markets. The order of magnitude of the underpricing on a crude comparison is 4.9 times (82.5%: 16.8%) in the emerging stock markets relative to the developed markets! *This is a significant difference*. However, the six theories mentioned earlier cannot adequately explain these excessive underpricing and most likely there are other unspecified factors responsible for the large underpricing.

UNDERPRICING OF MALAYSIAN NEW ISSUES

The short and long term underpricing behaviour of shares of newly listed firms was analyzed over a 16-year period (1975-1990). For each new issue, the rate of underpricing adjusted for the general price movement in the overall market was estimated over (a) a shorter time period of less than 12 months, and (b) a longer time period over the *next* 2 years. Both (a) and (b) enable us to distinguish short and long term price changes respectively. Finally, the underpricing is compared with the overall long run market return of 18 percent per annum as a benchmark for measuring the extent of underpricing over short and long run period.

Findings on Malaysian IPO market documented in the literature covers the initial or short-run pricing period of about 6-12 months only, and not over the longer period of beyond one year. Market conditions arising from demand pressure in the short run may account for the increasingly reported regularity of a longer run decline in the prices of new issues. Evidence on both short and long run periods is presented in Tables 2 and 3 respectively.

SHORT AND LONG-RUN PERFORMANCE OF IPOs

Table 2: Short Run Underpricing of Malaysian New Issues: 1975-1990

First Day	First Week	First Month	Third Month	Sixth Month
135%	122%	128%	129%	133%
(t=8.67)*	(t=8.91)*	(t=9.52)*	(t=8.36)*	(t=9.33)*

*Significantly underpriced: 0.05 probability or better levels.
Source: Ariff and Shamsher (2002)

The average refers to market-adjusted return in the Malaysian new issues market over sixteen-year period. The first day average excess return is 135 percent: this figure is different from other published reports that covered shorter periods and fewer new issues.[7] There is

a slight downward pressure in the first week and month, but prices recover enough to the first day level over the six months. These returns are statistically significant, in support of the notion that new issues are underpriced in the Malaysian new issues market.

The lowest underpricing observed was 4.7 percent and the highest was 563 percent with a volatility of 111 percent! No issues were marked below the offer price in this market. This would ensure that no speculator who held a new issue for six months lost any money. Regulators and investment bankers priced new issues such that the new issues market yielded positive returns, substantiating the public perception of handsome rewards for investment in new issues listed on the KLSE. Speculators tend to gain a high rate of return by holding in the short run only. Therefore, short run average return is about 130 percent of the offer price. However, it must be noted that these results assume that that every investor gets all the shares applied for, which is not true, as the chance of allocation is one in 35 for a small investor (it is more favorable for large-sized applications). *Also, the relevant return for an investor is the long run return and not the initial period underpricing, which reflects the effect of short run price pressure.* For the long run return behaviour (Table 3), the returns are calculated over the offer prices from the seventh to twelfth month and then over the next two years. Note that the prices were sustained at the initial price levels up to the end of first year i.e. at 133 percent. However, underpricing gain over the long run is 94 percent if the investor held shares for two years.

Table 3: Long Run Underpricing of Malaysian New Issues Market: 1975-90

7th month to 12th month	Two Years	Three Years
133%	94%	77%
(t=8.18)*	(t=6.00)*	(t=4.70)*

*Significantly underpriced: 0.05 or better probability levels
Source: Ariff and Shamsher (2002)

At the end of three years, the underpricing is 77 percent. Hence, if we compare the short run gain of 135 percent against the 77 percent in year 3, it shows that the long run returns are significantly lower than the short-run price-pressured temporary returns. Is 77 percent return over three years a high return? The long run return from holding new issues is more profitable (assuming a full and not partial allocation) than the 18 percent rate of annual return in the KLSE over the 1975-1990 period. However, not all investors will get a full allocation and some are not allocated at all. If investors apply for larger lots, the probability of allocation is likely to be higher. Larger investors will therefore reap higher returns even after costs because of the higher odds of being allocated.

INSIGHTS FROM THE RESULTS

Malaysian regulators appear to have put into place mechanisms for intervention in the stock market listing process to achieve positive rates of returns for all new issues, to reduce approval delay and underwriting risk. Unlike other markets, where about a third of all new issues yield negative returns to applicants, Malaysia's new issues have never yielded a negative return relative to the offer prices over any period. Added to this is that the public perception of lucrative gains have been fanned by inaccurate analysis of previous research on this subject, which estimated the gains to speculators and not to long term investors. The average excess return of 135 percent on the first trading day is the largest reported for any country. However, the 77 percent returns over three years period is 4.28 times more than the 18 percent normal rate of returns per annum in KLSE. Hence, the large initial underpricing is driven mostly by the short run price pressure, and not entirely by the fundamental factors. Increasing the allocation ratio to a higher rate of application lots for small investors could improve the profitability for investors. Demand pressure can be cited as the main reason for short run underpricing, however, for an investor, the lower return in the long term is the relevant rate. These findings are consistent with that documented in the U.S. new issues market (Aggrawal and Rivoli, 1990). This behaviour is termed the fad effect: it is perhaps driven by the heavy promotion of new issues as part of a national policy agenda as well as the attention factor new issues receive in the mass media, often endorsed by the governments to make its share distribution policy successful. It is also likely that the absence of a well functioning secondary bond market in Malaysia has led to a greater number of firms seeking investment capital, to source capital from the new issue of shares on the stock exchange. This could create a high-risk premium for new issues, hence a high level of returns.

REGULATORY INTERVENTION AS AN EXPLANATION FOR THE EXCESSIVE UNDERPRICING

Current Investment banking research has established that *almost all* new issue prices are set at a deep discount to provide a respectable reward in which is the so-called underpricing. There is a substantial body of evidence to state a general tendency for new share issues to be underpriced systematically in both developed and emerging share markets (Loughran *et al.* 1994). This section discusses the possibility of world's highest underpricing of new share issues observed in the emerging market in Malaysia[8] is perhaps due to regulations.

Underpricing of new issues ranges from as low as 9.7 percent in the United Kingdom to as high as 135 percent in Malaysia. The standard explanations offered in the literature appear to be *valid but insufficient* to explain the huge average discount offered to members of the public participating in share issue in this market. The excessive underpricing is perhaps due to two investment regulations implemented in this market.

Firms seeking listing approvals in this emerging market are required to decide on final offer prices at the time of application to the Securities Commission (SC), which considers

applications and then the approving authorities *revise the offer prices as part* of the approval process: this is *not* the case with the *red herring* offers widely used in the developed markets. Regulate pricing was the case prior to January 1996, when the SC discontinued that practice and began to permit the investment bankers and the firm seeking a listing to set their consensus prices as considered suitable *for the market conditions*. That is, regulators discontinued fixing prices of new issues from 1996.

It can be seen that the price setting practice prior to doing away with the price fixing regulation in 1996 is in sharp contrast to practices prevailing in several developed markets. In developed markets, prices are determined jointly by the investment bankers and the firm on the basis of *red herring offers* made by potential investors making non-binding offers to the investment bankers at or closer to the expected time of approval of listing by the authorities but just prior to release of the prospectus. The regulatory bodies do not interfere with the price setting. The important regulatory effect in the emerging markets comes from (a) requirement to *pre-specify a binding price* at the time of application, and (b), also permitting the regulators to vary the price using a price setting formula.

First, there is the application lead-time, and then there is the lead-time when application is open, followed by the time between the allocation time and trading. On average, the lead-time between the application date, when the offer price is fixed by applying companies, to the date of approval, when the regulator's revised prices are known, is about 8 weeks in Malaysia. It takes another 12 weeks to the date of listing to conduct the allocation of shares, as these must be allocated by public lottery after application is kept open over a 6-week period. The share is listed for actual trade three days after all the successful applicants have been notified of their allocations. Thus, specific delays in the longer approval process compared with the *red herring* offers may introduce a price effect in that the long delays induce the issuers to set low prices.

Thus, if prices are fixed way ahead of *the time of application*, then there is a greater chance of basis risk (i.e. the risk of listed price being lower than offer price) changing, which has to be borne by the issuer. This emerging market is also quite volatile with about 31.9 percent standard deviation of returns relative to 13 to17 percent in the New York Stock Exchange (Ariff *et al.*, 1998). Thus the risk of price changes - basis risk - to accommodate likely price changes in the forward period is more likely, which constitutes a danger in an emerging market.[9] The only way to mitigate this risk somewhat is to mark the offer price much lower in the event market conditions get worse towards the time of actual sale of shares. This factor is therefore related to regulations, which has not been adequately addressed in IPO research in this emerging market.

There are other less obvious regulations. A new economic policy to restructure the investment capital ownership of private capital is considered critical for the economic development of the majority *Bumiputra* population. A new regulation was agreed upon in 1975 and implemented from the year 1976 onwards. This new public policy mandated that at least 30 percent of any new shares on offer by private and government companies seeking listing be sold to the *Bumiputra* population or to mutual funds owned by the

indigenous population.[10] This rule was incorporated in the approval procedures normally required by the regulators prior to getting a license to list a new public firm. In its implementation, the authorities adopted a system of determining offer prices based on a set of price-earning multiples of different economic sectors. In a market, which was setting new and higher prices each year as the economy was growing at an average rate of 8.4 percent per year, the adoption of a simple average price multiple as the guide to fix the offer prices tended to downsize the estimated offer prices approved by the regulators. This must necessarily induce higher underpricing. Again, regulation appears to be a possible factor for the high underpricing. To date the NEP has been successful in sorting out the inequitable ownership distribution of private capital between different ethnic groups, though much more need to be done to achieve better results. For example, the *Bumiputra* ownership has increased to 19.3 percent in 1993, 20.6 percent in 1995, 22 percent in 1998, and 23 percent in 2001.

Regulatory intervention could possibly be the most likely additional factor affecting setting of new issue share prices at low levels to encourage mass participation. The intent is to create rewards for participation in the share issues by setting high underpricing to ensure success of a public policy so crucial to the future of this country. The implementation of such a policy reduces the political costs. To date there is no published evidence on this issue except that documented by Ariff and Shamsher (2002).

TEST FOR THE REGULATORY EFFECT

To test if the implementation in 1976 of the new public policy on share ownership distribution has in someway contributed towards the higher level of underpricing, the analysis was extended to include data of all listings from 1968. The new data set was partitioned into two parts. The new issues *prior to* and *after* the implementation of the new policy were analyzed separately: the former period had 38 new issues and the latter period 73 new issues. The 73 new issues are those that were traded in the period before the *second regulation* came into force in 1996: the second regulation is about freeing restrictions on setting issue price by regulators in 1996. There were 150 new issues in the period of free pricing over 1996-1999. The market-adjusted returns were estimated for each sub-period (1968-1975, 1976-1995, 1996-1999). This is in accordance with the accepted methodology of adjusting gross returns of new issues for market-wide changes in prices (Levis, 1993).[11] New issues included 16 government companies, which have very low systematic risk.

The average market-adjusted underpricing return was estimated for each new issue in each sub-period. The analysis was tailored to ascertain whether there is a positive and significant underpricing of new issues. This is a test of underpricing under the conventional explanations - underwriters' reputation, seasoning, winner's curse, *ex ante* uncertainty of performance, etc. all of which predict a significant positive abnormal return. It answers the question as to whether the new issue price performance using our new data set also substantiates the basic underpricing hypothesis.

The level of underpricing in this share market was found to be the highest. The second hypothesis is the implementation of the new share allocation policy since 1976 and its effect on underpricing. A significant increase in returns in the second sub-period would lend support to this explanation. However, the increase in underpricing in the second sub-period could also be driven by the adoption of the regulator's conservative price setting rule. Thus, these two hypotheses can explain whether there is (are) additional explanation(s) for the excessively high underpricing in this market.

Another issue of interest is to ascertain if the price setting freedom granted by the 1996 new regulation number two had the predicted result of reducing the size of the underpricing in the third sub-period, 1996-1999. Few new issues were approved in 1998 and 1999 as the economy was in recession following the Asian financial crisis. This massive shock caused unsettled market conditions that were not conducive for any new issues to be launched. If the average underpricing declined substantially (after excluding the crisis effect) in this period, this will support the notion that the regulation on price setting freedom had the expected effect on the level of underpricing.

EVIDENCE ON POSSIBLE REGULATORY EFFECTS

(i) *Underpricing in the pre and post regulation period*

The findings reported in this section are based on an analysis of IPOs over three regulatory regimes over a thirty-year period from 1968 to 1999. Prior to 1976 is the no-regulation period; regulation one (30% distribution rule) from 1975 onwards and regulation two (rule on fixing the price using price multiples) apply in period two but not in period one; and 1996 to 1999 is the free pricing period.

Examination of the market-adjusted returns during the pre-30 percent regulation one period suggests that there were only three new issues with first-day closing prices lower than the offer prices. All the remaining listings during the post-regulation one period earned positive returns on the first day or during the initial period of listing. The lowest underpricing over the 1968-1995 period was a negative 25 percent and the highest was positive 569 percent (the highest underpricing in the pre-30 percent regulation one period, 1968-1975, was 124 percent). The average market-adjusted underpricing over the whole period is 97 percent. In the pre-30 percent regulation one period, the total risk (measured by standard deviation) of returns was 54 percent compared to 131 percent in the post-regulation one period. The risk per unit of return (measured by coefficients of variation) was 0.97 and 1.01 in the pre- and post- regulation one period respectively is quite similar, suggesting not much difference in the risk per unit of return between the pre and post regulation one period.

The findings reported in Table 4 show that the average market-adjusted underpricing returns on the first day of listing is 118 percent in the post-regulation one period and 57

percent in the pre-regulation one period. This evidence supports the regulatory effect. The pre-reform period had a market-adjusted return that was roughly half the returns in the post-reform period.

Table 4: Short Run Underpricing of Malaysian New Issues in the Pre- and Post-Regulation One Period

	Pre-Regulation One Period (1968-1975)		**Post**-Regulation One Period (1976-1995)		**Comparison** over the two periods:	
	AR	t-Statistic	AR	t-Statistic	Difference	t-Statistics
First-Day	**57 %**	**6.36***	**118 %**	**8.67***	**61 %**	**2.47***
First-Week	59 %	6.25*	111 %	9.74*	52 %	2.11*
First-Month	60 %	6.11*	109 %	9.40*	49 %	1.99**
Third Month	49 %	4.96*	103 %	8.65*	54 %	2.12*
Sixth Month	42 %	3.84*	109 %	9.04*	67 %	2.67*

Significantly underpriced at 0.01 (*) and .05 (**) probability levels.
Source: Ariff & Shamsher (2002)

Measured against the seasoned market average return of 18 percent, the pre-regulation one first-day underpricing is 3.16 times; the corresponding number during the post-regulation one period is 6.56 times. Thus, the evidence is consistent with the findings reported by others over shorter periods with smaller samples: Dawson (1987) and Yong (1991) reported respectively 166 and 167 per cent over 1978-83 and 1983-88. The findings establish evidence for underpricing hypothesis as valid in this emerging share market.[12] Underpricing in this market is still the highest, and cannot be completely attributed to conventional explanations. But the difference of 61 per cent first-day underpricing during the regulation-one period supports the regulation effect, though there could be other unspecified factors equally contributing to the high underpricing. The coefficients of variation in the two periods is almost the same, implying that the difference over the two periods cannot be due to difference in volatility experienced in the two periods.

(ii) *Share Price Performance in the Long Run*

The long run results for the pre- and post-regulation one period are summarized in Table 5.

Table 5: Long-Run Underpricing of Malaysian New Issues in the Pre- and Post-Regulation One Period

	Pre-Regulation One Period (1968-1975) Average Underpricing	t -Statistics	**Post**-Regulation One Period (1976-1995) Average Underpricing	t -Statistic	**Comparison** over the two periods: Difference	t-Statistics
7th to 12th Month	28 %	2.55*	100 %	9.13*	72 %	6.14*
Two Years	25 %	1.32	73 %	7.26*	48 %	5.25*
Three Years	24 %	1.36	59 %	7.18*	35 %	4.25*

* Significantly underpriced at or better than 0.01 probability levels.
Source: Ariff & Shamsher (2002)

Findings in Tables 4 and 5 suggest that short-run underpricing in the initial period is much higher than the underpricing in the long run. The magnitude of underpricing declines by about 50 percent in the long run, in support of the fad or the publicity effect. During the pre-regulation one period, average underpricing varied greatly as the returns were not very close to each other: 60 percent on the first month, declining to 42 percent by the sixth month. In the post-regulation period, different price behaviour is observed. In the post-regulation one period, the average 109 percent underpricing in the first month started declining to 103 percent in the third month, and than increasing to 109 percent in the sixth month. Thus, the initial prices appear to be stable in the post-regulation one period. Obviously the implementation of the new 30 percent allocation policy in 1976 appears to encourage mass participation from not only the targeted segment of the population but also others chasing the non-compulsory allocation of 70 percent of the issued shares.

Publicity plays an important role in creating the initial demand, and the prices appear to have held up steadily during the initial underpricing period. The subscription rates, which appeared to be around 10 times the tranche, increased steadily over the years to an average of 38 times during the post-regulation one period. It is conceivable that the demand for new issues were sustained at high levels, and the large underpricing is partly due to the large demand created by the publicity. In fact this is indirect publicity evidence.

(iii) *Effect of Regulation Two*

The underpricing in post regulation-two period (inclusive and exclusive of crisis period between July 1997 to December 1998) is summarized in Table 6.

Table 6: Short-Run Underpricing of Malaysian New Issues in the Post Regulation-Two Period (1996-1999)

	Average Underpricing *Inclusive* of Crisis Period		Average Underpricing *Excluding* the (July1997-Dec 1998) Crisis Period	
		t-Statistic		t-Statistic
First Day	117%	15.78*	156%	18.29*
First Week	106%	13.85*	146%	16.11*
First Month	100%	12.61*	144%	15.51*

* Significantly underpriced at or better than 0.01 probability levels.
Source: Ariff & Shamsher (2002)

Though a short period, it had a large number of listings just ahead of the Asian financial crisis. The crisis period of July 1997-December 1998 affected the market badly with new issues almost disappearing from the scene. For example, there were 92 listings in 1996, 87 in 1997, 26 in 1998 and only 20 in 1999. The important thing to remember is that though there is freedom in setting offer price, *approval is still needed from the authorities.*

The underpricing in the free-pricing period in Table 6 shows that the mean underpricing was 117 percent on listing day, inclusive of the crisis period July 1997 to December 1998, and 156 percent if data over crisis period is excluded. The underpricing is still very close to those observed during the regulation one period when the authorities were setting low offer prices based on a table of historical price multiples. The high underpricing in this period, which looks only slightly less than the 135 percent in the regulated period, is statistically significant. *Surprisingly, the postulated expectation of a smaller rate of underpricing during the free-pricing period cannot be supported.* It is possible that the implementation of the second ruling may not have been enforced strictly. Therefore, pricing may have been still subjected to the price-earnings rule; though officially withdrawn, perhaps it is still practiced by firms and investment bankers. It appears that the abandonment of the old rule still leaves nothing in place to guide participants on estimating a market-relevant price.

In summary, the evidence suggests that this emerging market continued to produce high level of underpricing right up to 1999. The excessive underpricing appears to support the regulatory effect. Two regulations adopted by the regulators had the indirect effect of lowering the offer prices while also creating a large short-term demand effect on the prices that prevail during the initial listing period, say over the first six months. The returns in

the pre-30 percent regulation one period (1968-1975) are half of that in the post-regulation period over 1976-1995, in support of the regulation one (30% of all new issues to *Bumiputras*). The long run average underpricing is a third of the initial underpricing, in support of the short-term demand or fad effect. However, the removal of restriction on price fixing (in 1995) did not have the expected effect of significantly reducing the high underpricing in the post-1995 period. *However, it must be noted that the results are at best indirect evidence in support of the regulatory and the fad effects.*

INDIRECT EVIDENCE OF REGULATORY EFFECT

Prior to 1960, there was only one trading floor in Singapore when Singapore was also part of Malaysia. The stock exchange in Singapore served as a coterminous share market of both countries right up to 1989. The joint listing and trading arrangements ceased with the simultaneous removal of joint listed companies from both markets in January 1996. The two markets traded in a common currency until the common currency arrangement ceased in June 1973 when the Malaysian market began trading in Ringgit. Thus, by looking at the behaviour of the two markets over time, one gets a glimpse of the similarities or differences. Throughout the period of study, no changes to regulation of the kind implemented in Malaysia were passed in Singapore.

Though the two markets served as twin markets for the new issues, reported figures suggest an average of 135 percent for Malaysia and 36.5 percent for Singapore (Shamsher *et al.*, 1993).[6] Considered against long-run 16 percent average share market returns in Singapore and 18 percent in Malaysia, the extent of underpricing of new share issues is substantially higher in Malaysia (7.5x) than in Singapore (2.3x). The average underpricing in Singapore was only a quarter of the amount in Malaysia where the new regulations were implemented. *This in itself is indirect evidence on our postulation of regulatory effect on underpricing of new issues in Malaysia.* This market specific effect of regulations on new issues market cannot be generalized to other markets.

VALIDATION OF FORECAST EARNINGS IN IPO PROSPECTUSES - ARE AUDITORS DOING A FAIR JOB?

The financial crisis in Asia and the recent corporate scandals in the United States are all linked in some way to the weak enforcement of governance requirements. Competent and independent internal and external audit functions could ensure a good and fair corporate governance practice. If auditors fail in this role, they can undermine the financial markets by consenting to mislead investors through misinformation. There are many issues of corporate governance in the IPO market, however, in this paper the focus is on the credibility of the audit service provided by large and small auditors in verifying the financial information documented in the prospectuses for use by potential investors.

Legislations concerning source of financing, content and the form of prospectuses is provided by the Companies Act, 1965, and the Kuala Lumpur Stock Exchange's Listing Requirements. Section 39 of the Act and Part 6 of the Requirements stipulate the contents of the prospectus, which should include statements (in qualitative and/or quantitative terms) on the trading prospects and a quantitative forecast of expected changes in financial position for the year after the registration of the prospectus. In essence, Part 6, Section 218 of the Requirements requires a company to provide a profit forecast, the principal basis and assumptions (including commercial assumptions upon which the directors have based the profit forecast) for the year subsequent to the registration date of the prospectus. In addition, Part II of the Fifth Schedule of the Act specifies that auditors give an opinion on the compilation of the specific forecast and on the accounting policies used.[13]

Managers of newly listing firms are assumed to have private information about the future prospects of the firm and they need to convey the information to prospective investors to reduce uncertainty about the firm. This information is usually provided through prospectuses, which includes information on financial status, future prospects and audited financial statements. It is a mandatory requirement under the Company's Act 1965 for IPOs to issue prospectuses to potential investors that includes audited financial statements. The audited financial statements are considered an important element in the prospectuses and potential investors have to rely on the information to make an informed decision. In this respect, investors might have heterogeneous expectations concerning the quality of reported information based on the quality of audit service provided by large and small firms. Prospective investors perceive financial statements audited by more reputable auditing firms (usually the large international audit firms) as more credible than those audited by less reputable auditing firms. At the time of listing very little is known about the firm and prospective investors have to rely on the disclosures in the prospectuses to evaluate the future prospects and make an informed decision. Therefore, credible financial statements are required to enable investors to trust the disclosed information and abstain from seeking alternative sources of information for verification purposes. Since the allocation of shares to the public is based on the lottery system in Malaysia, the costs of information search (if verification is required) may not be compensated by the amount of shares allocated, therefore requiring a greater level of underpricing to attract the interest of potential investors. The provision of credible financial statements serves to reduce the monitoring cost.

Simunic and Stein (1987) suggest that the credibility of financial statements depends on the perceived quality of the audit. A higher perceived quality of audit is more likely to be associated with more reputable auditing firms because of their larger collateral properties (and therefore greater presumed reputation at stake) and investors' confidence in the accuracy and reliability of information audited. Therefore, the more reputable the auditing firm employed by an IPO, the less the chance of misrepresentation by the managers' disclosures and consequently less costs of monitoring and lower earnings forecast errors.

One way to ascertain whether auditors have done a fair job in validating financial information provided in the prospectuses by management is to observe the magnitude of the profit forecast error. Profit forecast error is estimated by taking the difference between the realized profits one year after the forecast and forecasted profits in the prospectuses. The regulatory agencies allow a margin of about ten percent error in the profit forecast. To ascertain whether the accuracy of forecast errors have changed over time, an analysis of forecast errors of listed firms was carried out for the periods 1975-1990, 1991-1996 and 1997-2001 using a sample of 65, 100 and 150 firms respectively. The results are summarized in Table 7.

Table 7: Mean Forecast Errors of IPOs Over Different Economic Periods:1975-2001

	1975-1990 N=65	1991-1996 N=100	1997-2001 N=150
Mean Forecast Error	9.34%	3.64%	-17.82%
Standard Deviation	52.65%	24.68%	38.31%
Mean Forecast Error (After Outliers)	5.25%	-0.26	-15.26%
Standard Deviation	25.00%	14.85%	27.51%
Percentage of firms that over-forecast (Realized profits less than forecast profits)	30%	53%	68%
Percentage of firms that under-forecast (Realized profits greater than forecast profits)	70%	47%	32%
Relationship between size of auditor and forecast error	-0.354 (t=-0.604)	-0.458 (t=-1.08)	-0.045 (t=-0.504)

The findings show that the mean forecast error for the 1975-1990 period is positive; the actual profits were 9.34 percent more than forecast. This performance is much better than that reported (more than 10 percent) for the British (Dev and Webb, 1972) and New Zealand (Firth and Smith, 1992) new issues. The mean forecast error is influenced by the presence of a few large forecast errors that were the result of both over-and under-forecasts. After omitting the outliers, the mean forecast error declined to +5.25%. About 70 percent of the IPOs exceeded their profit forecast while 30 percent reported profits lower than their prediction. This evidence suggests that IPO firms prefer to err on the positive side, within the acceptable 10% range.

For the 1991-1996 period, the mean forecast error was also positive 3.64 percent, implying that on average, the realized profits were 3.64 percent more than forecast profits. After discounting for outliers, the mean forecast error is negative 0.26 percent, meaning that on average, the forecast profits were marginally higher than the realized profits. Fifty-three percent of the firms had forecast profits that were higher than the actual profits (over-forecast).

The over-forecast of profits in the prospectuses by listing firms increased further during the 1997-2001 period. The mean forecast error is negative 17.82 percent that is on average the actual profit is 17.82 percent less than the forecast profit. After deleting outliers, the mean forecast error is still negative 15.26 percent but the standard deviation (measurement of dispersion from the mean) is reduced from 38 percent to 27 percent. The results reveal considerable variability and dispersion.

The auditing profession does have informal market segmentation for the 730 audit firms based on large and small firm status. To ascertain any association between the size of auditors and forecast errors, an analysis was carried out and the findings summarized in Table 7 implies that potential investors in the new shares are indifferent to the quality of audit service provided by large and small auditors. This is consistent with the findings documented earlier in a separate study (Shamsher, *et al.*, 1997). Overall, the size of auditors did not explain the differences in the forecast errors. This supports the notion that investors are homogenous with respect to the audit services provided by large and small audit firms.

The results show an increase in accuracy of forecast errors from the first to second sub-periods, from 9.34 to 3.64, representing an increase in accuracy by about 60 percent. The level of standard deviation has improved by 50 percent. However, the mean forecast errors for the third sub-period (1997-2001) show a negative 17.82 percent, implying over forecast of profits. Sixty-eight percent of the firms in this period over-forecast their profits compared to 53 percent in the second sub-period and only 30 percent in the first sub-period. The sudden strike and the extent of the economic crisis in the third sub-period might explain the large forecast errors in this period. It is possible that auditors (predominantly Big-Five) were doing a fair job of objectively validating the available information provided in the prospectuses by the firms, but were unaware of the unexpected and sudden down turn of the economy in this period. *The issue is whether the auditors had some insights on the forthcoming decline but were not obliged to discount this information in their validating process as it is beyond their accountability.*

This evidence questions the issue of competency and accountability of auditors in using information beyond that provided by the firms in the verification process. This is important for facilitating the government's vision of implementing best corporate governance practices of firms in the financial markets.

GLOBAL CHALLENGES FACING THE MALAYSIAN NEW ISSUES MARKET

The current era of globalization is moving towards one global financial market regulated by a few financial super-powers and super-individuals. The process of globalization started in the early 1800s (Shipman, 2002) and has accelerated with the help of advanced technology, information and finance. Technological advancements through innovations in computerization, miniaturization, telecommunications and digitalization has helped the world to get connected and exchange information, and provide opportunities to assess and apply knowledge on a universal scale. The advancement of information has paved the way for development of the satellite and Internet technology, resulting in falling costs of communication and eradicating almost all barriers of communications worldwide. The advancement of finance has changed the theory and practice of investments. This is reflected in the demise of the Bretton Woods system of fixed exchange rates and strict controls on international flow of funds and being replaced by liberalization of capital accounts, accounting for the free-flow of short-term capital across financial markets around the world, explosion of securitization of assets, and the development of stock, bond and currency trade. In summary, the process of globalization has resulted in lower entry barriers into financial and non-financial markets, lowered transaction costs, increased competition, speedier communication and better integration of markets and businesses.

This section enlightens on the potential challenges facing the Malaysian new issues market in the era of globalization. Financial markets are now linked through technology on a global basis. *This implies that regulators in the national markets no longer have total sovereignty over movements of capital across national boundaries.* Portfolio capital, unlike foreign direct investment, is fluid and will flow to those markets that offer the highest returns per unit of risk. For example in Malaysia, before the financial crises in 1997, we had a large inflow of short-term portfolio capital from international funds, fuelling the stock and property markets to great heights. During the crisis, this capital reversed its flow by cashing out from these markets and causing the Ringgit to depreciate with long-term negative implications on the economy. Stock market capitalization declined by 70 percent from RM807 billion in 1996 to RM376 billion in 1997. This caused severe economic ramifications that were contained through the exchange rate and capital controls in September 1998.

Globalization forces will enhance informational efficiency of the financial market. To compete globally, both the primary and secondary equity markets have to be cost-effective, efficient, and transparent. The merchant bankers responsible for getting firms listed need to be at par with international investment bankers in terms of technology, finance and services offered to clients. This will imply that these bankers need to invest in a big way in technology and resources to effectively compete with global players. The competitiveness of the financial services industry typically relies on cost effectiveness, operational efficiency and variety and quality of services offered. In this respect, broad-based deregulation of this industry is essential. This can be achieved through mergers, and greater international participation.

International participation brings in a larger and more diverse investor base enabling not only transfer of knowledge and skills but also injection of funds to further develop the economy. The salient features of the challenge would be that new issues would be much speedier (through Internet and on-line trading) and cheaper as the direct and indirect costs will be lower. The challenge would be greater foreign participation and loss of national identity of our financial and market-based institutions. The government through its Capital Market Master Plan (CMP) has taken steps to consolidate the sixty odd brokerage firms to only 15 universal brokers to cater for the expected changes in the market. However, there is a need to also consolidate and prepare merchant bankers to face the challenges.

The forces of globalization would also require financial markets in general and new issue markets in particular to use international standards (as opposed to national standards) of accounting principles, valuation and measurement. The more transparent the transactions and information used, the less likely the chance of sudden change in the markets. Applications of internationally accepted accounting principles and disclosure requirements would enhance the confidence of international investors and the development of the financial services sector such as the Internet brokerage services. The Capital Market Plan outlines the initiatives to improve transparency and information disclosure policies regulated through the Securities Commission, the Malaysian Corporate Governance Board and the KLSE.

The greatest challenge would be to compromise on the New Economic Policies relating to new issue market that had been the bastion of our economic and political stability, and consequently decades of positive economic growth and prosperity. In short, the investment capital redistribution policy among the different ethnic groups will be short-changed. The 30 percent special allocation of new shares to Bumiputra individuals and institutions will be subjected to compromise. This policy is unique to our society and is important in maintaining the racial harmony, and political stability of our multi-racial society. There will be an urgent need to maintain the essence of this policy and negotiate foreign participation only in the remaining shares through other measures.

Regulations governing the activities of the financial markets will need to be revised to suit the changing needs. The regulating agencies that ensure fair practices in the markets will be required to be more global in their approach so as to better understand the complex requirements of global financial markets. In a global environment, funds flow freely between stock markets, and the more competitive and cost-effective markets are expected to perform well. Therefore it will be necessary for KLSE to expand its base of captive customers through mergers and alliances. Mergers of exchanges is one method of strengthening the resources of exchanges so as to be indifferent to size and location of the markets. But mergers are usually plausible among equals. Another useful method is through the establishment of alliances between markets and cross-boarder trading to widen the investor base and participation. For example, alliance with KLSE and NASDAQ and the Australian market would be the obvious rational step toward this objective. The sacrifice would be the policy to contain

the foreign equity ownership of listed firms. We will not be able to control the foreign equity ownership in firms. On the same note, local firms could exploit the same opportunity by cross listings in other major markets, providing better exposure, liquidity and value.

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ENDNOTES

1. Ariff and Johnson (1990: p.15) document the relative volatility of Asian share markets. Standard deviation of rates of return of KLSE over 1980-1990 is about 31.9 percent per annum against 13 percent in the New York Stock Exchange. Price changes in the Malaysian share market are two-and-half times more likely even if the approval takes same time. Since self-listing is not permitted in Malaysia, all firms appoint investment bankers to make application to (i) the Securities Commission for approval for issuing prospectus to investors for sale of shares and (ii) the KLSE for permission to list the firm.

2. This estimate by Annuar (1991) is based on all listed companies over 1975-1989, and was extended to 1992 and found to be 18 percent per annum.

3. The only new issues to go below the offer price during initial days was that of Malaysian International Shipping Lines: the issue was oversubscribed on trading day by 1.13 times only. The poor performance was due to a sudden market correction after the end-1985 Pan El Affair involving share fraud by a group of insiders. Prices recovered later.

4. Standard textbook references in these three markets have justified using 12.4 percent for New York, 8 percent for London (Brealey and Myers 1997) and 13% (Pierson *et al.*, 1996) for the Sydney Stock Exchange.

5. There are stringent assumptions made in order for this comparison to be valid. Investors are assumed to be equally successful in getting all subscriptions to new issues and that there is no opportunity or transactions cost incurred in these trades. Considering these costs will reduce the underpricing.

6. Studies of a few South American emerging markets suggest that the underpricing there is below 98 percent in Brazil, which, therefore, has the second highest underpricing: see the spring issue of 1993 *Financial Management*. In Brazil, there is a regulation that made it mandatory for banks to subscribe to new issues up to 25 percent of the equity base of the banks. This effect has not been studied yet.

7. The reported figures of 166 percent (Dawson *op. cit.*) and 154 percent (Yong *op. cit.*) are higher as their studies are over shorter time periods. Also, they did not correct for market cycles and trends over time. Premium is the difference between the initial listing price and the issue price. This is usually a positive amount (i.e. listing price exceeds the issue price) reflecting underpricing. The level of the premium is the premium divided by the issue price, expressed as a percentage.

8. Reports in trade journals suggest that underpricing in China is 557 percent while preliminary results from an ongoing research on India's Bombay Stock Exchange suggests an underpricing of 98 percent. Since these are not yet published in the refereed journals, we are considering Malaysia as the emerging market with the highest average underpicing.

9. Ariff and Johnson (1990) and Ariff *et al.* (1998) document the relative volatility of Asian and major share markets. Self-listing is not permitted in Malaysia; it is illegal to seek applications before the SC and the Kuala Lumpur Stock Exchange (KLSE) approve listings. This market microstructure encourages lowering of offer prices to reduce risk of likely failure of floatation.

10. The new public policy was debated and approved in Parliament in 1975: see Parliamentary records of proceedings for 1975 in the Malaysian Parliament. The indigenous population, the *Bumiputra*, form slightly more than 60 percent of the population, and their share of private capital in the economy was under 10 percent in 1970. To increase their capital so as to give them corporate control, it was decided that at least 30 percent of new issues would be allocated to them or to mutual funds owned by them. The public could subscribe to the remaining 70 percent of the issue with allocations done on balloting by serial numbers, irrespective of the applicant's indigenous status.

11. Risk-adjusted for different systematic risks of new issues is not possible in this market. There is insufficient number of new issues in each month to adopt the RATS (Ritter 1987) procedure for adjusting for systematic risk differences.

12. The Malaysian share market is the first emerging market on which evidence of underpricing was first cited. However, more emerging markets have been studied since then and recent findings are consistent in supporting the same hypothesis in Brazil, Chile, Mexico and Portugal: See *Financial Management*, Spring Issue, 1993.

13. The Malaysian Institute of Accountants has issued an Auditing Technical Release, ATR 3, stating that auditors should ensure that assumptions on which prospective financial information is based are not unreasonable (MIA, 1990).

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