CHOICE, CONFUSION AND COMPETITIO IN THE MARKET FOR MARKETS: AIMING FOR AIM IN THREE JUNIOR ASIAN STOCK EXCHANGES

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Abstract. A review of literature on the theory of stock exchange competition provides the basis for a template model of a successful stock exchange. Three junior stock exchanges in East Asia which stated their ambitions to become a regional exchange for emerging firms are compared with the template and with the AIM section of the London Stock Exchange: Tokyo Stock Exchange Mothers, Hong Kong Stock Exchange Growth Enterprise Market and the Singapore Exchange Catalist. Our analysis indicates that the AIM and Catalist markets have the closest fit to our template model, while the GEM and Mothers show material departures from it.

1. INTRODUCTION

Based on a review of published research and the experience of the London Stock Exchange's (LSE) Alternative Investment Market (AIM), a template for a successful exchange is proposed. In the context of the template and literature review, the paper then answers the following research questions:

1. Can the success of the LSE's AIM model be repeated in the formation of a pan Asian junior market?
2. If so, what are the necessary conditions for achieving this, and
3. How are the Tokyo Stock Exchange (TSE) Mothers market, the Hong Kong Stock Exchange (HSE) Growth Enterprise Market (GEM), and the Singapore Exchange (SGX) Catalist markets positioned in this respect?
4. What opportunities exist for further research?

The AIM has been notably successful in attracting foreign listings in recent years, including those based in and operating from Mainland China. However, other stock exchanges neighbouring China have developed junior markets with the objective of capturing listings from both Mainland China and other countries in the region. Notable among these are the three Asian exchanges listed in point (3) above. Each has stated an intention to attract foreign listings and to become the destination of choice for new and emerging firms in the region. Hong Kong and Singapore are both geographically small jurisdictions with a tradition of international trade, and both are accustomed to using English as the language of business communication.

Tokyo hosts the second largest stock exchange by market capitalization in the World, although as a result of its huge domestic market, relatively less attention has historically been paid to attracting foreign listings. The availability of English language skills, translation costs, and persistently negative foreign perceptions

regarding corporate governance standards are also a constraint to the Mothers market in its bid to attract foreign listings, although this is partially offset by the amount of domestic capital which is potentially available.

The paper is organised as follows. Section 2 describes the main function of stock exchanges in the global economy and outlines different ways that exchanges can compete for business and their theoretical implications. This is followed by a discussion of the role of corporate governance and agency costs in the theory of competition between exchanges and the listing requirements set by exchanges. Section 3 outlines a broad template of how a successful exchange might compete for listings in a global market place. Section 4 describe the characteristics and the evolution of the AIM, Mothers, GEM and Catalist markets in the context of the broad template, their significance in their respective local and regional economies and analysis of the key reasons for the success of the AIM market in Europe. Throughout the discussion, the principal features of the Mothers, the GEM and the Catalist markets are compared and contrasted with the AIM market. Particular emphasis is placed on the listing criteria, investor protection mechanisms, governance structures and role of the respective stock exchanges in monitoring listed firms. In section 5, the investor base of the respective markets is examined, i.e. private investors or, professional investors such as venture capital providers, pension funds, open and closed ended mutual funds. The typical ownership structure of firms listed on the respective markets is also considered, i.e. dispersed, or concentrated in the hands of the founder shareholders, or early venture capital backers, and to what extent these features are likely to affect the liquidity and transparency of firms traded. Unresolved questions, providing opportunities for future empirical research in the three Asian markets are then detailed in section 6. The final section 7 concludes, by answering our four research questions.

2. CONCEPTUAL BACKGROUND AND LITERATURE REVIEW

Stock exchanges exist to allow firms to raise capital, and provide a market for investors to buy and sell stakes in listed firms. Traditionally, stock exchanges were mutual organizations owned by member firms of brokers and dealers. Within the last decade, many exchanges have become public limited firms, often with stock listed on their own exchange. As publicly listed entities, exchanges have an incentive to maximize their revenues for shareholders by raising the number of firms listed, hence raising revenue from initial and recurring listing fees, and by raising the number of transactions between investors in the listed firms. However, advances in technology and the associated demise of floor trading, together with a greater ease in the movement of capital around the world have also increased the competition between exchanges located in different jurisdictions and regions. For example, it is now possible for a small private (retail) investor, in the UK to monitor the performance of a stock listed in Singapore, or Tokyo with as much ease as a stock listed in London. Likewise, a small chain of grocery stores based in rural China may, conceivably, raise capital in London just as easily as in Hong Kong, Shanghai, or New York.

As well as generating revenue for shareholders, a successful exchange also creates employment for advisors, and other financial services firms, raises the profile of its location, and provides a valuable service to the global economy. Exchanges for emerging growth firms provide an exit opportunity for venture capital firms allowing them to recycle their funds into new generations of start up firms more quickly than

if it were necessary to grow the firms to the stage of maturity required for listing on an exchange for established firms (Giudici and Roosenboom 2004). As the profile of an exchange increases and more firms are listed, network effects generate a positive feedback, encouraging more new firms to list in the hope that their profile will be raised by association with the exchange (Coffee 1999, pp. 693 – 694). This effect creates incentives for regional governments to implement legislation favoring their local exchange. Such legislation may take the form of tax incentives for listed firms, or their investors, minimal or no tax on transactions, and the passing of securities laws that bolster investor confidence and protection while keeping implementation and enforcement costs to a minimum.

The following list identifies a number of ways in which an exchange can compete to attract listings from other exchanges.

1. Reduce quantitative and qualitative requirements for listing
2. Reduce initial listing costs
3. Reduce recurring costs
4. Reduce compliance costs
5. Reduce investors transaction costs by improving liquidity and reducing dealing fees
6. Increase investor confidence by enforcing effective shareholder protection principles and rules
7. Facilitating the dissemination of timely and relevant information on listed firms to market participants and providing support to listed firms
8. Providing flexibility to listed firms and their investors such that a growing firm is able to raise its standards of shareholder protection, recognition and access to capital by listing on a more rigorous exchange or a more rigorous level of the same exchange with minimal incremental costs, or, alternatively, allowing a shrinking firm to downgrade its listing status to reflect its reduced size, without being unduly penalized by adverse reputation effects and costs of re-listing.

Some of the above steps may be implemented independently by the exchange. Others need the cooperation of legislators and market participants; while points 1 – 4 may not always be compatible with points 5 – 8. In fact, much research in corporate governance is aimed at determining an appropriate balance between the costs and benefits of shareholder protection. For instance, Chemmanur and Fulghieri (2006 p. 458) discuss the twin possibilities of a 'race to the top' versus a 'race to the bottom', in terms of the listing requirements set by competing exchanges in order to attract foreign listings. They suggest that 'high reputation' exchanges are likely to reinforce their comparative advantage and set high listing standards, while 'low reputation' exchanges will set lower standards and become lower tier markets. Using the rivalry between the New York Stock Exchange and the London Stock Exchange as an example, Chemmanur and Fulghieri (2006 p. 481) also argue that the comparative advantage of a particular exchange in being able to reduce market segmentation and enhance investor recognition is important in determining the incentive to increase or decrease listing standards relative to its competitors. Coffee (1999) also points out that regulatory arbitrage can work both ways and cites examples, such as dispersed ownership firms, that might "race for the top" by seeking listings on exchanges with more stringent corporate governance standards than those

found in their home country. Pagano *et al.* (2001) report that firms prefer to list on exchanges which offer more liquid and larger markets, and markets where several firms from their industry are already cross listed. They are also more likely to list in countries with better investor protection and more efficient bureaucracies than their home countries (Pagano *et al*. 2001).

Coffee (1999 p. 703) argues that firms with concentrated ownership are likely to be effectively controlled by a particular block of investors, thus the controlling block may be inclined to avoid listing on exchanges where greater rights are afforded to minority shareholders. A similar comparison may be drawn between the AIM and the Official List of the London Stock exchange with the AIM likely to be favoured over the Official List by firms with concentrated ownership because there are no free float restrictions for AIM listed firms, unlike the Official List where a minimum free float of 25% is required.

2.1. *Agency costs*

Agency theory, as pioneered by Jensen and Meckling (1976), examines the agency costs to the principals (shareholders) of delegating the running of their firm to agents (firm managers). Broadly speaking, agency costs can be divided into three categories. Direct agency costs occur when agents engage in rent seeking behavior and divert wealth from the principals to themselves. The agency risk results in an additional risk premium being required by investors to compensate for the uncertainty surrounding the magnitude of expected direct agency costs (see Ashbaugh *et al*. (2004) for further discussion of agency risk). Agency costs resulting from agency risk are manifested by a reduction in firm value as a result of the higher discount rate used to determine the present value of the firm. Bonding costs are defined by Jensen and Meckling (1976) as the cost of implementing controls that minimize direct agency costs and agency risks; i.e., auditing costs, regulatory costs and corporate governance mechanisms. There is clearly a tradeoff between bonding costs and direct agency costs and agency risks that may be influenced by economies of scale. For instance, shareholders of a large profitable and cash generative firm which are numerous and widely dispersed, may find it optimal to spend more on bonding costs than those of a small firm with highly concentrated ownership. A simplified explanation for this hypothetical scenario might be that the absolute increase in bonding costs incurred by the large firm is more than offset by the savings in direct costs and the increase in the value of the firm resulting from a lower cost of capital. Conversely, in a smaller emerging firm with small profits and negative cash flow, there may be less opportunity for rent seeking, or maybe the value of the firm is small in relation to bonding costs, so any increase in firm value arising from a reduction in cost of capital, due to falling agency risk, may not be sufficient to offset the higher bonding costs required to produce a given increase in firm value.

Successful exchanges are likely to be exchanges that recognize that the appropriate level of corporate governance and regulation may be different for firms of different sizes and maybe even for firms of similar size operating in different industries, or in different stages of development. Allowing for the possibility that firm size may be a determining factor in the appropriate level of corporate governance required, such an exchange is also likely to put a facility in place to allow and encourage maturing firms to increase their standards of corporate governance and bonding costs and yet allow shrinking firms approaching financial distress to scale back their bonding costs, albeit with checks and balances in place to prevent this occurring against the interests of minority shareholders and without their approval.

2.2. *Listing costs and requirements*

Exchanges which are overly aggressive in reducing the costs and requirements of listing, face being placed in the "race to the bottom" category of Chemmanur and Fulghieri (2006) or Coffee (1999). Bottom racing exchanges may achieve speedier listing processes and a greater number of listings from emerging firms, potentially increasing the revenue for the exchange by virtue of the greater volume of listings. However, if anyone can list with minimal vetting criteria, then the status of an exchange listing may be devalued and that may drive more reputable firms to competing exchanges where the kudos of listing is higher; resulting in an adverse selection problem, as the 'low cost' exchange is left with only poor quality firms. On the other hand, if the emphasis is on maximizing shareholder protection, akin to the "race for the top" model, there is a danger that costs are set too high for small developing firms, which may be driven away to competing lower cost exchanges, or denied capital altogether: even if they are of a potentially high quality; thus depriving the global economy of potentially valuable innovations. This paper discusses how four regional exchanges might attempt to capture the best of both worlds by creating a tiered system which provides separate markets for emerging and mature firms. For example, investors are warned that firms on the lower tier (emerging firm) market are likely to be more risky, and less liquid than those on the upper tier (mature firm) market. In fact, the AIM has a mechanism by which firms may transfer between tiers depending upon their stage of development. This is in contrast to the Mothers market, where transfers from the upper to the lower tier were abolished in November 2007 to make it clear that the Mothers market is intended for a firm planning to move to upper market. It is also not possible for firms to transfer from the main board of the HSE to the GEM.

2.3. *The reasons firms seek a listing on an international stock exchange*

Three hypothesis are often cited in the literature to explain why firms may seek to list on an international rather than a local exchange. These are: (1) the Merton (1987) model, often referred to as the investor recognition hypothesis, (2) the market segmentation hypothesis of Kadlec and McConnell (1994) and (3) the liquidity hypothesis of Amihud and Mendelson (1986). The liquidity hypothesis of Amihud and Mendelson (1986) predicts that firm returns increase with liquidity, as measured by the bid-ask spread, which is an inverse measure of liquidity. The investor recognition hypothesis points out that unlike in the Capital Asset Pricing Model, investors in the real World have incomplete information and are not aware of all publically available information regarding all securities, because the cost of information gathering is too great. Merton's model predicts that as a result, securities which are "neglected" will have a lower investor base, a lower market value and hence higher expected returns, compared to an equivalent security which is more widely recognised and held. Kadlec and McConnell (1994) test the investor recognition hypothesis and the liquidity hypothesis by examining the returns and bid-ask spreads of firms that transfer their listing from the Over The Counter (OTC) market to the New York Stock Exchange (NYSE). They highlight Merton's acknowledgement that effects equivalent to those caused by investor recognition can also be caused by a segmented market. A segmented market refers to the fact that some investors may be precluded from investing in the OTC market, due to regulatory restrictions, or restrictions in their investment mandate. Hence, when a firm transfers its listing from a market in which many investors are unable to participate, to one where wider participation is possible, the investor base is likely to increase as

the market segmentation effect decreases. In addition to restrictions on investment, market segmentation may also arise because some markets are populated by analysts with specialist knowledge of a particular industry.

The above arguments and supporting empirical analysis indicate that in practice firms may experience a variety of benefits from an overseas listing. For example, the status of a foreign listing may reduce the firm's cost of capital; thereby, increasing its market value. Alternatively, the foreign listing may provide easier access to potential investors and, or, greater trading liquidity in the firm's stock. If the listing is in a market where the firm does a lot of business, it may also improve the firm's visibility within its product market. The valuation of a firm might differ depending upon the stock exchange, due to differing liquidity and investors' perception of the firm's shares. If markets are segmented, listing in a foreign market makes the firm's stock available to more investors, leading to an increase in the shareholder base and risk sharing, which results in higher valuations. That is why the effect of the foreign listing resulting from market segmentation is stronger in the presence of ownership restrictions (Foerster and Karolyi 1999; Miller 1999). Serra (1999) points out that market segmentation effects are particularly pronounced in the case of emerging markets, where barriers to investment are more severe in the sense that international investment is, in the limit, precluded by regulatory and ownership barriers. Liquidity effects come from the reduction of trading costs, through listing in a more "liquid" exchange, and through inter-market competition, as well as from order flow migration (Domowitz *et al*. 1998). For individual firms, one way of exploring a listing on an international market is to first, undertake a dual listing of the same shares on two separate exchanges. Grant Thornton (2007) summarise the advantages of dual listing as follows:

1) Insufficient liquidity and a low profile in one market can be offset by a better performance in another market
2) The share prices in each market will eventually converge;
3) Firms gain access to a larger investor base with a larger pool of capital available for investment, resulting in a fair valuation; and
4) There is a high possibility that visibility and profile can be augmented through media coverage in two different countries.

However, there are disadvantages of dual listing, such as higher costs arising from preparing accounts under two different sets of accounting rules, compliance work, and producing reporting documents in two languages. Therefore, a firm needs to carefully evaluate the reasons for seeking a dual listing in an international market by weighing the associated costs and benefits.

Pagano *et al.* (2002) argue that the globalization of business and capital markets has created opportunities for firms seeking an international listing. They point out that,

> *"As firms become global in their product market and investment strategies, direct access to foreign capital markets via an equity listing can yield important benefits. At the same time, the international integration of capital markets has led to unprecedented levels of competition among stock exchanges. In this competitive struggle, the winners are the exchanges that manage to attract more foreign listings and the attendant trading volume and business opportunities (Pagano et al. 2002 p. 2651 par. 1)".*

With the guidance of the literature review above, and examination of successful exchanges, it is possible to identify the characteristics required to enable an exchange to attract foreign listings and listings from

emerging firms.

3. A BROAD TEMPLATE FOR A SUCCESSFUL EXCHANGE

Based upon the literature review and examination of the four stock exchanges discussed in this paper, a broad template for a successful exchange is suggested. The extent to which each of the four exchanges fit the template, and deviate from it is then analyzed.

An exchange might follow a vertically integrated model, where the exchange operator has control over a market for both venture firms, emerging firms, maturing firms and blue chip firms. The latter being more likely to have a larger – more dispersed shareholder base, a larger market capitalization and a larger asset base. Within the integrated model, there are segments separated by a clear threshold, or hurdle, which delineates the different levels of shareholder protection expected. Segments at lower tiers would be expected to have more easily attainable listing requirements, lower initial listing fees and lower recurring listing fees. However, the cost of capital is likely to be higher for firms with a lower tier listing, to compensate investors for the greater risk associated with a less regulated market.

Firms crossing the threshold, in either direction, would have to undergo both a formal consultation process with their investors, and a formal application process to the exchange. Within segments, there may be a code of best practice regarding corporate governance controls and shareholder protection, with firms at the top of their class eligible, but not required, to seek promotion, while firms at the bottom of their class may be approaching voluntary, or compulsory, delisting or relegation. In order to retain their listing, either in the current or relegated segment, firms would still be expected to strive for good standards of corporate governance, and demonstrate a convincing commitment to sustain this. However, given sufficient explanation, it could be recognized that specific business conditions outwith the control of the firm managers may make full compliance at the standard expected at a higher tier unfeasible and inappropriate. There may also be a fast track application process to enable firms listed on the junior exchange for a minimum period of time to graduate to a higher tier exchange, subject to certain performance thresholds being met. Likewise, there may be a fast track for firms which have shrunk, either via restructuring, or poor business performance, to move down the ranking. This provides opportunity for listed firms to move up, or down the ranking, according to their business success and financial resources. So long as investors are kept informed in a timely manner about the change in disclosure requirements and the level of protection provided, they will have time to exit, or otherwise, as they see fit. A successful exchange is also likely to be an exchange that communicates well with listed firms and firms seeking a listing, as well as investors and potential investors in the listed firms. This might be achieved by providing a well designed website written in English, on which detailed information is freely available, not only on listing requirements and fees, but also on the firms already listed. In summary, our model exchange would have the following characteristics

1. A tiered structure with separate markets for new emerging firms and mature firms
2. Initial and recurring costs are lower on the lower tier exchange

3. Investors would be warned about the different levels of investor protection and investment risks of firms listed on the different tiers
4. A facility whereby firms can transfer between tiers at minimal cost, subject to meeting the listing requirements for the target exchange
5. Notwithstanding point (4) above, firms have to undergo a formal application process to change listing status which would require approval from shareholders
6. An agreed standard of best practice regarding corporate governance controls within each tier
7. An effective website on which information required by market participants and potential market participants is freely available.

The four exchanges examined in this study, are all junior markets operated by firms which also run more senior exchanges providing a destination for listed firms to graduate to at a later date. In fact, the TSE has three sections, the first section, second section and the Mothers suggesting opportunities for an orderly grading of firms according to size and business maturity. To varying degrees, each of the four exchanges discussed manages to achieve some aspects of the above template. Beginning with the LSE, the following section examines how they achieve this, and discusses any barriers that may exist and their possible consequences.

4. THE EVOLUTION OF JUNIOR MARKETS IN ASIA, A COMPARISON WITH THE AIM

The owners of the four stock markets for emerging firms studied in this paper all own and operate senior exchanges for larger developed firms. The existence of an associated senior market provides a logical destination for emerging firms to graduate to, if their businesses are successful. It also provides the exchange owner with an incentive to provide a mechanism to allow firms to graduate from the junior to the senior exchange, as any loss in revenue incurred by the junior exchange is mitigated by the new revenue earned on the senior exchange. However, what appears to be unique about the LSE's structure with the AIM, is the ease with which firms are able to de-list from the senior Official List (main market) and transfer to the junior AIM. Since the inception of the AIM on the 19th June 1995, more than two hundred and fifty firms have transferred downwards from the main market to the AIM, whereas only around one hundred and twelve have moved in the opposite direction; indicating that there does not appear to be a great deal of stigma attached to moving to the AIM from the main market.[1] In fact, many firms making the move cite a reduction in costs, greater flexibility regarding mergers and acquisitions and also tax advantages for investors when making the move. The LSE may benefit by retaining listings on the AIM that would otherwise have been forced to de-list under the more stringent rules of the main market.

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[1] Source: the London Stock Exchange "New Issues and IPO Summary" available at: http://www.londonstockexchange.com/en-gb/about/statistics/

4.1. *The London Stock Exchange and the AIM*

On 31 March 2008, 3,332 domestic and foreign firms had securities traded on either the main market or the AIM with a total market capitalization of US$3.5 trillion.[2] Of the 3,332 firms, 45% (1,495) were listed on the AIM with a combined market capitalization of £82bn, i.e. 2.3% of the total market capitalization. Firms traded on the "Official List" of the London Stock Exchange are regulated by the UK Listing Authority (UKLA), a section of the Financial Services Authority (FSA). The AIM replaced the Unlisted Securities Market (USM) on the 19th June 1995, and is the junior section of the LSE. Initially there were just 14 firms listed on the AIM, but by 31 March 2008, there were a total of 1,495, after excluding investment entities and firms with a market value of less than £1m. Although the AIM is regulated by the London Stock Exchange, AIM listings are subject to the AIM rules rather than the UKLA rules. The AIM rules are administered by the LSE rather than the FSA. Thus, listed firms have to meet less stringent financial and reporting standards than on the Official List. In fact, the LSE delegate implementation of the AIM rules to firms known as nominated advisors (NOMADS). NOMADS have to demonstrate to the LSE that they have sufficient expertise and resources to be able to advise listing firms on the appropriate way to implement the AIM rules and the standards expected in terms of corporate governance. NOMADS found failing to perform an adequate supervisory role over their advisee firms face public censure and in extreme cases, removal of their NOMAD status. The lower reporting threshold is intended to facilitate firms seeking to raise equity capital in their early stages of development, i.e. before they have achieved a long trading history, or a stable record of profitability. In addition to the Official List and the AIM, the LSE also established the Professional Securities Market (PSM) in 2005 which is available to firms issuing debt or convertible securities marketed at institutional investors and with a denomination of greater than EUR 50,000.

If fiscal incentives to investors are interpreted as a measure of government perceptions regarding the importance of the AIM to the economy as a whole, then the UK Treasury apparently viewed the AIM as important in this respect. This is because investors in AIM firms have been granted generous tax relief, although recent budget announcements indicate that the treasury will be less generous in future.[3] Indeed tax advantages have often been cited as a motivation for firms to transfer from the main market to the AIM.

Both the London Stock Exchange Official List and the AIM have been relatively successful at attracting the listings of foreign firms. For example, it can be seen from Table 1 that firms from 28 countries outside of the UK make up 21% of AIM firms and 35% of the market capitalization. In fact, these figures understate the true prevalence of foreign firms listed on the AIM, as many firms incorporated in the UK, originate

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[2] After excluding 452 investment trusts and similar entities with a combined market capitalization of £63.6bn, and excluding 164 firms with a market capitalization of less than £1m each and £45m in total. Source: Spreadsheet "List of all Companies" provided by the London Stock Exchange at: http://www.londonstockexchange.com/en-gb/pricesnews/prices/ and the World Federation of Exchanges (WFE) spreadsheet February 2008.

[3] Until the 5th April 2008, individual AIM investors qualified for business asset taper relief against capital gains tax, enterprise investment scheme tax relief, inheritance tax business property relief and loss relief, if investments are held for the qualifying minimum periods. However, unlike firms on the Official List, AIM firms are not eligible to be held in an Individual Savings Account (ISA) which is a tax free wrapper available to private investors resident in the UK.

outside of the UK and do much of their business outside of the UK: for example, China Shoto a manufacturer of lead acid batteries, or, Faces Cosmetics PLC, a cosmetic firm operating predominantly in North America.[4]

Out of the four exchanges examined, the LSE appears to provide the most comprehensive information to market participants via its website.[5] For example, spreadsheets are available containing the full list of firms categorised into the different markets, industry groups, class of securities and market capitalization and country of incorporation for each month dating back to January 1999. Spreadsheet data is also available detailing the history of IPOs and listing transfers from January 1996 to the present. Data provided by the other three exchanges is not as comprehensive and it is not provided in such a user friendly format, making it difficult for prospective listing firms to determine their peer group, should they choose to seek a listing. For example, the information presented in table 1 is not publically available for the GEM and Catalist markets. In addition, the LSE website is backed up by a comprehensive team of telephone contacts, making it relatively easy for unresolved queries to be answered. This is in contrast to the other exchanges, in which telephone contacts are not as accessible and e-mail queries, including those submitted by the authors, often go unanswered. However, even the LSE could improve in this respect because, unlike the SGX, it does not make a comprehensive list of ISIN or SEDOL codes of firms freely available, although they are provided for a fee.

Firms listed on the Official list and the AIM are required to file their accounts using international accounting standards, although previously they were required to use UK GAAP. Firms on the official list are required to comply with the combined code on corporate governance, or explain any areas of non compliance. Firms listed on the AIM, are not required to comply with the combined code, although many of them do comply with some or all of it. In fact, the Quoted Companies' Alliance (QCA) details voluntary standards of corporate governance for AIM firms, although the actual degree of compliance with the QCA guidelines is varied (Mallin and Yong 2008). The National Association of Pension Funds (NAPF) also provides guidelines on corporate governance policy for AIM firms. Unlike the other three exchanges examined the AIM is a recipient of established firms from the Official List, as well as new IPOs, indicating that transfers in either direction are not frowned upon, at least by the LSE. However, the absence of specific requirements to undertake shareholder consultation and to seek shareholder approval, prior to a transfer from the main market to the AIM, or from the AIM to the main market, is at odds with the requirement of our template model, summarised by point (5) at the end of section 3. Consultation with shareholders, and shareholder approval prior to a listing change, seems a reasonable minimum requirement given that materially different tax and regulatory regimes apply to the two markets.

Notwithstanding the evident success of the AIM in attracting new listings, it has been criticised, perhaps most famously, by John Thain of the NYSE, who is quoted as saying that the AIM "did not have any standards at all" (Gapper 2007), and from Roel Campos of the US Securities and Exchange commission who likened AIM to a casino (Grant *et al.* 2007). Furthermore, Malin and Yong (2008) find considerable

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[4] http://www.chinashoto.com/about/chairman_s_speech.asp

[5] See for example the data available at: http://www.londonstockexchange.com/en-gb/about/statistics/

variation in the standards of corporate governance applied by AIM listed firms. There have also been isolated examples of fraud, and perhaps more frequent, instances where shareholder protection mechanisms seem to have failed. In addition, health warnings to retail investors highlighting the particular risks of AIM, compared to the Official list, are not particularly evident to this author, who has been investing in both markets for many years. In response to the criticisms levelled at it, the LSE has robustly defended the accusation that it has no standards at all, emphasising the role of the NOMADs, and the fact that a number of errant firms have been forcibly de-listed. Khurshed et al (2008), also rebut the claim by Roel Campos, that 30% of issuers on the AIM are gone within a year. Another feature of the London Stock Exchange which potentially makes it less attractive than other markets is the imposition by Her Majesty's Revenue and Customs (HMRC) of a 0.5% stamp duty (tax) on the value of eligible purchase transactions.

4.2. *Stock Exchange of Singapore (Singapore Exchange) and Catalist*

At the end of February 2008, the Singapore Exchange (SGX) was ranked twenty second in the world by market capitalization of listed firms (World Federation of Exchanges 2008). The Singapore Exchange (SGX) was formed in 1999, following the merger of two established financial institutions - the Stock Exchange of Singapore and the Singapore International Exchange. It is the Asia-Pacific's first demutualised and integrated securities and derivatives exchange (SGX 2008). Including exchange traded funds and investment funds, approximately 2,700 securities were listed on the Singapore Exchange in April 2008 (SGX 2008). At the end of February 2008, firms listed on the SGX had a combined market capitalization of US$494 billion ranking it 22nd in the World (World Federation of Exchanges 2008). In April 2008, the SGX opened a Beijing office and announced that they have more Chinese firms listed than any other foreign exchange. At the 31st March 2008, there were 141 Chinese firms listed on the SGX with a market capitalization of S$45.1 billion. (SGX Press Release 18th April 2008). At the time of writing (April 2008), SGX indicate that one third of their listed firms are foreign and account for 30% of the market capitalization and that more than 200 foreign firms from more than twenty countries have listed on the SGX since 1990.

On the 17th December 2007, Catalist replaced its predecessor SESDAQ which was established in 1987. The Catalist model was arrived at through extensive studies of successful second boards on foreign bourses, and after a public consultation conducted in 2007. Firms are able to list on Catalist as little as six weeks after initiating the listing process. In addition, rules for corporate activities have also been vastly relaxed. For instance, a firm can obtain a mandate from shareholders to issue up to 100 per cent of its share capital and it can acquire assets up to 75 per cent, and dispose of up to 50 per cent, of relevant group assets without shareholder approval, unless there is a fundamental change in the firm's business. Consequently, Catalist is fairly attractive to firms which need to respond quickly to market opportunities. Regulation of Catalist firms is by an SGX approved sponsor, similar to the NOMAD structure adopted by the AIM. The sponsor is responsible for bringing the firm to market, and ongoing supervision of the firm once listed. There are no quantitative rules for firms eligible to join Catalist, rather they have to satisfy their sponsor that they are suitable for a Catalist listing and are able to meet the Catalist listing rules. Sponsors that fail to carry out their responsibilities may be subject to reprimand, fines, restriction on their activities or even deregistration as sponsors. Catalist firms must have at least two independent directors, at least one of which must be

resident in Singapore. Catalist firms must either, comply with a code of corporate governance, or, explain why they do not. Firms previously listed on SESDAQ automatically became listed on Catalist and are given two years to comply with the new Catalist rules and to acquire a sponsor. Firms seeking a listing on Catalist must produce an "Offer Document" rather than the prospectus which is required for firms seeking a listing on the main SGX market. Sixteen sponsors were designated on the 4th February 2008. By the end of April 2008, ten firms had attained a listing on Catalist with a sponsor and considerably more non-sponsored firms had transferred from the SESDAQ listing.

The structure of Catalist in relation to the main board of the SGX bears many similarities with the AIM. Both the AIM and Catalist do not have numerical listing criteria. As such, Catalist might become a competitor to AIM, for European and US firms which want to gain a foothold in Asia. The likely success of Catalist hinges on four key factors.

1. The initial group of listee firms have to experience a fast and efficient listing process as promised by SGX
2. The group of firms has to be of good quality to convince potential investors of the viability of the market
3. The first cohort of firms must also be able to easily raise additional funds subsequent to their listings, as required, and at a reasonable cost
4. It must be demonstrated that adequate liquidity can be maintained for firms post listing.

If the above conditions (1) – (4) are met, this will have the effect of attracting more funds to invest in the Catalist market. In particular, the lack of liquidity is an inherent problem with the Singapore market where the investor base is not as big as that in New York or London, if this can be resolved, more firms will be drawn to the board, hence feeding into a virtuous circle.

The information made available via the Catalist and SGX web-site to investors and firms planning to list, lags some way behind that provided by the London Stock Exchange. Furthermore, when an e-mail was sent asking for clarification, only an automated response was received that simply directed the author back to the website. Historic spreadsheet lists of firms on a par with those provided by the LSE, detailing market, the country of incorporation and industry group are not available on their web-pages at present, making it impossible to compile data equivalent to that presented in table 1 for the AIM and Mothers.

4.3. *Hong Kong Stock Exchange Growth Enterprise Market*

The Hong Kong Stock Exchange became a demutualised publicly listed enterprise in 2000. In February 2008 the World Federation of Exchanges (WFE) reported that the total market capitalization of listed firms was US$2.34 trillion ranking it 7th in the World after Shanghai (US$3.2 trillion). The GEM was officially launched on 25th November 1999, by the end of April 2000, 23 firms had been listed on GEM (GEM 2000 p. 1). By the end of March 2008 it had listed almost 200 firms with a total market capitalization of HK$133.9 billion. However, the HSE expresses concern that the mainland Chinese markets are planning to launch their own growth enterprise market in the near future and that competition for mainland Chinese listings is intensifying from other regional exchanges, such as the SGX and TSE (HSE 2007 p. 2). 16 of

these firms had graduated to the main board by June 2007 (GEM 2007 p. 12 par. 75). Unlike the AIM, there are no tax concessions for investment in GEM firms and it is considered unlikely that such concessions would be forthcoming from the Hong Kong Government (GEM 2007 p. 9, par. 55). A further contrast to AIM is that GEM listing standards require quarterly reporting with tighter deadlines than the main board (GEM 2007 p. 17, par. 94). This would seem to place a greater reporting cost burden on the small GEM firms compared to the larger main board firms and it is directly opposite to the requirements of the AIM, where firms report half yearly and are allowed six months to report full year results compared to three months on the Official List. The GEM was originally planned as a long term listing venue, and as such, there is no special process for firms to transfer to the main board (GEM 2007 p. 20, par. 98). Furthermore, unlike the LSE, the HSE have confirmed that it is not possible for issuers to transfer from the Main Board of the HSE to the GEM, a characteristic which is incompatible with the requirements of our template outlined in section 3.[6] It is now proposed that GEM firms may apply to the main board without requiring a sponsor if they meet the quantitative listing requirements, have been listed on GEM for two years and have a good behaviour record. Under the current regime issuers are required to go through the formal process of delisting from GEM in order to transfer to the main board (GEM 2007 pp 20 – 21). At the time of writing, those reforms appear to be still up for discussion and, until implemented, represent a material departure from the template for a vertically integrated exchange outlined in section 3.

The GEM is described by the HSE as a "buyers beware market for informed investors". Since inception, the GEM has undertaken a regular consultation process with market practitioners, putting forward proposals and consultation papers. In the July 2007 Consultation Paper GEM discussed practitioners' responses to three earlier proposals, (a) retain GEM as a second board under the existing structure aimed at providing a stepping stone for the main board, (b) merge GEM with the main board to form a two tier market, of which the lower tier would form a market for growth firms, or (c) create a new alternative market modelled on the AIM, and allow existing GEM firms to be grandfathered onto the main board. Out of eleven responses to these suggestions, seven favoured option (c), two favoured option (a) and non favoured option (b). Despite the overwhelming support in favour of option (c), the HSE decided against this option in favour of option (a). The justification provided was that the NOMAD system, seen as crucial to the success of the AIM, may not be so easy to replicate on GEM. Although a system of sponsors, not unlike the NOMAD system was introduced in January 2007, "more time is needed to see its full effect" (GEM 2007 p. 2 par. 9). Furthermore, the AIM was seen as a market dominated by sophisticated institutional investors, whereas private, and possibly less sophisticated, investors were thought to play a much greater role in providing capital to GEM firms (GEM 2007). Hence, there was seen to be a greater need to provide higher levels of investor protection for investors in GEM firms compared to AIM. Notwithstanding the above considerations, it is acknowledged that if the AIM regulatory model were to be adopted, costs could be reduced (GEM 2007 p. 22, par. 112).

The HSE may argue that they wish to position themselves in the "race to the top" category of exchanges regarding investor protection, and are seeking to distance themselves from competing exchanges that

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[6] E-mail from GEM to the author: 18th July 2008.

choose to "race to the bottom". However, a recent paper by the Bauhinia Foundation Research Centre (BFRC 2008) is critical of the HSE on a number of counts, but particularly with respect to the decision not to adapt the GEM to the AIM model. According to the BFRC report (p. 62), the HSE ranks lowest among the common law jurisdictions of Australia, Canada, the UK, Singapore and the US in terms of cost of regulation per $billion of stock capitalization, and substantially behind the US and UK in terms of regulatory personnel employed per 100 listed firms. The BFRC report (p. 57) also suggested that if the HSE is concerned about the greater predominance of retail investors in Hong Kong compared to London, they could establish a third market restricted to professional investors, similar to the PSM operated by the LSE, or alternatively allow securities to be issued on the GEM or the main board that are restricted to professional investors, in a similar manner to the operation of rule 144A in the US. It is argued that such a move will strengthen Hong Kong as an international financial centre and further benefit an economy which, in 2006, had 12.3% of GDP accounted for by finance and insurance (BFRC 2008 p. 57). The BFRC report goes on to argue (p. 59) that excessively zealous attempts to assure quality of listed firms may have the unintended consequence of creating moral hazard problems. A potential opportunity for the HSE is highlighted by the BFRC report (p. 64) commenting that Mainland Chinese authorities are considering lifting restrictions on Mainland residents from investing directly in HSE equities.

The HSE, by virtue of its geographic location and administrative relationship with Mainland China, should be in the best position to benefit from the growth of the Mainland equity markets; therefore, it is surprising that many firms with business operations based in China have chosen the UK or Singapore as their listing venue, and in some cases, their country of incorporation. Indeed, the pace of innovation displayed by the HSE, compared to its competitors, is causing concern among market participants. In the longer term, if it continues to lose its competitive edge for attracting listings from outside China, its growing dependence on Chinese listings may turn out to be its greatest weakness. For example, excessive dependence on Mainland Chinese listings will leave it particularly vulnerable to Mainland policy decisions which may be biased in favour of domestic exchanges. Out of the three East Asian exchanges considered in this paper, the HSE and GEM appear to depart furthest from the proposed template for a successful exchange outlined in section 3. Furthermore, the level of information provided to investors, potential listing firms and the public at large falls far short of that provided by the LSE. Indeed it is acknowledged (GEM 2007 p. 22, par. 116) that the HSE has received requests for improvement in this respect and has stated an intention to improve performance at some, unspecified, time in the future.

4.4. *Tokyo Stock Exchange and the Mothers Market*

The Tokyo Stock Exchange (TSE) is the second largest stock exchange in the world by market value, second only to the New York Stock Exchange (WFE 2008). On the 15th May 2008, 2,271 domestic firms and 31 foreign firms, with a total market capitalization of about US$4.3 trillion were listed on the TSE. The TSE was demutualized, changing its form of organization from a membership corporation to a joint stock company in 2001, but it is not yet publicly listed. The Mothers market owned by the TSE was established on November 11th 1999 in order to provide venture firms access to funds at an earlier stage of their development than would be possible via a listing on the main board of the TSE. The Mothers is governed by the rules of the TSE and the Exchange is subject to oversight standards set forth by Chapter 5

of Financial Products Trading Law.[7] On the 1st November 2000, additional criteria were established for foreign firms seeking a listing on Mothers. Initially, the Mothers had two main qualitative criteria in addition to numerical criteria; "growth" and "novelty" criteria. The "Novelty" was defined as a new type of industry such as information technology (IT) or bioscience. However, the novelty criterion was abandoned following the collapse of the IT boom and now any firm that can demonstrate growth potential may apply. At the same time, to gain investor trust, Mothers set delisting criteria as: sales revenue falling below 100 million yen, or market capitalization falling below 500 million yen. A firm is delisted when either of these criteria cannot be met. This seems to be a direct contrast to the AIM where there are no prescribed rules regarding minimum sales revenue, or market capitalization, leaving it up to firms and investors to decide what is viable for themselves.

In December 2006, a new sub-section of the Mothers named Mothers Global was created in an effort to raise the profile of the Mothers for international firms potentially seeking to list in Japan. The efforts by Mothers to attract foreign firms have yet to bear fruits. So far, only three foreign firms have been listed, a Hong Kong, a Mainland China and a UK based firm. In order to raise interest in listing by Chinese firms, the TSE opened a representative office in Beijing in January 2008. TSE was once the world's biggest bourse in the asset bubble years during 1989 – 1991 and 127 foreign firms were listed in 1991; however, following the collapse of asset prices approximately 100 firms left the TSE due to high recurring costs. As a result, opportunities to invest in foreign firms have reduced and the Tokyo market as an international financial centre has likewise shrunk.

Japan has been attempting in recent years to position Tokyo as a financial hub for Asia, seeking listings from elsewhere in the region. In line with this move, the TSE introduced the Japan Depository Receipts (JDRs) in 2007 to revitalize its foreign stock market. Prior to 2007, only Depository Receipts issued outside Japan such as American Depository Receipts could be listed through the depository linkage mechanism. The TSE is currently preparing to set up a new market for emerging firms jointly with the LSE by early 2009. The market will be operated as a joint venture on an equal basis. It will build upon the London Stock Exchange's success in creating and developing a market structure designed for smaller firms through the AIM, and the Tokyo Stock Exchange's local expertise and infrastructure. Details of the new market are still to be determined, but it is indicated that it will be a market with limited regulations, international accounting standards (IAS) and English can be used for financial reporting. It is not yet clear whether this new market will be in addition to mothers, or will replace Mothers.

As of the 29th February 2008, 196 firms were listed on the Mothers market and 28 firms had moved up to the main board. However, it is not possible for firms to move down to the mothers from the main board. Firms wishing to move from the Mothers to the TSE main board can apply if they meet the listing criteria. This examination process is easier if the applicant has a proven track record of disclosure while listed on the Mothers. Like the AIM but unlike the Official List of the LSE, the TSE do not stipulate a best practice code for corporate governance, whereby any company that adopts policy divergent from this code must

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[7] In May 2008, Securities and Exchange Laws were renamed as the Financial Products Trading Law.

explain why, nor does it require minimum standards on corporate governance. Rather, the TSE issued the Principles of Corporate Governance for listed companies in 2004, the purpose of which is to provide a necessary common base for recognition; thereby, enhancing corporate governance through the integration of voluntary activities by listed companies and demands by shareholders and investors.

The TSE states that it allows foreign firms to adopt an accounting system which is recognized and appropriate from the view point of investor protection, leaving the precise choice up to the firms. This seems to contradict the preference for IAS indicated for the new market. If the TSE wishes to attract foreign firms to seek a listing, a stated preference for, and acceptance of, IAS seems to be desirable in order to avoid confusion among investors and firms alike. Unlike the AIM, there are no tax concessions for investors. Firms are required to provide investors with quarterly financial reports "to protect investors". This seems to add costs to emerging firms and risks eliminating a key potential advantage of a specialist market for such firms. It is difficult to reconcile such a requirement with the template proposed in section 3. In fact, the CFA Institute and other bodies representing professional investors have started to question the merits of quarterly reporting on the grounds that it results in "short termism", whereby firm managers concentrate on short term goals at the expense of long term strategic objectives that would better serve shareholders (see CFA Institute 2006; CIMA 2003; Graham *et al.* 2006; Rappaport 2005; Bhojraj and Libby 2005). Indeed, it is arguable that so called short-termism may have contributed to, if not caused, the current financial crisis. The Mothers provides post listing support to listed firms. For example, representatives of listed firms can attend joint briefings, lectures and seminars on themes that are important for publicly traded firms, such as investor relations (IR) for venture firms, or corporate governance.

As a market, the TSE is one of the least concentrated of the major global markets with the top ten firms accounting for only 18% of total capitalization and 17% of total trading turnover by value, compared to the LSE, where the top ten firms account for around 40% of total capitalization and 30% of total trading volume (TSE Listing Guide for Foreign Firms). Like the HSE and SGX, statistics concerning the TSE and Mothers are not as accessible as they are for the LSE. Although it is possible to access a list of mothers firms from the web, the list is not in a format, such as a spreadsheet, that is easy for the casual observer to manipulate. The listing requirements for the Mothers market places emphasis on the requirement for firms seeking a listing to be able to demonstrate sustainable growth. A requirement for a sustainable 'business model' might be easier to understand. Indeed the rationale behind the sustainable growth requirement would benefit from further explanation. This is because even without sustainable growth, a firm may still have investment opportunities which present a positive net present value (NPV) for investors. In addition, it is widely recognised in economics and finance that long term sustainable growth in excess of GDP is difficult to achieve by any firms, and is mathematically impossible in perpetuity, as such a firm would grow to represent the entire economy. Furthermore, the sustainable growth requirement imposes a higher threshold than that applied, in practice, to many firms with a first, or second, section listing, where investors frequently complain that Japanese firms have a tendency to hoard cash and exhibit a reluctance to pay dividends, even when investment opportunities with an appropriate return on capital are not evident.

4.5. *The four exchanges compared*

The qualitative characteristics of the four junior exchanges are summarised in table 2, together with their respective four senior exchanges for comparison. Superficially, the four exchanges seem to share many similarities, such as no obligation to obtain shareholder approval before transferring between tiers, a feature which is at odds with our template recommendations. Firms seeking a listing, also all have to meet qualitative requirements. However, a key difference between the AIM, GEM and Mothers, is that the qualitative screening is delegated to the NOMAD with AIM firms and to sponsors with Catalist firms, whereas for the GEM and Mothers the exchange is directly responsible. NOMADS are responsible for helping firms to comply with the AIM rules, and the exchange has the ability to sanction both the firm and the NOMAD, if either are found to have failed in their responsibilities. The LSE and AIM are also distinguished by the absence of binding rules concerning the number of directors, although firms which try to deviate from the expected norms generally find it harder to attract fresh capital from investors, and in the case of AIM firms, harder to convince their NOMADs of their suitability for a listing. Another unique feature of the AIM is the presence of fiscal incentives for investors in listed firms. Furthermore the availability of information provided by the LSE on its respective markets far surpasses that provided by the three East Asian Exchanges.

The quantitative characteristics of the four exchanges are summarised in table 3. The minimum initial listing fees for both senior and junior exchanges appear to be lowest in the Mothers, while the highest maximum for a senior exchange is in the LSE. Recurring fees among the four exchanges are all sufficiently low as to be unlikely to have a great influence in determining the choice of exchange. Of greater importance, are advisory fees, together with initial and ongoing compliance costs; unfortunately, this data is not readily available at present, hence providing an opportunity for further research.

In terms of number of firms listed on the respective markets, the LSE is unique in having more firms listed on the junior AIM market than on the senior market. Only the SGX has more foreign firms listed on the senior market than the LSE, although the AIM has more foreign firms than any of the other three junior markets at (341), compared to Catalist (36), Mothers (3) and HSE (0), indicating the scope for growth if they can produce an attractive model.

4.6. *Analysis of the key reasons for the success of the AIM market*

The success of AIM is attributed to the market's structure reflecting AIM's principles-based regulatory model. While designed to meet the needs of international investors, it strives to balance appropriate safeguards with the flexibility required by growth firms. It also encourages NOMADs to support firms in raising capital throughout their lifecycle.

One of the empirical features of the AIM that does not appear to be replicated elsewhere is the ready acceptance of firms that move 'downwards' to the AIM from the more 'senior' Official List of the LSE. Although many young firms listing on the AIM for the first time one day aspire to a full "Official" listing, firms which eventually achieve this are outnumbered more than two to one, by firms moving in the opposite direction. Provided the integrity of the market is maintained, the LSE, as the owner of the Official List and the AIM, does not lose out when firms migrate in either direction. The Mothers, Catalist and

GEM markets all have the potential to share this feature, although at present firms appear to have shown no appetite for downward migration unlike in London.

Another defining feature of the AIM, which is unique among the four exchanges, is the presence of generous fiscal incentives for investors. The extent to which this feature has contributed to the success of the AIM is still to be determined. The AIM has also had very strong support from the UK government which has defended its regulatory structure from encroaching European directives, and from the potential to come under US jurisdiction in the event of a takeover of the LSE by a US exchange. Furthermore, the AIM model bears the closest resemblance to the hypothetical model of a successful exchange described in section 3. Finally, corporate governance and shareholder protection mechanisms are relatively effective in the UK compared to its competitors. In fact, anti-takeover defences, such as poison pills are almost unheard of in the UK, largely due to the effectiveness of the City Code on Take Overs and Mergers, while, according to La Porta *et al.* (1998) and La Porta *et al.* (1999) some measures of protection for minority shareholders are higher in the UK than in the US. For example, the existence of pre-emption rights preventing dilution of minority shareholdings without prior approval. The two studies by La Porta *et al.,* also provide a useful comparison of shareholder ownership and protection mechanisms around the World, including Hong Kong, Singapore and Japan. They argue that common law jurisdictions such as the former British colonies including Hong Kong and Singapore, offer better shareholder protection than French civil law jurisdictions. Legal jurisdictions influenced by German civil law, such as Japan, have shareholder protection standards somewhere between those of common law and French civil law jurisdictions.

Djankov *et al.* (2002) compare the regulatory barriers to entry for new firms in different countries around the World. The lowest barriers to entry are found in Canada, where only two procedures are required to establish a firm ready for trading and this can be achieved in one day. In the UK an entrepreneur can establish a new firm in four days after following five regulatory procedures. This compares with Hong Kong, five procedures and fifteen days, Singapore, seven procedures and twenty-two days and Japan, eleven procedures and twenty-six days. Djankov *et al.* (2002) conclude that lower barriers to entry and less government bureaucracy are associated with more prosperous economies, perhaps we can conjecture that successful exchanges are also likely to be found in less bureaucratic regimes?

5. INVESTOR BASE AND LIQUIDITY

Investor base refers to both the number of individual investors in a firm's stock and also the different kinds of investors, i.e. institutional, venture capital, private equity, insiders, retail investors etc. Merton (1987) predicted that the size of the investor base is positively associated with a firms trading liquidity and valuation and negatively associated with a firms cost of capital and hence expected return. Amihud and Mendelson (1999) tested Merton's prediction in the Japanese market with positive results. Subsequent studies investigating Merton's prediction are discussed in section 0.

This section examines the investor base of the respective markets, i.e. professional investors such as venture capital, pension funds and other open and closed ended funds. It also considers the typical ownership structure of firms listed on the four markets, i.e. dispersed, or concentrated in the hands of the

founder shareholders or early venture capital backers, and to what extent these features are likely to affect the liquidity and transparency of firms traded.

Firms on the Official List of the LSE must have a minimum free float of 25%, whereas there is no minimum free-float for firms listed on the AIM. It, therefore, seems likely that firms listed on the AIM will have a lower average free float than those on the official list and are likely to have a greater proportion of their stock owned by insiders, including founders, although we do not have supporting evidence for this at present. Smith (2008 p. 84) cites research by Teather & Greenwood/Landsbanki Securities indicating that since 2003, institutional ownership of AIM firm has increased from 35% to more than 56% in 2006. The institutions range from, predominantly British based firms, to multinational and foreign firms: including Fidelity, Black Rock, AXA and Morgan Stanley. Levis (2008 p. 6) found that over the period 1995 to 2006, venture capital and private equity backed IPOs raised a total of £2.3 billion on the AIM and £16.7 billion on the Official List. These figures amount to 13.7% and 31% of the total funds raised in the respective markets over the period. Levis (2008) found that an average of 33.2% and 59.2 of firms stock were held by venture capital backers and private equity backers respectively on flotation. These holdings declined to 19.8% and 28.5% respectively, following flotation; thus indicating that private equity and venture capital firms make up an important component of the investor base of many AIM firms post listing. With regards to liquidity and performance, Levis (2008 p. 11) finds that venture capital and private equity backed IPOS on the LSE typically have lower first day returns than their non private equity backed counterparts. Levis (2008) also finds that private equity buyout backed IPOS outperform the FTSE Allshare Index by the end of their first year of trading. In contrast, non private equity backed IPOs and particularly Venture Capital Backed IPOs underperformed the benchmark in the year following flotation.

The Mothers market is characterized by private investors as opposed to the 1st section of the TSE. In 2007, 77% of trading was carried out by private investors on the Mothers, whereas the same percentage of trading was conducted by institutional investors on the main board, notably by foreigners. Owners of emerging firms may wish to retain significant shareholdings in order to influence the decision making process of a company. Owners of firms listed on Mothers had on average 29.2% of shares at IPO in 2007, but the shares owned by venture capital, pension funds and other open and closed ended funds are limited. Including managers' holding of shares of 12.5%, more than 40% of the shares are held by owners and managers. Contrary to expectations, when liquidity is measured by showing the average monthly turnover of shares as a percentage of total market capitalization, the investor base and ownership structure of firms appears to have little effect on liquidity of the Mothers. The liquidity of the Mothers market was 32.8% in 2007, much higher than the TSE which was 11.5%.

As mentioned above, the concentration of ownership is high compared to the main board of the TSE. According to La Porta *et al.* (1999) high ownership concentration is often associated with exploitation of minority shareholders, an assertion which is consistent with the observed high incidence of irregularities on Mothers in comparison with the TSE. As previously discussed, high ownership concentration and low levels of shareholder protection is usually found to have an adverse effect on liquidity and firm valuations.

Using the same measure as for the Mothers, the liquidity of Catalist was 18.9% in 2007, higher than SGX which showed only 6.6%. However, the liquidity of GEM was 9.5% in 2007, slightly lower than HSE

whose liquidity was 10.8%. The low liquidity of GEM might be attributed to a relatively small investor base.

6. OPPORTUNITIES FOR FURTHER RESEARCH

As the present paper is largely a compilation and analysis of other relevant primary and secondary sources of information, we were able to identify a number of unresolved questions and opportunities for further research which we now present.

Although we identify some literature in the previous section, there is opportunity for further research into the source of initial capital for firms seeking an IPO on the four exchangs. For example, is there a difference between the number of venture capital backed and non venture capital backed firms on the four markets? Do venture capital backed firms perform better or worse than non venture capital backed firms and why?

Although the importance of liquidity is widely recognized, we found relatively little empirical research comparing key liquidity metrics such as bid-ask spread, free float, and market depth, between the respective junior and senior markets, or between the competing exchanges. For example, how does the liquidity of firms listed on the four markets differ? Might this explain differences in the ability of the exchanges to attract new listings? Is there a relationship between the liquidity and transparency of firms traded?

What kind of a model exchange is most appropriate in East Asia, including governance structure and investor protection as compared to the West? Is there a significant relationship between the development of the market and foreign investors? To what extent is government policy having an impact on the development of junior exchanges?

A feature of the AIM which is unique among the four exchanges studied is the presence of generous fiscal incentives for investors. The extent to which this feature has contributed to the success of the AIM is still to be determined and hence provides an opportunity for further research.

The AIM has also had very strong support from the UK government in the defence of its regulatory structure from European financial regulations, and from the potential to come under US jurisdiction in the event of a takeover of the LSE by a US exchange. Is this government support a key factor in the success of AIM and what is the likelihood of such support being replicated in the jurisdictions of the other three exchanges?

7. CONCLUSION

We examined the ability of Mothers, GEM, and Catalist, to compete for listings of emerging firms in the East Asian region at a time when globalization of business and capital markets has created opportunities for companies seeking an international listing. Our findings will be on interest to managers of emerging firms seeking a listing and to the managers and stakeholders of the four exchanges discussed, as well as their

competitors. They may be of particular interest to those at the Tokyo Stock Exchange responsible for establishing the new market for emerging firms as a joint venture with the London Stock Exchange.

Our findings indicate that the success of the AIM could be repeated in the formation of a pan-Asian junior market. The necessary conditions for this to occur are: a supportive government and regulatory environment and a desire by the successful exchange to be flexible and responsive in meeting the needs of the market. A successful exchange also needs to demonstrate both willingness and ability to communicate effectively with potential investors and listing firms.

Each of the three markets is competing for the listings of emerging firms and has stated that they aim to become a regional exchange for emerging firms. The host countries and the regions of the respective markets are strongly supporting this idea in the hope of being able to capture the economic benefits associated with hosting a successful and vibrant capital market. We also examined the evolution of East Asia's three junior markets in comparison with the London Stock Exchange's AIM. Some unique features of the AIM which may be factors in its success are: (1) the delegated principles based, rather than quantitative rules based, approach to regulation; (2) the ease with which listed firms can migrate in *both* directions, from the AIM to the main market, and vice versa from the main market to the AIM, (3), the level of government support, both in terms of fiscal incentives for investors, and in protecting the principles based regulatory framework and: (4) the breadth of information provided by the LSE to potential firms and investors via its web-pages, which is more accessible than that provided by the other three exchanges.

Based upon the literature review and examination of the four stock exchanges, we develop a broad template for a successful exchange, against which, the competitive position of the three East Asia exchanges are evaluated. Out of the three exchanges, Catalist appears to be the closest fit to our template for a successful exchange. The structure of Catalist in relation to the main board of the SGX bears many similarities with the AIM. The move by the SGX to transform SESDAQ to Catalist is consistent with the strategy of building an Asian Gateway in Singapore for securities. Both AIM and Catalist do not directly screen the firms for listing; instead they delegate the pre-listing examination and after-listing monitoring of firms to sponsors, or in the case of AIM, NOMADS. Neither AIM nor Catalist has numerical listing criteria. In contrast, the GEM and Mothers are in a number of respects far removed from our template. Both the HSE and TSE are slow in market reform and lag behind the bold initiatives of the SGX. However, the TSE's intention to set up a new type of market is regarded as a move to catch up with the more successful stock exchanges. Nonetheless, the race for regional exchange status has just started and, although Catalist can lay claim to best represent the title of the AIM of East Asia, it is too early to say that Catalist, or the AIM model, will become the most successful regional market in East Asia. Indeed, the outcome of the race will be a test of the true extent of globalization and homogenization of capital markets, corporate governance and shareholder protection standards between the East and the West.

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Table 2 Qualitative characteristics of the four exchanges

Abbreviated name of exchange operator ***Abbreviated name of junior exchange*** ***Exchange Qualitative Characteristics***	***LSE*** ***AIM***	***TSE*** ***Mothers***	***HSE*** ***GEM***	***SGX*** ***Catalist***
Number of listing tiers	3 includes PSM	3	2	2
Qualitative requirements of listing	Yes delegated to NOMAD	Yes	Yes	Yes
Formal application process to move between tiers	Yes	Yes, only from Mothers to TSE	Yes but developing	Yes
Shareholder consultation required prior to movement between tiers	No, notification only	No, notification only	No, notification only	No, notification only
Direct Regulation by government, senior exchange	Yes, UKLA	Yes, FSA	Yes, SFC	Yes, MAS
Direct Regulation by government, junior exchange	No, LSE	Yes, FSA	Yes, SFC	Yes, MAS
Direct Regulation by exchange, senior exchange	No, UKLA	No, FSA	Yes	Yes, MAS
Direct Regulation by exchange, junior exchange	No delegated to NOMAD	Yes, FSA	Yes, SFC regulates sponsors	No, delegated to sponsors
Regulation by advisor, senior exchange	No UKLA	Yes, FSA	No	No
Regulation by advisor, junior exchange	Yes	Yes, FSA	No	Yes
Tax incentives for investors in emerging firms	Yes but recently reduced	No	No	No
Materially lower cost for a lower tier listing	Yes	Yes	No	Yes
Shareholder protection enforced	To some extent	To some extent	Questionable (BFRC p. 61)	To some extent
Shareholder protection consistent across the same tier	To some extent	To some extent	Questionable	To some extent
Investor base warned about different levels of protection	Only to a limited extent	To some extent	Yes	Yes
Comprehensive information provided on website	Yes	No	No	No
Website backed up by comprehensive telephone and e-mail contact list	Yes	To some extent	No	No
Number of directors required senior exchange	Combined code guidelines (CCG)*	At least 3	At least 3 independent dir.	At least 2 independent dir.
Number of directors required junior exchange	At least 3**	At least 3	At least 3 independent dir.	At least 2 independent dir.
Directors with specific qualifications required senior exchange	Appropriate professional exp.	None	Appropriate professional exp.	Appropriate exp. & expertise
Directors with specific qualifications required junior exchange	Appropriate professional exp.	None	Appropriate professional exp.	Appropriate exp. & expertise
Directors required to reside in exchange jurisdiction senior exchange	Not required	Not required	At least 2 dir.	Yes
Directors required to reside in exchange jurisdiction junior exchange	Not required	Not required	At least 2 dir.	Yes

Notes: * CCG state that a board size should be "of sufficient size that the balance of skills and experience is appropriate" and that the annual report should identify the Chairman, Chief Executive, Senior Independent Director, and chair and members of the remuneration, nomination and audit committees. It recommends at least three non executive directors, although allowing that two may be more feasible for smaller firms.

** National Association of Pension Fund (NAPF) guidelines and Quoted Companies Alliance (QCA) guidelines encourage firms to, adopt the combined code where possible, although accept that firms with as few as three directors exist, comprising chair, CEO and a single non executive director.

Table 3 Quantitative Characteristics of the four exchanges

Exchange Quantitative Characteristics	*LSE*	*TSE*	*HSE*	*SGX*
Initial listing fees, senior exchange	$0.012-$0.58m	$0.14 m	$0.02m-$0.08m	$0.04m-$0.15m
Initial listing fees, junior exchange	$0.012-$0.14m	$0.009m	$0.01m-$0.03m	$0.03-$0.07m.
Recurring listing fees, senior exchange	$0.008- 0.076m	$0.01-$0.04m	$0.02m-$0.08m	$0.025-$0.07m
Recurring listing fees, junior exchange	$0.01m	$0.004-$0.038m.	$0.02m-$0.15m	$0.015-$0.04m
Transaction tax per deal, senior exchange	0.5% purchases only	0%	0%	0%
Transaction tax per deal, junior exchange	0.5% purchases only	0%	0%	0%
Average bid-ask spread	circa 0.1% (2004)	0.23% (1996)	0.34% (2000)	0.71% (2002)
Minimum firm size, senior exchange	None	$18.74m	$256.5m	$0-$59m
Minimum firm size, junior exchange	None*	$9.37m	$64.1m	None
Minimum profitability, senior exchange	None 3yr trading record	$3.75m	$2.56m	$0-$7.4m
Minimum profitability, junior exchange	None	None	None	None
Minimum assets, senior exchange	12 months working capital	$9.37m	None	None
Minimum assets, junior exchange	12 months working capital	None	$64m	None
Minimum free cash flow, senior exchange	None 3yr trading record	None	$12.8m	None
Minimum free cash flow, junior exchange	None	None	None	None
No of firms migrating up	circa 112	27	16	
No of firms migrating down	circa 250	0	0	0
Market cap of senior exchange (May 08)	$3.5 trillion	$4.33 trillion	$2.33trillion	$0.52 trillion
Market cap of junior exchange (May 08)	$164bn	$20.8bn	$15.88bn	$6.00bn
Average Market cap of firms on senior exchange (May 08)	$3.4bn	$1.99bn	$2.2bn	$81bn
Average Market cap of firms on junior exchange (May 08)	$0.122bn	$0.105bn	$0.17bn	$0.04bn
No. of firms listed on senior exchange (May 08)	circa 1,350	2,215	1,057	619
No. of firms listed on junior exchange (May 08)	circa 1,500	198	191	157
No. of foreign firms listed on senior exchange (May 08)	189	22	9	259
No. of foreign firms listed on junior exchange (May 08)	341**	3	0	36
Percentage of IPOs from venture capital	22% tot. both exchanges.	78.2% (2007, Mothers)		
Minimum free float, senior exchange	25%	30% (min.)	25% (min.)	10% (min.)
Minimum free float, junior exchange	No Minimum	25% (min.)	15-25%(min.)	

Source: Publications and data provided by the respective stock exchanges.
Notes: Monetary figures are in US$ calculated using Exchange rates at 21:00 Japan time on 17th July as follows: £=2.002300 US$, Y=0.009466 US$, HK$=0.128245 US$ and S$=0.739590 US$.
*A firm raising more than £500m would normally be expected, but not required, to list on the main board rather than the AIM.
**Is the number of firms incorporated outside the UK; however, many foreign firms are incorporated in the UK, so the actual number of foreign firms is much higher.

Table 1. Panel A, Alternative Investment Market

Country of Incorporation	**No. Firms**	**% of firms**	**% Total Capitalization**	**Dominant sector of country by Number**	**Number Firms**	**Market Capitalization of Dominant Sector**	**% of total Market cap for country**	Notes
UK	1180	78.9%	64.6%	Real Estate	85	£7,607.52	14.2%	Followed by Oil & Gas Producers 12% and General Financial 12%
Canada	43	2.9%	6.0%	Mining	16	£2,653.41	52.9%	Followed by Oil & Gas Producers 28%
British Virgin Islands	34	2.3%	5.1%	Real Estate	6	£1,444.63	34.2%	Followed by Mining 19%
USA	43	2.9%	3.9%	Industrial Metals	1	£1,094.08	33.8%	Followed by Electronic & Electrical Equipment 14%
Bermuda	23	1.5%	3.9%	Nonlife Insurance	2	£773.43	24.1%	Followed by Mining 20%
Australia	42	5.2%	3.6%	Mining	21	£1,960.72	66.2%	
Republic of Ireland	39	2.6%	3.3%	Food Producers	2	£802.65	29.1%	Followed by Oil & Gas Producers 17%
Cayman Islands	27	1.8%	2.8%	Real Estate	5	£724.30	31.4%	Followed by Mining 21%
Cyprus	8	0.5%	2.2%	Real Estate	3	£1,028.66	55.6%	Followed by Oil & Gas Producers 33%
Netherlands	12	0.8%	2.0%	Real Estate	5	£738.81	21.3%	Followed by General Retailers 21%
South Africa	2	0.1%	0.5%	Software & Computer Services	1	£290.17	69.4%	Followed by Mining 31%
Malaysia	1	0.1%	0.4%	Construction & Materials	1	£307.80	100.0%	
Israel	16	1.1%	0.3%	Technology Hardware & Equipment	4	£64.62	22.6%	Followed by Electronic & Electrical Equipment 19%
Belize (British Honduras)	3	0.2%	0.2%	Support Services	3	£204.66	100.0%	
Switzerland	1	0.1%	0.2%	Banks	1	£198.90	100.0%	
Falkland Islands	2	0.1%	0.1%	Oil & Gas Producers	1	£114.79	97.6%	Followed by Mining 2%
Belgium	1	0.1%	0.1%	Pharmaceuticals & Biotechnology	1	£98.47	100.0%	
Germany	2	0.1%	0.1%	Software & Computer Services	1	£58.75	64.3%	Followed by Media 36%
Denmark	1	0.1%	0.1%	Real Estate	1	£83.23	100.0%	
Singapore	3	0.2%	0.1%	Travel & Leisure	1	£31.74	47.0%	Followed by General Financial 40%
Finland	1	0.1%	0.1%	Forestry & Paper	1	£63.80	100.0%	
Luxembourg	2	0.1%	0.1%	Travel & Leisure	2	£55.26	100.0%	
Hong Kong	3	0.2%	0.1%	Personal Goods	1	£38.43	81.8%	Followed by Electronic & Electrical Equipment 18%
New Zealand	1	0.1%	0.1%	Software & Computer Services	1	£45.69	100.0%	
Sweden	1	0.1%	0.0%	Health Care Equipment & Services	1	£34.81	100.0%	
Italy	2	0.1%	0.0%	Electronic & Electrical Equipment	1	£18.59	73.4%	Followed by Fixed Line Telecommunications 27%
Gibraltar	1	0.1%	0.0%	Travel & Leisure	1	£20.74	100.0%	
Japan	1	0.1%	0.0%	Electronic & Electrical Equipment	1	£3.31	100.0%	
Total	1,495							

Table 1.-Panel B Mothers

Country of Incorporation	**No. Firms**	**% of firms**	**% Total Capitalization**	**Dominant sector of country by Number**	**Number Firms**	**Market Capitalization of Dominant Sector**	**% of total Market cap for country**	Notes
Japan	195	98.5%	99.98%	Information & Communications	64	N.A	N.A	Followed by Services,
Bermuda	1	0.05%	0.01%	Service	1	Service	-	-
Cayman Islands	1	0.05%	0.01%	Information & Communications	1	Information & Communications	-	-
UK	1	0.05%	0.00%	Information & Communications	1	Information & Communications	-	-
Total	198	100.0%	100.0%					