

Changing Market Structures, Demutualization and the Future of Securities Trading*

Ruben Lee
Managing Director, Oxford Finance Group

5th Annual Brookings/IMF/World Bank Financial Markets and Development Conference 15/4/2003

Introduction

It is widely recognized that the pressures of competition, globalization, and technological change, are threatening the development, and in some instances the very survival, of many developing capital markets. This paper examines some options for responding to these pressures that are open to policy makers, with regards their trading infrastructure and exchanges, and also provides some practical comments on how to decide which of these policies should be followed. The suggestions made throughout the paper are summarized in the conclusions in the form of six broad recommendations.

The paper is divided into six sections. In the first, the key factors threatening the development and survival of securities exchanges in developing markets are briefly identified. The next four sections analyse different policy options stock exchanges can follow in order to respond to these problems.¹ In section two, the question of whether policy makers should continue to support the development of their domestic stock exchanges in isolation, in the belief that they can be self-sufficient, is discussed. The issue of whether regional linkages or alliances between exchanges should be encouraged, in order to try to build larger virtual markets, is examined next. In section four, the costs and benefits of mergers between, or takeovers of, stock exchanges in developing markets are discussed. In section five, some comments on the advantages and disadvantages of demutualizing stock exchanges are presented. Brief conclusions are provided in the final section.

* This paper draws on and extends Claessens, Lee & Zechner (3/2003) and Lee (2002b), and the author would accordingly like to thank Stijn Claessens and Josef Zechner. The opinions expressed here, however, are those of this author alone, and not necessarily their opinions, or those of the Oxford Finance Group, or any of its clients. While every effort has been made to ensure the accuracy of this paper, no factual material or statements presented here are guaranteed correct.

Three general comments on the discussion presented here are important. First, given the intense difficulties facing stock exchanges in many developing capital markets, it is unsurprising that there are no easy options available. Second, the analysis provided in the paper is not intended to be either definitive or exhaustive. Indeed, the strategy that any particular stock exchange should follow is crucially dependent on its particular circumstances, and thus no single strategy will fit all exchanges. Third, enhancing the domestic provision of trading infrastructure is not sufficient by itself to ensure that a stock exchange in a developing market will thrive. The success of a stock exchange is dependent on many factors beyond the control of the exchange itself. Relevant issues include the creation and enhancement of domestic institutional investors, which are likely have natural domestic liabilities, the growth of domestic retail trading, the protection of shareholder rights, the establishment of robust legal systems that allow firms to issue and trade shares, the implementation of high corporate governance, accounting, listing and transparency standards, and the effective enforcement of securities market legislation and regulation.

1. Factors Threatening Developing Market Exchanges

A range of factors threatening the development and survival of securities exchanges in developing markets are briefly identified in this section. One central problem is that there are only a small number of liquid shares on many such markets. There are various reasons for this. In many countries, there are not many companies which are large enough and profitable enough to warrant the trading of their shares on a stock market – disregarding the possibility of trading start-up companies on a special board or with reduced listing requirements. A range of potentially attractive companies have not been privatised in many developing markets. The shareholdings of many companies are progressively being concentrated in fewer hands, as the people and institutions seeking control of these companies are gradually buying up their shares. The free float of shares in many companies is therefore decreasing. Some of the most attractive companies on local domestic markets are also being bought up by bigger foreign firms and are then being de-listed.

The prosperity of developing market stock exchanges has in some contexts also been adversely affected by the trend for domestic stocks to be traded or listed on larger international markets. There are several forms which such trading or listing can take: it may include dual-listing, the use of depository receipts programs, or listing only on a non-domestic exchange. For all developing markets combined, the ratio of market capitalization listed abroad to total market capitalization jumped from only a few percent in 1989 to about 50% currently, with a peak of over 62% in 1999.² The amount of capital raised abroad, especially for middle-income countries, rivals that raised domestically, as large firms, and particularly those firms being privatised, generally

include large tranches geared to international markets. The degree of listing of firms on international stock exchanges varies considerably among individual countries. In some cases more than two thirds of stock market capitalization is listed abroad as well as domestically.

Firms which seek a listing abroad are typically larger than their domestic-only counterparts, grow faster and carry on more international business. Such firms are also generally from the better performing segment of their local market. This reflects both demand and supply factors: better performance firms are likely to have greater growth opportunities, which makes seeking foreign financing more attractive. International investors may view these types of firms more favourably. This selection process means that the firms listed only on the local markets tend to be smaller and perform less well than those firms which can be listed and traded internationally.

Even when the liquidity and price setting process of a single firm obtaining a foreign listing is not affected, the international listing or trading of specific firms can have effects on their whole domestic market. More particularly, it may reduce the liquidity of the remaining firms which are only listed domestically in two ways. First, a reduction in the domestic liquidity of the “international” firms may have negative spillover effects on the liquidity of the remaining domestic firms. Second, there may be a movement of trading within the domestic market away from the purely domestic firms and into those firms which have sought an international presence.³ Foreign listing of a few large companies can have a large impact, especially on smaller exchanges, given that most trading on such exchanges takes place in precisely these larger shares. The market capitalization of most issuers on developing exchanges is small to begin with compared to the size of most companies in which global portfolio investors invest. With further declines in liquidity, the remaining companies can therefore become even more unsuitable for such investment.

A range of other factors are threatening the prospects for developing stock exchanges. Regulators in the larger jurisdictions, with the most capital available, rarely allow such exchanges to access their markets directly. Competition to developing market stock exchanges could in principle come from alternative trading systems (ATSs). To date, however, such competition has rarely occurred in developing markets, both because some regulatory authorities ban ATSs, and because most developing markets are too small to be profitable for the major international ATSs. If it is allowed, internalisation by major financial intermediaries can also be a threat to developing market stock exchanges. Developing market stock exchanges can also be adversely affected by regulatory liberalization. Domestic portfolio restrictions requiring investors to place a specified minimum of their funds in local securities may be abolished. Such deregulation will inevitably increase domestic interest in foreign securities, thereby reducing their interest in the local market.

2. Self-Sufficiency

The first policy examined here that a threatened stock exchange in a developing market can follow is to maintain the *status quo*, namely to seek prosper by itself in isolation, without any form of linkage with other exchanges. Some key factors that support the continued existence of domestic stock exchanges in developing markets are briefly surveyed in this section, and then some issues concerning the future sources of revenues for exchanges are discussed.

Factors Supporting Developing Market Exchanges

There are several factors which support the continued survival of domestic stock exchanges in developing markets, notwithstanding the trends identified above which threaten the trading infrastructure in many developing markets. An important one arises from the now widely recognised positive “network externality” associated with order execution.⁴ Order flow attracts order flow, and liquidity attracts liquidity. A trading system that already attracts a large amount of orders thus has an advantage over any new competing systems. If an exchange in a developing market has most, or even a large part of the trading in its shares, it is difficult, though not impossible, for other trading systems to capture this liquidity.

Even if competition to a developing market stock exchange by an international exchange does occur, it is not self-evident that such competition will either undermine the domestic exchange or lead to its demise. The experience of competition between the more developed European exchanges provides an interesting illustration of this. In 1986, the London Stock Exchange (LSE) changed the structure of its market in the so-called “Big Bang”. Market participants who previously had only been allowed to act in a single capacity, either as a market-maker (jobber) or as a broker, were now allowed to act in a joint capacity, namely to provide integrated market-making and sales teams. In addition, a screen-based system was established for disseminating the LSE’s quotes around the market. As a result of these reforms, a significant amount of trading in continental European stocks was attracted to the London market for several years. In response to this competition, all the major continental European stock exchanges automated and liberalised their markets, both by establishing electronic auction mechanisms and by allowing much easier access to their exchanges. The result was that most of the trading which had gravitated to the London market then reverted back to the continental European domestic markets

Although foreign listing may divert trade away from a local exchange, trading in a domestic share on a foreign exchange is not simply a substitute for trading on the local market – it can lead to greater domestic trading if the stock attracts more attention or acquires a higher reputation. Trading

abroad may also lead to greater trading locally if foreign trading is unwound on the local market.

For many companies – except the truly global ones – the domestic market is the “natural” place to be traded. Domestic traders may be better informed about local companies than foreign investors, and foreign investors know this, thus keeping the trading of companies on the local market. Having no “home listing” may also be a significant problem, especially for small and intermediate sized firms, which tend not to be able to go abroad. These firms, of which there are typically a relatively large number compared to the number of big firms in many developing markets, will often support the operation of some form of domestic stock exchange.

A local stock exchange can adopt a market microstructure that best conforms to the characteristics of potential listing candidates and investors, in terms of defining market segments, or designing listing requirements and fee structures. Local exchanges can also be more flexible in accommodating channels through which local small and medium sized firms can tap into public securities markets, through securitisation, the listing of holding companies, and the listing of private equity funds.

Another factor supporting the continued existence of developing stock exchanges is that the technology of providing trading services continues to advance and relatively low cost trading systems are now available off-the-shelf. This is making it easier to maintain small stock exchanges in developing markets.

Future Revenues

A key question for many stock exchanges, in both developing and developed markets, is how to remain financially sustainable. In order to prosper by itself in the current climate, a stock exchange needs both to reduce costs and to increase revenues. Options for stock exchanges to enhance their revenues are, however, limited. Historically, exchanges have had seven main types of revenues: membership subscriptions, fees for listing, trading, clearing, and settlement, and charges for the provision of company news, and for quote and trade data. A few exchanges have also sought to obtain revenues by selling their technology. For many exchanges, however, many, if not all of these sources are now under threat.

Membership fees will continue to be paid as long as an exchange has members – but demutualization is bringing this to an end. Exchanges now have customers, not members. In many contexts, listing is subject to intense competition between exchanges, and thus the ability to extract high revenues from the provision of this service is limited. Furthermore, there is debate about whether exchanges should in fact still undertake this function, when they can use it as a competitive

advantage against trading systems which do not provide it.⁵ There is also growing controversy about whether the listing function is actually best provided by an independent regulator in order that it not be compromised by the commercial interests of the exchange.⁶ One possible source of maintaining a sustainable competitive advantage and a stable source of revenues for an exchange is to provide clearing and settlement services.⁷ However, most securities exchanges do not provide such services, and even for those that do, there is pressure to reduce their costs and charges. The provision of clearing and settlement services is also subject to growing anti-trust scrutiny. Only a few exchanges provide company information, and in most environments this is subject to intense competition from the data vendors.

Transaction fees are the largest source of revenues for most exchanges today. However, this may not continue. As the cost of processing an extra marginal trade on most automated trading systems has now become essentially zero, competition between trading systems is pushing transaction fees to this level. Exchanges may be able to attract more trading by allowing for remote access to their trading systems. Remote access may allow foreign financial intermediaries easier access to a domestic market than without it. Furthermore, if the EU Investment Services Directive is agreed, and if it becomes applicable to countries seeking accession to the EU, then all jurisdictions in the EU should be required to allow exchanges from the accession countries to provide remote access to their exchanges. Remote access, however, will not necessarily bring an increase in trading since similar access by foreign traders can be obtained via local brokers, which establish internal systems for routing orders on a cross-border basis. To date the impact of remote access on exchanges in many developing markets does not appear to have been significant.

One area which may be a viable source of extra revenues is the sale by exchanges of their quote and trade data.⁸ Even when a dominant exchange has faced competition from new trading systems, and even if such trading systems have succeeded in capturing some order flow, very rarely has a dominant exchange ever lost its position as the main source of price discovery for the securities it trades.⁹ Revenues from the sale of quote and trade data will therefore be more resilient than those from transaction fees. However, the extent to which revenues from the sale of quote and trade data can be increased will again be critically dependent upon regulatory approval, or rather a lack of regulatory price-capping which is most likely to arise as a result of antitrust regulatory scrutiny. Other potential sources of revenues include introducing trading in new instruments such as derivatives or mutual funds.

Although ways of reducing costs for stock exchanges are not discussed here in detail, one is mentioned, as it relates to the other strategies examined here. An exchange may be able to reduce

the costs it incurs by outsourcing major expenditures. This is often attempted by negotiating with a foreign exchange to use its IT software and hardware at a lower cost than would be possible if the domestic exchange had to build and operate its own structure. As discussed below, the outsourcing of the supply of key technology may be a precursor to, or associated with, a closer linkage between the participating exchanges, or indeed a merger.

3. Linkages

There is a widely held belief amongst policy makers interested in promoting capital market development that the survival of many smaller developing markets is in question precisely because they are too small to survive. One obvious possible response is therefore to consider whether linkages between several such markets could create a larger virtual exchange, which would by construction be more able to survive than the individual and smaller exchanges of which it was composed. This section examines some issues related to the establishment of cross-border associations or linkages between different exchanges, in which the various exchanges essentially retain their different identities but cooperate in some manner.¹⁰ In order to illustrate the benefits that may be obtained via a linkage between exchanges and some of the strategic problems associated with establishing such a linkage, one example, namely NOREX, is also discussed below.

There are many ways in which linkages between exchanges may work. Any subset of the various functions undertaken by exchanges can be shared, including marketing, listing, order routing, information dissemination, order execution, matching, clearing, settlement, and administration services. There are also many different contractual procedures by which shared delivery of these services can be implemented. For example, an exchange can purchase services from another exchange, both exchanges may agree to sub-contract delivery to a third party, or a joint venture may be established.

The prime aim of a linkage between stock exchanges is to reduce costs and seek to increase liquidity. Cost savings can arise from many different sources. An exchange may establish an order-routing mechanism or joint clearing arrangement with another exchange in order to offer some of its products to members of the other exchange, without requiring them either to buy a seat on its market, or to deal through a local intermediary. This may allow traders who are not members of the first exchange cheaper access to its products than would otherwise be available. Economies of scale may be available to cooperating exchanges, if their shared costs in any joint facilities are less than the sum of their separate costs would otherwise be. If the linked exchanges are able to combine the order flows they receive for similar products, they may together be able to achieve a more liquid market than either would be able to realize separately. Sharing standards (for example on

communications, messaging, and technology) can also reduce costs. While some of these potential gains exist, achieving them is not easy, however, and typically requires major managerial and sometimes financial investments.

Of the many attempts at cooperation between exchanges that have been proposed, few have been implemented, and of those that have been realized, most have failed.¹¹ There are many reasons why. Even if several small exchanges operating in the same region were to link up with each other to create a bigger virtual exchange (or indeed merged to create a larger combined exchange as discussed below), the new exchange would still be relatively small by the standards of more developed markets. It is therefore questionable whether such a merged exchange would be sufficiently large to interest international investors.

Another factor leading to difficulties in exchange linkages has been associated with the implementation of new technology. Despite continuing advances in IT, it frequently takes longer and is more expensive, to build appropriate technology for market infrastructure projects than is initially anticipated. It is also often cheaper and more efficient to buy a technology package off-the-shelf, rather than attempt to develop a new one for a single project. A good time to consider embarking on a cooperative project is when the useful life of a particularly important technological aspect of market infrastructure is coming to an end.

Another critically important factor affecting the development and success of cooperative exchange ventures is the influence of exchange governance structures. Linkages are never neutral in terms of their effects on the various constituencies of the participating markets. The governance structures of the collaborating exchanges determine how any benefits obtained by the scheme will be distributed, and whether those constituencies that believe their interests might be harmed have the power to change or obstruct its implementation. Joint ventures may give rise to conflict both within a particular institution participating in such a scheme, and between the institutions supposedly working together on the project. The resolution of these conflicts may be dependent not only on the contractual agreements signed between the relevant parties, but also on their relative commercial power.

Another problem is the difficulty of creating credible contractual commitments between cooperating exchanges. To achieve this, not only do such agreements have to be initially beneficial for the participants, they have to continue to be so even in a changing environment. If material circumstances vary, as often occurs, one or more of the participating exchanges may decide that the original contractual agreement is no longer appropriate. It is normally then hard for the other participating organizations to insist that the dissenting institution honour its original agreement. The

costs of enforcing any such contract are typically too high to warrant any legal attempt to do so, particularly in an international environment. More importantly, however, even if a participating exchange could be forced into an action it perceived as unfavourable, the market participants who trade on the exchange cannot be compelled to use the linkage. There is thus little point in forcing an unwilling exchange to continue honouring an initial linkage agreement without the active support of its customers or members.

Other barriers to the successful implementation of linkages between exchanges, include legal issues, especially concerning clearing and settlement, and also how such linkages should be financed.

Some lessons about the benefits of a linkage between exchanges, and also some of the difficulties in establishing one, can be seen by considering the NOREX project. NOREX is a strategic alliance between four out of the five Scandinavian stock exchanges, namely those in Denmark, Iceland, Norway and Sweden.¹² The alliance seeks to maintain the identity of all participating exchanges and is based on the following principles: i) cross membership – which means that member firms are encouraged to join all the NOREX exchanges; ii) a single point of liquidity – which means that issuing companies are encouraged to list their securities on only one NOREX exchange; iii) a common trading system – which means that trading on the NOREX partner exchanges is executed on a single electronic trading system, allowing the exchanges to take advantage of economies of scale in the development of key technology; and iv) a common regulatory framework – which means that the member countries of the NOREX alliance have harmonized their trading rules and membership requirements as well as the authorization obligations of brokers.

NOREX has had some significant successes. It was founded on 21/1/1998, when the Stockholm Stock Exchange and Copenhagen Stock Exchange signed a formal co-operation agreement to establish NOREX. By 1/10/2001, a common set of rules for trading and membership on NOREX had been agreed and implemented, and over this period the SAXESS trading system had also become operational on all four partner exchanges.¹³ However, not all its initiatives have been successful. NOREX hoped to attract the three Baltic exchanges to join the partnership, and indeed both a letter of intent and a design study agreement to do so was signed in 2000. After many negotiations, however, the potential cooperation between NOREX and the Baltic Exchanges was put on hold a year later, and finally was suspended. Amongst the reasons indicated for this was that the size of the combined Baltic markets was thought too small to be commercially interesting by some of the NOREX partners, and that the cost to the Baltic exchanges of joining NOREX was

thought by them to be too high. Subsequently, the only Scandinavian stock exchange which was not a party to NOREX, namely the Helsinki Stock Exchange operated by the HEX group, bought up two of the three Baltic exchanges, as discussed below.

Three important and simple lessons may be drawn from the NOREX experience. First, it is possible for different exchanges to agree upon a linkage structure that is mutually beneficial. One of the factors which has led to the success of NOREX has been the long history of cooperation between the Nordic countries in a range of different endeavours, which meant that national political concerns about cooperation in the field of stock exchange activity were minimised. Second, at all stages in an alliance between different exchanges, the individual exchange partners will consider their commercial incentives, and only continue participating if on balance the partnership is believed to further these commercial incentives. Third, balancing the interests of different sized exchanges – in this instance the larger developed Nordic exchanges and the smaller developing Baltic ones – proved difficult.

4. Mergers and Takeovers

A third strategy which a stock exchange in a developing market may consider in the face of threats to its prosperity and survival is a merger with, or takeover by, another exchange so as to form a larger, typically regional, exchange. Some brief general issues concerning exchange mergers and takeovers are now raised, and then two examples of such transactions are described – the creation of Euronext and the purchase by HEX of two of the Baltic stock exchanges – in order to illustrate some relevant issues that may arise.

There have been only a few mergers and acquisitions between exchanges, and many of the problems associated with linkages between exchanges are also present in such transactions. The difficulties both of agreeing a merger, and of successfully implementing it once agreed, are also high. There are in addition many other factors that can and do obstruct the success of mergers in general, and of mergers between securities exchanges in particular, including legal, regulatory, cultural and political issues.

Politics will indeed be a key factor in determining whether, and how, securities exchanges can agree to merge. In a merger, the identity of the participating exchanges may disappear, and this can cause significant political problems. It is hard to conceive of many jurisdictions, including in developing markets, where the takeover of the national stock exchange would not be considered worrying by its national government, whatever the economic reasons proposed for doing so. This may be particularly true for countries which have been established relatively recently, and which

see the creation of a local stock exchange as a central plank in their political path to obtain national financial independence. The possibility that their national exchange may be subsumed into a larger market, most likely controlled by one of their neighbouring states, is often unappealing.

A merger between exchanges does, however, have three important economic advantages over most types of linkages. First, the distribution of any gains between merged exchanges becomes irrelevant, as they all share in any such gains via their equity in the merged vehicle. In contrast, there is often friction between cooperating exchanges about how to divide up any gains obtained from linkages. The second beneficial attribute of a merger over a linkage is that the credibility of agreements between the elements of a single merged exchange is typically much higher than could obtain in any contractual agreements between different exchanges. This is because, while still possible, it is difficult to unwind such mergers. Third, unlike in linkages, contracts between merged exchanges do not have to be fully specified in advance. Internal incentives are normally sufficient for the different components of a merged entity to work together even in changing circumstances.

Two examples of exchange mergers and takeovers are now briefly described in order to illustrate some key aspects of such transactions. Euronext is the result of a merger which was carried out on 22/9/2000 between the French (SBF), Belgian (BXS) and Dutch (AEX) stock exchanges.¹⁴ The three stock exchanges became wholly-owned subsidiaries of a newly created Dutch holding company, Euronext NV, and changed their names to Euronext Paris, Euronext Amsterdam and Euronext Brussels. Following the merger, Euronext NV became 60%-owned by former SBF shareholders, 32%-owned by former AEX shareholders and former holders of participating certificates issued by AEX, and 8%-owned by former BXS shareholders. Although companies remained listed in their original market, the intention was for all financial instruments to be traded on a single integrated trading platform, and for the listing and trading rules of the merged exchanges eventually to be harmonized, resulting in a single market rulebook. Issuers are subject to the supervision and monitoring rules, information obligations and public offer obligations set by the regulators in the country in which they are listed. Following the merger, the three exchanges retained their separate legal status from a regulatory point of view.

A developing market example of a merger between exchanges has been that of HEX, which has taken over the exchanges in two out of its three neighbouring Baltic countries. In 4/2001 HEX acquired 61.6% of the Tallinn Stock Exchange (TSE) in Estonia, and in 8/2002 it bought 92.98% of the Riga Stock Exchange (RSE) in Latvia.¹⁵ The key goal of HEX in doing this was to achieve growth and profitability through internationalisation by being the best place to trade Baltic securities. The reasons for the Baltic exchanges joining HEX are illustrated by the Riga Stock

Exchange's main objectives: to attract a strategic partner or join an alliance, in order to obtain a solid investor base, and also to transfer the know-how of an experienced partner to the Latvian market. When the Riga Stock Exchange saw that NOREX was not going to deliver these objectives at what it believed to be a reasonable price, it decided to join HEX. The Tallinn Stock Exchange and the Riga Stock Exchange still operate independently, but under the brand of HEX. The intention is to provide trading and settlement facilities on a single electronic platform. On 25/2/2002 the TSE and its member firms started using the trading system of HEX, thus creating a common trading environment for securities listed on the Tallinn and Helsinki exchanges.

Several lessons may be drawn from the Euronext and HEX experiences. First, both transactions show that a merger between exchanges can be structured so that the national identities of the constituent exchanges can still be retained, or at least continue to be marketed, while creating a new trans-national institution. Second, the anticipated technological efficiencies obtainable from a merger, such as the delivery of a single trading platform across several exchanges, can take several years to be realized. Third, the technological aspects of a merger are easier to implement than any regulatory convergence or harmonization that might be needed to exploit efficiencies in having a single regulatory structure governing trading on the merged institution. Indeed, notwithstanding developments in the EU, there is no example of a merger between exchanges in different countries where some form of regulatory framework has been established so that a single national or international set of rules or laws is applicable to all users of the merged institution.

5. Demutualization

There is now a widespread belief that the demutualization of stock exchanges is both desirable and inevitable, as the following two quotes illustrate:

Surely it would now be impossible to deny that the securities community has reached an implicit consensus that demutualisation maximises efficiency incentives and is critical to the survival of international exchanges.¹⁶

and,

Mutuals as a way of operating financial markets were never going to survive corporate membership of exchanges, far less computerisation in the financial sector, the information age, the Internet revolution, or globalisation. They reflected the coffee shop origins of the markets, the shouted order across the crowded, noisy and frequently smoke filled room, where every trader knew every other trader, and what they were good for. The wonder is not that they are coming to an end, but that they lasted so long.¹⁷

Notwithstanding this almost universal agreement that the merits of demutualizing securities exchanges are self-evident, it is believed here that there may also be significant costs in such a process. Furthermore, it is thought likely that while some of the larger benefits, and specifically those obtained by members of an exchange who choose to sell their shares, are available immediately after such an event, the costs that arise from demutualizing a stock exchange will take some time to become apparent. The choice of whether to demutualize a stock exchange is therefore more finely balanced than generally accepted, and indeed there may well be contexts in which it is inadvisable.

A wide range of potential benefits of demutualization for exchanges have been identified.¹⁸ It may allow an exchange:

- 1) to modernize its technology;
- 2) to create a valuable currency to develop international strategic alliances and acquisitions by offering equity to relevant parties;
- 3) to obtain a governance and management structure that is more agile, flexible, and swift in its ability to respond to industry and market conditions;
- 4) to obtain a governance and management structure that is less susceptible to members' vested interests and conflict between classes of members, and, more bluntly, that is not subject to "cumbersome decision-making and strategic gridlock";¹⁹
- 5) to unlock members' equity, and buy out the vested interests of traders;
- 6) to ensure that those market participants which provide most business to an exchange have a proportionate say in its control;²⁰
- 7) to avoid concentration of ownership power in a particular group of exchange participants;
- 8) to spread ownership risk;
- 9) to reward key market participants in equity, thus giving them a financial incentive to bring business to the exchange;
- 10) to provide appropriate incentives for, and impose market discipline on, management;
- 11) to create a catalyst for pursuing new business strategies;
- 12) to provide both a valuation benchmark and liquidity for investors;
- 13) to obtain an initial infusion of capital and to gain easier ongoing access to capital;
- 14) to be more willing to open up access to its markets; and,
- 15) to improve financial decision-making, by ensuring that resources are allocated to business initiatives and ventures that enhance shareholder value.

A full analysis of all the potential benefits associated with demutualization is beyond the scope of this paper. Nevertheless, four obvious but important and general points are worth noting, and then some more detailed comments on five of the above list of potential benefits are also made, given their importance. The four general points are: first, the anticipated benefits listed above may

in not materialize, second, they may be obtainable with a mutual governance structure; third, there may indeed be costs associated with demutualization; and fourth, some of the anticipated benefits may in fact conflict with each other. More detailed comments on five of the above list of potential benefits – namely the items numbered 2), 5), 9), 15) and 16) – now follow.

The value of benefit number 2) noted above, namely that demutualization may give an exchange a valuable currency to develop international strategic alliances and acquisitions by offering equity to relevant parties, is self-evidently dependent upon a prior assumption that an exchange wishes to enter into such an alliance or make such an acquisition. As previously analysed, given the failure of almost all such exchange linkages, exchanges in developing markets may in fact choose not to try to implement one, which may reduce the anticipated value of demutualization. Furthermore, and again as noted above, there are many different contractual procedures by which to effect a linkage between exchanges. It has not been a precondition of success for the very few exchange linkages that have been successful, that a transaction in the shares of the participating exchanges has been required.

Benefit number 5) noted above, namely that demutualization may allow an exchange to unlock members' equity, and buy out the vested interests of traders, normally has different implications for the different types of members of an exchange. Such members may typically be divided into a small group of relatively large firms which provide most of the business on the exchange, and a large group of relatively small firms which each provide only a tiny proportion of the business of the exchange. It is this second group of members whose votes are normally determinative in effecting whether an exchange chooses to demutualize or not. Their prime reason for voting for such an outcome is to receive the shares in the demutualized exchange, the value of which is normally relatively large compared to the size of their firms. This is in fact a key factor explaining why many exchanges have chosen to demutualize – so that the majority of their members can realise at short notice a large capital gain on the shares of the exchange which they own.

Benefit number 9) noted above, namely that demutualization may let an exchange reward key market participants in equity, thus giving them a financial incentive to bring business to the exchange, is likely to have an unanticipated and paradoxical effect. Many private-owned ATSs and indeed demutualized exchanges have sought precisely to attract trading by giving equity ownership to the largest users of their trading platforms, namely to the biggest traders in the market. By doing so, however, these providers of trading infrastructure are in effect re-mutualizing their ownership structure, but just with a different group of owners than before.

Benefit number 15) noted above, namely that demutualization may make an exchange more willing to open up access to its markets, could be very beneficial both for the exchange itself and for the market in which it operates. In particular, a demutualized exchange may be more responsive than a mutual exchange to the needs of its users and customers, including investors and issuers, and reduce the need for the exchange to satisfy the interests of the financial intermediaries who were previously its members and owners. This may encourage the exchange to grant direct access to its trading system to market participants other than financial intermediaries.²¹ The cost-savings to investors, and indirectly to issuers, of having such direct access without any intermediation can be considerable.²² A nonprofit or cooperative exchange whose members are financial intermediaries will be loath to grant access to its trading system directly to investors. To do so would disintermediate, and thereby imperil the livelihood of, the members whose very welfare the exchange existed to serve. A for-profit non-member-owned system, on the other hand, would have no such qualms, as it would not have to satisfy the preferences of the financial intermediaries trading on its system.

While this argument is valid, it is not believed determinative, especially in a developing context. The creation of any financial institutions in a developing market is extremely hard, and the development of the institutional investors, who would best be able to benefit from direct access to a stock exchange, is frequently much harder than the creation of the brokers. Any cost savings that a demutualized stock exchange with direct investor access might bring need therefore to be balanced against the benefits the presence of brokers, with ownership interests in an exchange, may yield in helping bring the market into existence.

It is the last benefit, number 16) noted above, namely that demutualization may allow an exchange to improve financial decision-making by ensuring that resources are allocated to business initiatives and ventures that enhance shareholder value, that will be most problematic for policy makers – and it is precisely because it will come true. A central problem with an exchange demutualizing is if the exchange operates a monopoly. Notwithstanding the current environment in which trading infrastructures are believed to be competing with each other to some extent, there are strong reasons why trading in a particular asset does tend to gravitate to a single monopolistic exchange. As previously noted, order flow tends to attract order flow, making competition to a dominant exchange difficult. A monopolistic for-profit exchange will tend to do what all monopolists do, namely maximize profits by raising price, reducing output, and reducing unnecessary expenditures. This will not be desirable either for the users of the exchange, or indeed more generally from a public policy viewpoint.

Standard corporate governance procedures operated by a for-profit demutualized stock exchange are unlikely to stop this happening. A key goal of demutualization is precisely to disperse ownership to a wider group of market participants than just financial intermediaries. However good the corporate governance structure of a demutualized securities exchange, it will therefore be difficult for a wide group of shareholders to exert any influence to stop such anti-competitive activity. Indeed, to the extent that the owners of securities exchanges are not users of the exchanges, they will have no incentive to do so. On the contrary, as shareholders, the owners will benefit from any monopolistic profits that these exchanges are able to obtain.

It is here that the main advantage of the mutual governance structure is evident from a public policy viewpoint. The central attribute of a mutual or cooperative securities exchange is that the users of its services are also its owners. A cooperative exchange's customers can therefore control the prices the exchange sets, and ensure that even if it operates effectively as a monopoly, by dint of being the dominant provider of execution facilities, the exchange does not charge anti-competitive prices.

This brief summary of some the costs and benefits of demutualizing a stock exchange in a developing market is not meant to be exhaustive. It does, however, highlight one central conclusion: namely it is not clear that such a policy is unambiguously beneficial – and the benefits of demutualization need to be set off against the costs.

6. Conclusions

This paper examines the responses policy makers in developing markets concerned with the future of their domestic securities exchanges can follow in the face of the pressures of competition, globalization, and technological change. Four major policy options are discussed: self-sufficiency of a domestic stock exchange, regional linkages or alliances between exchanges, mergers and takeovers of, stock exchanges, and finally demutualization. The advice presented in the paper about how to decide which of these policies should be followed may be summarized in the following seven broad recommendations:

- 1) Identify the policy options open to a domestic stock exchange.
- 2) When assessing any particular option, undertake a realistic cost/benefit analysis of what its effects are likely to be.
- 3) When considering the financial sustainability of a stock exchange, ensure that due account is taken of the likely effects of both competition and regulatory intervention.
- 4) When evaluating an exchange linkage, identify both the initial and the ongoing incentives facing the cooperating institutions, so as to assess whether they are likely to maintain

their support for the linkage. Bear in mind that most exchange linkages have failed.

- 5) When examining the merits of an exchange merger, do not underestimate the difficulties either of agreeing the merger, or, once it is agreed, of implementing it effectively.
- 6) Do not accept unconditionally that demutualizing a stock exchange is clearly beneficial – there are costs as well as benefits associated with such institutional transformations.

Three aspects of these recommendations are noteworthy. First, they may all be considered obvious by many people. That is not thought sufficient reason, however, not to include them here. On the contrary, the obvious advice is often the most important, it is often over-looked, and frequently is not implemented, even if identified. Second, given the intense difficulties facing stock exchanges in many developing capital markets, it is unsurprising that no easy options are available. Finally, these recommendations are not intended to satisfy anybody who wishes for specific suggestions that can be implemented in a particular context. This is both because the analysis provided here is neither definitive nor exhaustive, but also more importantly, because the strategy that any particular stock exchange should follow is crucially dependent on its particular circumstances. A full examination of the relevant context is therefore required before any specific recommendations can be made.

References

- BTA Consulting. *To Be or Not To Be: Demutualization Survey*. (2/2001).
- Cameron, Alan. *Demystifying Demutualization*. (2002).
- Cameron, Alan (Consultant, Blake Dawson Waldron, Australia). *The Future Of Stock Exchanges*. Presented at Regional Seminar on Non-Bank Financial Institutions in East Asia Region, Bangkok, Thailand (4-6/9/2002).
- Cha, Laura (Deputy Chairman and Executive Director, Securities & Futures Commission, Hong Kong). *Regulatory Framework after the Merger of the Exchanges*. (21/10/1999).
- Claessens, Stijn, Ruben Lee & Josef Zechner. *The Future of Stock Exchanges in European Union Accession Countries*. A CEPR paper, prepared for the Corporation of London (3/2003).
- Coffee Jr., John C. *The Coming Competition Among Securities Markets: What Strategies Will Dominate?* Working Paper No. 192, Columbia University School of Law (24/9/2001).
- Domowitz, Ian & Benn Steil. *Automation, Trading Costs, and the Structure of the Trading Services Industry*. pp. 33-92, Brookings-Wharton Papers on Financial Services, Robert Litan & Anthony M. Santomero (eds.), Brookings Institution Press (1999).
- Domowitz, Ian & Benn Steil. *Innovation in Equity Trading Systems: The Impact on Transaction Costs and the Cost of Capital*. In Richard Nelson, David Victor, & Benn Steil (eds.) *Technological Innovation and Economic Performance*. Princeton University Press (2001).
- Expert Panel. *Listing on the Hong Kong Stock Exchange*. (3/2003).
- Financial Services Authority. *The Transfer of the UK Listing Authority to the FSA*. Consultation Paper 37 (12/1999).
- Grasso, Richard A. (Chairman, NYSE). *Public Ownership of the U.S. Stock Markets*. Testimony before Committee on Banking, Housing and Urban Affairs, US Senate (28/9/1999).
- Karmel, Roberta. *Demutualization of Exchanges as a Strategy for Capital Market Regulatory Reform*. Inter-American Development Bank (2002a).
- Karmel, Roberta. *Turning Seats into Shares: Causes and Implications of Demutualization of Stock and Futures Exchanges*. Vol. 53, p. 367, Hastings Law Journal (2002b).
- Karolyi, A. *The Role of ADRs in the Development and Integration of Emerging Equity Markets*. Working Paper, Ohio State University (2003).
- Lee, Ruben. *What is an Exchange? The Automation, Management and Regulation of Financial Markets*. Oxford University Press (1998).
- Lee, Ruben. *Promoting Regional Capital Market Integration*. Prepared for the Inter-American Development Bank (1/2001).
- Lee, Ruben. *Central Counter-Parties and the Stock Exchange Industry*. Oxford Finance Group, Prepared for the World Federation of Exchanges (2002a).
- Lee, Ruben. *The Future of Securities Exchanges*. Ch. 1, in *Brookings-Wharton Papers on Financial Services*, Robert Litan & Richard Herring (eds.) (2002b).
- Moel, A. *The Role of American Depositary Receipts in the Development of Emerging Markets*. Vol. 2, No. 1, pp. 209-273 *Economia* (2001).
- Rozłucki, Wiesław. *Developing Stock Markets in Central Europe: Where do We Stand?* Ch. 12, pp. 139-144, in *Financial Transition in Europe and Central Asia: Challenges of the New Decade*. Lajos Bokros, Alexander Fleming & Cari Votava (eds.) World Bank (7/2001).

- Shah, Ajay & Susan Thomas. *Displacing the Liquidity of an Entrenched Market: One Case Study*. IGIDR Bombay (16/1/2000).
- Steil, Benn. *Borderless Trading and Developing Securities Markets*. World Bank, International Monetary Fund, and Brookings Institution, 3rd Annual Financial Markets and Development Conference (19-21/4/2001).
- Sydney Futures Exchange. *Information Memorandum*. (19/6/2000).
- Szeles, Nora & Gabor Marosi. *Isolation or Association: A Difficult Choice for a Regional Exchange – The Example of the Budapest Stock Exchange*. Josoph de la Vega Prize, FESE/ECMI (3/2001).

Notes

- ¹ These options have been discussed before. See, for example, Rozlucky (7/2001) and Szeles & Marosi (3/2001).
- ² See figure 4, Claessens, Lee & Zechner (3/2003).
- ³ See Moel (2000) and Karolyi (2002).
- ⁴ See p. 5, Coffee (24/9/2001).
- ⁵ See Lee (2002a).
- ⁶ See Expert Panel (3/2003).
- ⁷ See Financial Services Authority (12/1999).
- ⁸ There is a fine legal distinction between the terms “data” and “information”. See p. 141, Lee (1998).
- ⁹ See Shah & Thomas for an exception (16/1/2000).
- ¹⁰ See Lee (1/2001).
- ¹¹ See chapters 4-5, Lee (1998).
- ¹² This is drawn from www.norex.com.
- ¹³ On Oslo Börs on 27/5/2002, on ICEX 30/10/2000, on the Copenhagen Stock Exchange on 21/6/1999, and on the Swedish market on 12/3/1999.
- ¹⁴ Euronext subsequently also bought the London International Financial Futures Exchange, and also with the Lisbon Stock Exchange.
- ¹⁵ HEX has also been in negotiations with the National Stock Exchange of Lithuania.
- ¹⁶ Cha (21/10/1999).
- ¹⁷ para. 1, Cameron (2002).
- ¹⁸ See BTA (2/2001), Cameron (2002), Karmel (2002a) and (2002b), Chs. 2-3. Lee (1998), and Sydney Futures Exchange (19/6/2000).
- ¹⁹ See Grasso (28/9/1999).
- ²⁰ para. 16, Cameron (2002).
- ²¹ Steil (19-21/4/2001).
- ²² See Domowitz & Steil (1999) and (2001).