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COMPETITION AMONG SECURITIES MARKETS:
A Path Dependent Perspective

John C. Coffee, Jr.
Adolf A. Berle Professor of Law
Columbia University Law School

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COMPETITION AMONG SECURITIES MARKETS:
A Path Dependent Perspective

by John C. Coffee, Jr.*

Introduction

Today, there are an estimated 150 securities exchanges trading stocks around the world.¹

Tomorrow (or at least within the reasonably foreseeable future), this number is likely to shrink radically.

The two great forces reshaping the contemporary world - - globalization and technology - - impact the world of securities markets in a similar and mutually reinforcing fashion:

(1) they force local and regional markets into more direct competition with distant international markets;

(2) they increase overall market capitalization and lower the cost of

* Adolf A. Berle Professor of Law, Columbia University Law School. This paper has been presented at a variety of workshops and conferences, including the 9th Annual Singapore Conference on International Business Law, the Law and Economics Workshop at Harvard Law School, the 2002 IbmeC Business School conference in Sao Paulo, Brazil, the 2001 Brookings-Wharton Conference on Financial Services, and Columbia Law School's Center for International Political Economy 2002 Conference on "Global Markets, Domestic Institutions: Corporate Law and Governance In a New Era of Cross-Border Deals." The author wishes to acknowledge helpful comments from commentators and participants at each of these conferences.

¹ For this estimate, see "Vision Test: Nasdaq's Drive to Build Global Exchange Hits Some Major Potholes," The Wall Street Journal, June 25, 2001 at C-1 (hereinafter cited as "Vision Test"). The term "exchange" is defined in Section 3(a)(1) of the Securities Exchange Act of 1934. The actual functions performed by an "exchange" have been the subject of much academic writing. See Ruben Lee, WHAT IS AN EXCHANGE? The Automation, Management and Regulation of Financial Markets (1998). For purposes of this article, neither the statutory definition of an exchange nor the legal differences among market centers is important, and the term "exchange" will be used in its ordinary sense of a market center.

equity capital, as issuers are enabled to access multiple markets; and

(3) they permit order flow and liquidity to migrate quickly from local markets to international “super-markets,” sometimes with adverse consequences for smaller domestic markets.

In overview, these consequences follow because globalization has lowered the barriers to cross-border capital flows, including in particular traditional restrictions on foreign investments in domestic stocks, while technology has made instantaneous information flows feasible, thereby enabling electronic securities markets to link dealers and markets participants around the world in continuous world-wide trading.

But what happens next? Predictably, once these forces have been set in motion, one natural consequence will be a wave of mergers, consolidations, and related alliances among securities markets.² Most who have studied this process have assumed that the winners (or at least the survivors) in this consolidation process will be those who can offer the greatest liquidity, or the lowest trading costs, or the most advanced technology.³ Some also believe that such a competition will inherently result in a “winner-takes-all” contest that will leave only a few large pools of liquidity in major

² This process is well underway. For reviews of recent developments, see Norman Poser, The Stock Exchanges of the United States and Europe: Automation, Globalization and Consolidation, 22 U. Penn. J. of Int’l. Eco. L. 497 (2001); Alberto Cybo-Ottone, Carmine DiNoia and Maurizio Murgia, “Recent Developments in the Structure of Securities Markets,” in Robert Litan and Anthony Santomero (eds.), BROOKINGS-WHARTON PAPERS ON FINANCIAL SERVICES 2000 (2000) 223-282.

³ This short list does not exhaust the ways in which market centers can compete. For example, exchanges also have very different clearance and settlement systems; some markets are “quote driven,” while others are increasingly “order driven;” some are non-profit membership organizations, while increasingly more have been demutualized and are privately owned. See Poser, *supra* note 2, at 510-528.

international financial centers.⁴ Few have focused, however, on a force that may restrain these centralizing tendencies: namely, the regulatory differences among exchanges. Inherently, very different legal requirements and disclosure standards apply to markets in different jurisdictions.⁵

How will these regulatory disparities affect the competition among markets? Opinions vary. One school of recent commentators has argued that intermarket competition will simply facilitate a desirable regulatory arbitrage that will enable issuers to evade inefficient or antiquated laws.⁶ From this

⁴ The premise here is simply that large pools of liquidity in major markets will exercise a vacuum cleaner-like effect that drains smaller markets in order to maximize the liquidity in a few major markets. See Carmine DiNoia, Competition and Integration Among Stock Exchanges in Europe: Network Effects, Implicit Mergers and Remote Access, 7 *European Financial Management* 39, 42 (2001) (arguing that, as a matter of theory, competition will result in “only one exchange surviving,” except when exchanges negotiate alliances that convert them into a cooperative network).

⁵ This point applies also to electronic exchanges or markets that have no physical location or that are beyond the practical reach of any jurisdiction. Thus, even if an offshore ECN (or “electronic communications network”) may have no mandatory legal requirements applicable to its operation, this fact just underlines the regulatory disparity on which this article focuses. As later discussed, the principal significance of ECNs for purposes of this article is that they tend to free ride on the efforts of an exchange or other market center and hence reduce the profit that an exchange can capture by investing in its own reputational capital. See text and notes *infra* at notes 180 to 181.

⁶ Typically, proponents of this view advocate “issuer choice:” namely, the ability of an issuer to choose the legal regime applicable to it. Such a power would enable, for example, a U.S. corporation listed on the New York Stock Exchange to opt to be governed by the securities law of, hypothetically, Taiwan or Italy. For advocacy of this position, see Roberta Romano, Empowering Investors: A Market Approach to Securities Regulation, 107 *Yale L. J.* 2359 (1998); Stephen Choi & Andrew Guzman, Portable Reciprocity: Rethinking The International Reach of Securities Regulation, 71 *S. Cal. L. Rev.* 903 (1998). For Professor Romano’s latest statement of her views, see Romano, The Need for Competition in International Securities Regulation, Yale ICF Working Paper No. 00-49 (June 2001) (available on SSRN website at id=278728). Others have emphatically disagreed. See Merritt B. Fox, Retaining Mandatory Securities Disclosure: Why Issuer Choice Is Not Investor Empowerment,

perspective, competition serves to prune legal standards that are presumed archaic and cumbersome, leaving only that degree of regulation that sophisticated market participants would design for themselves. Others believe that the competition among markets will produce a “race to the top,” with firms moving to those markets having the highest disclosure and regulatory standards.⁷

This article agrees that strong legal standards tends to attract, rather than repel. Indeed, when one examines the actual migration of issuers and listings across jurisdictions, the dominant pattern has been the movement of listings to exchanges in jurisdictions that are noted for their strong protection of minority shareholders.⁸ Even in Europe, where firms today do possess a substantial degree of “issuer choice” - - namely, the ability to choose the disclosure standards that apply to them - -, few firms seem to be opting for the lower cost, less demanding options, but instead are voluntarily complying with the highest level of disclosure.⁹ By opting instead for a higher disclosure regime, the migrating firms maximize their share price and become able to raise additional equity at lower cost. This finding is, of course, consistent with a new academic literature that argues that liquid and deep securities markets can

85 Va. L. Rev. 1335 (1999). For Professor Fox’s latest statement of his views, see Fox, The Issuer Choice Debate (forthcoming in 2 Theoretical Inquiries in Law).

⁷ For this view, see Steven Huddart, John Hughes and Markus Brunnenmeier, Disclosure Requirements and Stock Exchange Listing Choice in an International Context, 26 J. Acct. & Econ. 237 (1999). But still others predict a “race to the bottom” and lesser transparency. See Robert Bloomfield and Maureen O’Hara, Can Transparent Markets Survive, 55 J. Fin. Econ. 425 (2000).

⁸ See text and notes infra at notes 33 to 55.

⁹ See Howell Jackson and Eric Pan, Regulatory Competition in International Securities Markets: Evidence from Europe in 1999- Part I, 56 Bus. Law. 653 (2001) (reporting results of survey showing that despite availability of issuer choice, few firms employ it to reduce disclosure obligations).

develop only in jurisdictions that protect the rights and expectations of minority shareholders.¹⁰ Yet, although this article finds that legal differences (and their impact on stock value) is driving in substantial part the contemporary race among foreign firms to cross-list on U.S. exchanges, this article rejects the simple scenario under which intermarket competition produces an all-encompassing, regulatory “race to the top.”¹¹ Not only is the world too complicated and path dependent for such a simple Darwinian competitive model to explain everything,¹² but competitive pressures tend to produce not uniformity, but

¹⁰ The seminal work of La Porta, Lopez-de-Silanes, Shleifer and Vishny (“LLS&V”) has established the existence of two rival structures of share ownership - - dispersed ownership and concentrated ownership - -, and that the structure of share ownership in a given jurisdiction correlates with significant differences in the legal protection provided to minority shareholders. See Rafael La Porta, et al., Corporate Ownership Around the World, 54 J. Fin. 471 (1999); Rafael La Porta et. al., Law and Finance, 106 J. Pol. Econ. 1113 (1998). This author has been skeptical as to whether this “legal explanation” can truly account for the appearance of the separation of ownership and control in Anglo-American countries. See John Coffee, The Rise of Dispersed Ownership: The Roles of Law and the State in the Separation of Ownership and Control, 111 Yale L. J. 1 (2001) (arguing that the early development of a relatively autonomous and self-regulating private sector in some countries better accounts for stock market development than do legal differences). Nonetheless, this author strongly agree with the thesis that “law matters” and that minority legal protections can affect share value. See John Coffee The Future As History: The Prospects for Global Corporate Convergence in Corporate Governance and Its Implications, 93 Nw. U. L. Rev. 641 (1999).

¹¹ The terms “race to the top” and “race to the bottom” have become familiar shorthand expressions in a longstanding academic debate in the U.S. over whether interjurisdictional competition among states for corporate charters produces more or less efficient legal rules. Compare William Cary, Federalism and Corporate Law: Reflections Upon Delaware, 85 Yale L. J. 663 (1974) with Roberta Romano, THE GENIUS OF AMERICAN LAW (1993). In a number of respects, the competition among market centers for listings is different from the competition among states to grant (and tax) corporate franchises.

¹² Path dependency postulates that institutions evolve in a manner that is heavily determined by initial starting points and pre-existing conditions. See Lucian Bebchuk &

specialization and fragmentation. Thus, to the extent that firms are the ultimate consumers of listings,¹³ some firms will migrate to exchanges in jurisdictions with stronger legal protections, but others will not. This article predicts that firms that do not so migrate will be disproportionately composed of firms with controlling shareholders who would prefer to maximize their receipt of the private benefits of control, rather than to maximize the share price of their publicly held shares. Precisely because the structure of share ownership differs radically around the world (with concentrated ownership generally dominating dispersed ownership), the structure of securities markets is thus not likely to become homogenous, even under competitive pressure.

More generally, in a path dependent world, market structure should be heavily influenced by, and possibly dependent on, the structure of shareholder ownership. This implies in turn that different markets will serve different clienteles, with some becoming more transparent and imposing higher listing standards in order to foster dispersed ownership, attract portfolio investors and maximize the share value of listed companies, while others persisting as lower cost, relatively opaque exchanges that accommodate firms with concentrated ownership in which the private benefits of control will remain

Mark Roe, *A Theory of Path Dependency in Corporate Ownership and Governance*, 52 Stan. L. Rev. 127 (1999). While this perspective has been applied by several authors to corporate structure and evolution, it has not been previously used as a means by which to model the competition among market centers.

¹³ It is, of course, debatable whether this choice is made in the end by public shareholders or controlling persons (either managers or a dominant shareholder). If public shareholders determined where firms listed, a regulatory race to the top would be predictable, because it would maximize share value. Controlling shareholders are, however, less interested in maximizing the value of the firm's shares in the public market, because they can sell their control block privately for a control premium and because they stand to receive private benefits from control. Hence, they may resist greater disclosure or transparency if it interferes with their receipt of private benefits.

high. As a result, a dual equilibrium becomes possible under which “high” and “low” disclosure exchanges persist, side by side, reflecting the fact that firms with both concentrated and dispersed ownership will also persist, side by side.

Underlying this prediction is the premise that competition normally produces not conformity, but market fragmentation.¹⁴ Because competition maximizes consumer choice and because consumers in the market for exchange services have very different desires, markets will come to specialize, rather than to conform, as competitive pressures increase. Admittedly, the contemporary pattern is strikingly one sided: issuers have been delisting from “low disclosure” exchanges and moving to “high disclosure” exchanges. In particular, European companies have migrated heavily to U.S. exchanges over recent years, while U.S. companies have reduced their cross-listings in Europe and Japan.¹⁵ Overall, the competitive ability of European exchanges to attract foreign listings has declined, while that of U.S. exchanges has soared.¹⁶ Still, the forces that cause some companies to migrate to distant markets do not apply equally to all. Hence, one cannot extrapolate from recent experience, without first focusing

¹⁴ For similar generalization, see Marshall Blume, “The Structure of the U.S. Equity Markets” (Working Paper, January 8, 2002) (“Fragmented markets are a natural result of competition”).

¹⁵ See Marco Pagano, Ailsa Roell, and Josef Zechner, The Geography of Equity Listings: Why Do European Companies List Abroad?, CSEF Working Paper No. 28 (October 1999) at p.7.; see also Jackson and Pan, *supra* note 8 (noting that few issuers in Europe are opting to utilize lower disclosure standards even though legally permitted to do so).

¹⁶ Pagano, Roell and Zechner, *supra* note 15, at 7. They add: “Interestingly, the European markets with the highest trading costs, lowest accounting standards and worst shareholder protections have also fared worst in attracting or retaining foreign listings, and companies from those countries have been comparatively eager in seeking foreign listings.” *Id.* In essence, this is a finding that many foreign firms desire to bond.

on the differences among the clienteles that different markets serve.

Competition also inevitably implies that there will be winners and losers. Whose oxen are therefore most likely to be gored by the new intermarket competition? Of an estimated 150 securities exchanges world-wide, many are recent start-ups, characterized by limited liquidity, weak regulation, declining stock values, and a recent migration of trading in local firms to other venues.¹⁷ Historical parallels suggests that a period of world-wide consolidation is likely. This was the U.S. experience in the late 19th and early 20th Centuries when over one hundred small securities markets either consolidated or shut down, as improved communications and transportation systems lowered the informational cost barriers that had sustained them.¹⁸

Predicting that consolidation will occur is only slight more risky than predicting that the sun will rise tomorrow. More interesting and uncertain questions involve, however, the likely mechanisms of consolidation and the strategies that will dominate this new competition. At least four different outcomes can be reasonably imagined. First, exchanges could simply merge, or they could develop

¹⁷ For a recent assessment, see Rick Jervis, "Stock Exchanges in Central and Eastern Europe Are Shrinking Due in Part to Slow Privatization," *The Wall Street Journal*, July 16, 2001 at C-16 (noting also that smaller brokerage firms in these markets have recently been closing their doors).

¹⁸ During the 19th Century, approximately 250 different stock exchanges were formed in the U.S., with all major cities (and many lesser ones) possessing at least one exchange. See R.C. Michie, *THE LONDON AND NEW YORK STOCK EXCHANGES: 1850-1914* (1987) at 167. As late as 1900, over 100 stock exchanges were still functioning in the United States. See Marshall Blume, Jeremy Siegel, and Dan Rothenberg, *REVOLUTION ON WALL STREET* (1993) at 30. Their survival into the 20th Century was a direct function of the high cost of long-distance communications and the both costly and cumbersome process of settlement, which required physical delivery of the stock certificates. *Id.*

other forms of linkages and alliances that cross borders and effectively create a de facto international exchange.¹⁹ The precursors of such a movement are already evident in Europe, where the Paris, Amsterdam and Brussels exchanges have formed the Euronext network and where O.M. Gruppen, Inc., the private owner of the Swedish exchange, recently made a hostile (but ultimately unsuccessful) tender offer to take over the London Stock Exchange.²⁰ A second alternative is that more successful market centers could simply drain liquidity from local or regional exchanges, leaving them intact but hollowed out. As will be seen, the recent experience of several Latin American exchanges suggest that this is also a realistic scenario, and as a result the prospect of cross-listings has frightened local and regional policy-makers. Third, another scenario is that an ambitious and entrepreneurial market center might seek to expand by founding outposts around the globe. Nasdaq's recent strategy appears to fit this model, as it has acquired Easdaq in Europe and established multiple outposts in Asia.²¹ Finally, as brokerage firms become truly international, it may prove more cost efficient for them to route domestic customer orders to distant foreign exchanges than for foreign issuers to list on domestic exchanges. As will be seen, much may hang on the relative transaction costs of bringing investors to the issuer's market versus bringing issuers to the investors' market.

¹⁹ Cybo-Ottone, DiNoia and Murgia review approximately one hundred transactions that have recently been negotiated among exchanges and classify them according to a typology that they develop. They find looser, contractual arrangements that seek to create a network to be more common than merger transaction at present. See Cybo-Ottone et al., *supra* note 2.

²⁰ For a closer review of these developments, see Poser, *supra* note 2, at 502 to 507.

²¹ For a review of Nasdaq's recent strategic moves, see Vision Test, *supra* note 1, and Poser, *supra* note 2.

But what forces or advantages enable one market to drain liquidity from another? Not long ago, it might have been confidently answered that large markets would absorb smaller ones, either because markets with greater volume could offer greater liquidity or because they could realize economies of scale that permitted trading to occur at lower cost. This single-minded focus on cost and liquidity, however, may blind one to other possibilities, including that greater transparency and higher listing standards in a particular market may attract listings from issuers and trading interest from portfolio traders. This article finds the reputational attractions of markets to be the motor force that best explains the new cross-listing competition that has destabilized markets around the world, but it also finds this force to be sufficiently weak that it cannot alone produce a general elevation of disclosure and governance standards.

Organizationally, this paper is divided into three sections. Part I will examine the developments that have brought about the increase in intermarket competition, with particular emphasis on the impact of cross-listings. Part II will then turn to the obvious questions that the increase in cross-listings poses: why do firms cross-list? What is the source of the gains that cross-listing produces for these firms? Two competing explanations will be assessed: (1) a market segmentation explanation, and (2) a corporate governance or “bonding” hypothesis.²² Once, it was assumed that cross-listing was basically

²² “Bonding” is a term of art in modern institutional law and economics. It refers to the costs or liabilities that an agent or entrepreneur will incur to assure investors that it will perform as promised, thereby enabling it to market its securities at a higher price. The paradigmatic example would be the surety bond purchased by the agent and protecting its shareholder principals. The term was coined in Jensen & Meckling, Theory of the Firm: Managerial Behavior, Agency Costs, and Ownership Structure, 3 J. Fin. Econ. 305 (1976).

a means of integrating segmented markets and thus enabling the issuer to access trapped pools of liquidity. A newer interpretation is today emerging that cross-listing may also be a bonding mechanism by which firms incorporated in a jurisdiction with weak protection of minority rights or poor enforcement mechanisms can voluntarily subject themselves to higher disclosure standards and stricter enforcement in order to attract investors who would otherwise be reluctant to invest (or who would discount such stocks to reflect the risk of minority expropriation).²³ Although both explanations have some validity, the second or “bonding” explanation has the greater predictive power for the future, because the barriers that once segmented markets have largely eroded (and will continue to do so), thus reducing the need for issuers to enter distant markets to access trapped pools of liquidity.

Nonetheless, this bonding hypothesis should not be overstated. Not all foreign firms will want to bond; many controlling shareholders of such firms may prefer to enjoy the private benefits of control that they can obtain with relative legal immunity so long as they do not list in the U.S. Also, a U.S. listing is far from a complete shield for minority shareholders. Entry into the U.S. market does not change the substantive corporate governance standards to which a firm incorporated elsewhere is subject. Nor does the United States or its exchanges require foreign issuers to comply with the same disclosure and listing standards that are applicable to domestic issuers; rather, foreign issuers are

²³ This author was probably the first to publish this hypothesis. See John Coffee, The Future As History: The Prospects for Global Convergence in Corporate Governance and Its Implications, 93 Nw. U. L. Rev. 641 (1999). Obviously, others may have independently arrived at the same idea at more or less the same time. See also Rene Stultz, Globalization, Corporate Finance, and the Cost of Capital, 12 Journal of Applied Corporate Finance 8 (1999); Owen Fuerst, A Game Theoretic Analysis of the Investor Protection Regulations Argument for Global Listing of Stocks (Working paper 1998).

subject to significantly less stringent requirements.²⁴ The SEC may also pursue foreign issuers less frequently than domestic issuers for the same regulatory violations, because the latter represent a higher enforcement priority and their behavior is more visible to the SEC. Finally, the available evidence does not suggest that non-U.S. firms entering the U.S. change the composition of their board or adopt U.S.-style board committees.²⁵ Still, even with all these qualifications, stock exchange rules and listing agreements assure investors of greater and probably more credible disclosure, and entry into the U.S. subjects the foreign corporation to the relatively unique forms of private and public enforcement that exist in the United States. In any event, neither the bonding nor the market segmentation hypothesis

²⁴ At least three significant differences exist between the standards applicable to foreign issuers versus those applicable to domestic issuers:

First, foreign issuers file an annual report on Form 20-F, rather than on Form 10-K. Its requirements are more relaxed regarding compensation and interested director transactions and, more important, quarterly reporting is not required. Thus, the foreign issuer does not file an equivalent to Form 10-Q; rather, it files whatever documents or press releases it issues abroad. Form 20-F must also only be filed within six months after the end of the issuer's fiscal year, whereas Form 10-K is due within ninety days after the end of the domestic issuer's fiscal year.

Second, the foreign private issuer is exempted from some SEC rules entirely, including the obligations to file a proxy statement, comply with Section 16's "short-swing" trading rules, or refrain from "selective disclosure" in violation of Regulation FD.

Third, stock exchanges are permitted to waive their listing standards with regard to foreign issuers, and in response they have looked to the standard of whether the foreign issuer is in compliance with the "laws, customs and practices" of its country of origin. See SEC Exchange Act Release No. 24,634 (June 23, 1987) ("Order Approving Proposed Rule Changes by the American Stock Exchange, Inc., and the New York Stock Exchange, Inc. to Amend the Exchanges' Listing Standards for Foreign Companies"). See also Roberta Karmel, The Future of Corporate Governance Listing Requirements, 54 SMU L. Rev. 325, 333 (2001). Hence, listing rules on audit committees and equal voting rights can be (and are) waived.

²⁵ See, e.g., Gerald F. Davis and Christopher Marquis, Are U.S. Stock Markets A Pathway to Global Governance Convergence? (Working Paper 2001) (finding firms that list on U.S. exchanges maintain former board structure).

must be accepted to the exclusion of the other; rather, they are complementary explanations, and the focus of Part II will be to assess their relative explanatory power.

Part III will focus on what individual exchanges can and cannot do to become more successful competitors and why some firms will wish to bond and others not. Initially, it will be suggested that many exchanges, particularly those in transitional economies, face formidable problems, and the process of consolidation may inevitably close many of them. Nor can these exchanges easily attract Western portfolio investors back to their markets, because the latter prefer to trade in U.S. or London markets where their trading will be dollar or pound-denominated. Still, some strategies may be able to reduce the migration of order flow to international markets, particularly to the extent that higher listing and disclosure standards can attract listings. In the wake of both the Asian financial crisis of 1997-98 and the world-wide collapse of the high-tech bubble during 2000-01, both firms and exchanges are under enhanced pressure to signal investors that trading in their securities or on their exchange reduces the risk of minority exploitation.

Paradoxically, however, bonding may still not be a profitable strategy for an individual market center to pursue. The growing problem with this strategy is that, for a variety of reasons, trading may take place elsewhere than on the “high disclosure” exchange. To the extent that “high disclosure” exchanges are unable to secure the economic benefits of their superior reputations, they have insufficient incentives to invest in or pursue a strategy that enhances economic efficiency. Hence, an economic justification arises for mandatory rules that override issuer choice.

Part I. THE MECHANISMS OF COMPETITION

Exchanges and other market centers have natural incentives to compete and attract order flow

from rivals, but they cannot determine by themselves the trading venue. Rather, trading location is the product of decisions made by at least three different actors: (1) issuers, who determine where to list; (2) liquidity traders, who determine where to trade; and (3) financial intermediaries, including brokers and dealers, who determine where to route trades and where to trade, themselves, as market makers (or their equivalents). Competition among market centers thus hinges on a variety of different decisions by each of the foregoing actors: (1) issuers can cross-list on multiple exchanges; (2) financial intermediaries can move between markets, opting for whichever offers them the best trading environment; (3) liquidity traders can opt for one market over another; and (4) exchanges can form networks and/or merge in order to foreclose rivals. Potentially, nothing is stable.

Yet, despite the multiplicity of the actors, traditional analysis has assumed that one factor trumps all others: “liquidity attracts liquidity.”²⁶ Both financial intermediaries and issuers naturally find it more attractive to trade or list in a deep market than a thin one, because in the former market prices will be less affected by momentary imbalances between supply and demand. Thus, given the tendency for order flow to attract order flow, some argue that exchanges are natural monopolies.²⁷

Even if exchanges are to some extent natural monopolies, the boundaries of that monopoly power have clearly shrunk and are being increasingly contested. In itself, this is a major development, because prior examples of inter-market competition were rare. In the past, most firms simply listed on their home country exchange, which was generally a public or a quasi-public entity that possessed a de facto monopoly. A few exceptions were acknowledged, but seemed to prove little. In the late 19th

²⁶ See DiNoia, *supra* note 4, at 55 (explaining attractions of more liquid markets).

²⁷ See Ruben Lee, *WHAT IS AN EXCHANGE* (1998) at ___.

Century, the Consolidated Stock Exchange challenged the NYSE by beginning to trade NYSE-listed stocks, charging lower commissions because in part it simply used the NYSE's quotes and did not have to invest in establishing the NYSE's price discovery mechanism.²⁸ For a while, it worked, but the challenger was gone by the end of the century. More recently, in the late 1980's, the London Stock Exchange ("LSE") unilaterally began to quote the major European-listed stocks and quickly gained a dominant share over the European national exchanges.²⁹ Essentially, much like the Consolidated Stock Exchange a century earlier, the LSE was free-riding on a price discovery process that actually occurred on the home-country exchanges, but by offering a faster execution and at low cost, the LSE was able to divert a significant percentage of trades to its exchange.³⁰ The advantage, however, again proved short-lived. The European exchanges updated their trading technology,³¹ and by 2000, the LSE had fallen behind and was forced to agree in principle to a merger with the Frankfurt exchange.³²

Nonetheless, although the LSE's competitive challenge was successfully resisted, it set off a wave of defensive mergers and alliance building that continues to the current date. At bottom, the goal in this process of alliance building has been to erect a network that both (i) has superior liquidity to its

²⁸ See DiNoia, *supra* note 4, at 43-44. See also text and note *infra* at note 181.

²⁹ *Id.* at 44. The LSE did not require the firms it traded to formally request listing, but rather proceeded without their request. *Id.* at 54.

³⁰ *Id.* at 54.

³¹ Essentially, the European exchanges moved from a call auction procedure to a faster quote-driven trading technology. *Id.* at 54-55.

³² See Poser, *supra* note 2, at 502-03 (discussing the LSE's recent problems). The merger was thwarted by other developments, but the privately-owned LSE remains a potential takeover target today.

rivals, and (ii) is deliberately incompatible with its rival's network, thereby excluding members of the rival exchange or market. Even once networks are established, however, some forces may still drain trading from one network to another, as next discussed.

A. Cross-listing: the dominant competitive technique

By far, the principal mechanism that produces competition among market centers has been the issuer's decision to cross-list its stock on a foreign exchange. For reasons that will be later explained, cross-listing on a United States exchange is usually effected by the issuer first establishing a depository receipts facility (typically, with a major U.S. bank). The bank will hold shares of the foreign issuer and issue depository receipts to U.S. investors, who will thereby achieve the convenience of dollar-denominated trading. These depository receipts then may (or may not) be listed on a U.S. exchange or Nasdaq.

During the 1990's, the popularity of American Depository Receipts ("ADRs") soared. In 1990, 352 depository receipt programs from 24 countries were in effect in the United States,³³ but by 1999, this number had grown to 1,800 programs from 78 countries³⁴ - - an increase of over 500 percent. The combined market capitalization of these companies exceeded \$6 trillion at the end of

³³ See Stijn Claessens, Simeon Djankov, and Daniel Klingebiel, Stock Markets in Transition Economies, World Bank Financial Sector Discussion Paper No. 5 (Sept. 2000) at p. 17.

³⁴ Id. A more recent study finds that, as of March, 2001, there were 1,951 "active" depository receipt programs from 1,524 firms in 80 countries. See Stijn Claessens, Daniela Klingebiel, and Sergio Schmukler, "The Future of Stock Markets in Emerging Economics: Evolution and Prospects" (Working Paper, December, 2001) at p. 12.

1999.³⁵ Correspondingly, the number of foreign companies listed on the two principal U.S. stock markets (the NYSE and Nasdaq) grew from 170 in 1990 to over 750 in 2000 (or roughly a 450% increase).³⁶ As of April, 2001, over 970 non-U.S. firms were listed on the NYSE, Nasdaq or the Amex.³⁷ During the 1990's, trading of ADRs grew by 22 percent a year, reaching \$758 billion in 1999.³⁸ While depository receipts are primarily used simply to list a stock in a foreign market, their listings can also be accompanied by equity offerings in the foreign market. In 1999 alone, a record \$22 billion was raised in the U.S. markets through the issuance of depository receipts, which brought the total equity capital raised during the 1990's through this method to \$133 billion.³⁹

The impact of cross-listings has been particularly pronounced on the NYSE. As Table 1 below shows, foreign listings on the NYSE have grown from approximately 2% of all NYSE listings in 1975

³⁵ Id.

³⁶ See Davis and Marquis, *supra* note 25, at 3.

³⁷ See Michael Gruson, Global Shares of German Corporations and their Dual Listings on the Frankfurt and New York Stock Exchanges, 22 U. Pa. J. Int'l Econ. L. 185, 187 n.2 (2001).

³⁸ See Davis and Marquis, *supra* note 25, at 3.

³⁹ Id. In 2001, some \$29 billion was raised in new equity through 115 depository receipts offerings in the U.S. and European markets, a 32% increase over 1999. See Claessens, Klingebiel and Schmuckler, *supra* note 33, at 2.

All this is in sharp contrast to the European experience over the same interval. U.S. cross-listings on European exchanges declined over the 1986 to 1997 interval, and firms cross-listing on European exchanges did not make subsequent equity offerings at a higher rate than a control group. See Marco Pagano, Alisa Roell, and Josef Zechner, The Geography of Equity Listing: Why Do European Companies List Abroad? (CSEF Working Paper No. 28, October 1999).

to over 15% in 2000.⁴⁰ As Table 1 also indicates, foreign listings have more than quadrupled since 1990, while domestic listings on the NYSE have actually declined since 1998.

Table 1

Foreign Listed Companies on the New York Stock Exchange

Year	Total Listing	Foreign	Domestic	Foreign listings as % of total listings
1975	1557	33	1524	02.12%
1980	1570	37	1533	02.35%
1985	1541	54	1487	03.5%
1990	1174	96	1678	05.4%
1991	1885	105	1780	05.6%
1992	2089	120	1969	05.7%
1993	2361	153	2208	06.5%
1994	2570	216	2354	08.4%
1995	2675	247	2428	09.0%
1996	2907	304	2603	10.5%
1997	3047	356	2691	11.7%
1998	3114	379	2735	12.2%
1999	3025	406	2617	13.4%
2000	2862	434	2428	15.2%

⁴⁰ This table is an abbreviated version of a table prepared by Professors Jonathan Macey and Maureen O'Hara, "The Economics of Stock Exchange Listings Fees and Listing Requirements" (Working Paper September 2001) at Table 1.

The NYSE's inability to attract additional domestic listings, while its foreign listings have soared over the same period, suggests that a NYSE listing does something for a foreign issuer that it does not do for a domestic issuer. Within the U.S., the NYSE's trading technology (which still relies on an open outcry system on an actual trading floor and is significantly less computerized than its chief rival, Nasdaq) strikes many as relatively antiquated,⁴¹ and firms listed on Nasdaq have shown less interest in recent years in moving up to the NYSE once eligible for listing there. But for the foreign issuer, the NYSE still offers a critical advantage: its reputation as the leading repository of high disclosure standards and market transparency. Here, it clearly outranks its leading international competitor for listings, the LSE.⁴² The NYSE's relative success against the LSE suggests that reputation may be more important than technology - - at least for firms that cross-list.

Why did the rate of foreign listings in the U.S. suddenly accelerate in the 1990's? To a considerable extent, the sudden growth in popularity of ADRs was a consequence of state privatizations of formerly state-owned enterprises, which swept across Europe and South America, beginning in the late 1980's. Prior to this time, depository receipt programs were typically used to facilitate over-the-counter trading and were not associated in most cases with either a listing on the

⁴¹ For this assessment, see Cybo-Ottone, et. al., supra note 2, at 263. Although the NYSE has a significantly greater market capitalization than the LSE (\$12.4 trillion versus \$2.9 trillion), the LSE lists many more securities (over 12,000). See Poser, supra note 2, at 500-02. Unlike the NYSE, the LSE has not sought to emphasize higher listing or disclosure standards as a competitive strategy.

⁴² Cybo-Ottone, DiNoia and Murgia offer the assessment that "listing on the NYSE seems to signal commitment to a shareholder value approach," which the listing foreign firm often advertises in the press. In contrast, listing on the London Stock Exchange carries no such signal and is not advertised by firms listing thereon. *Id.*

NYSE or Nasdaq or a contemporaneous equity offering in the United States. Yet, these privatization offerings were often so large as to necessitate access to the world's largest capital market in the United States. Once these offering techniques were developed, they were increasingly copied later in the 1990's by already private companies.

The impact of depository receipt programs on the issuer's domestic market becomes clearer, however, when we narrow our focus from the worldwide level to the special case of emerging markets. Latin America supplies the best illustration. In 1989, only two Latin American companies were cross-listed, but by January, 1999, this number had grown to 106.⁴³ Why? Over this period, companies found, as much data now shows, that cross-listing increased the value of their firm and enhanced the liquidity of their stock.⁴⁴ Indeed, the market capitalization of the four principal Latin American stock exchanges soared from \$66 billion in 1990 to \$439 billion in 1996 (or over 650%).

But, along the way, something else happened: stock turnover increased, and trading migrated from Latin American countries to the United States. By 1999, over 87 percent, 54 percent, 62 percent and 71 percent of the Mexican, Argentine, Chilean and Brazilian stock market indices, respectively, were available for trading in the United States in the form of ADRS.⁴⁵ Even more dramatically, trading moved to the United States, as the following table shows:

⁴³ See Kent Hargis, International Cross-listing and Stock Market Development in Emerging Economies, 9 Int'l Review of Economics and Finance 101 (2000).

⁴⁴ See Darius Miller, The Market Reaction to International Cross-Listings: Evidence from Depository Receipts, 51 J. Fin. Econ. 103 (1999).

⁴⁵ See Hargis, supra note 43, at 103.

Table 3

<u>Growth in U.S. Trading In Proportion to Domestic Trading (in millions).</u> ⁴⁶					
<u>Argentina</u>	<u>1990</u>	<u>1993</u>	<u>1994</u>	<u>1995</u>	<u>1996</u>
Domestic trading value:	852	10,339	11,372	4,594	4,382
U.S. trading value:	0	6,125	12,612	15,679	12,445
Turnover ratio (%)	26.1	37.4	65.0	53.6	37.7
<u>Brazil</u>					
Domestic trading value:	5,598	57,409	109,498	79,186	112,108
U.S. trading value:	0	96	284	3,284	25,801
Turnover ratio (%)	34.2	57.8	58.0	55.9	63.2
<u>Chile</u>					
Domestic trading value:	783	2,796	5,263	11,072	8,460
U.S. trading value:	92	2,369	7,210	11,600	9,584
Turnover ratio (%)	6.4	11.6	18.3	30.7	27.3
<u>Mexico</u>					
Domestic trading value:	12,212	62,454	82,964	34,377	43,040
U.S. trading value:	2,577	37,307	83,496	54,400	29,391
Turnover ratio (%)	45.2	49.7	127.8	97.9	67.9

If one looks at the year 1995, one sees from this table that the value of Mexican, Argentine and Chilean ADRS traded in the United States was greater than the total value of all stocks traded in their respective domestic markets in that year. Only Brazil seemed exempt from this domination, and, even in its case, 1996 was the first year in which U.S. trading became proportionately significant (it has since

⁴⁶ This table is taken from a fuller table in Hargis, supra note 43, at 102, table 1.

increased substantially).

In one respect, these tables understate the migration of trading to the U.S., because they compare the trading in the security covered by the depository program to the trading of all securities in the home country. Other studies that have focused just on trading in the securities covered by depository programs have found that as much as 75% of the trading in those securities shifts to the U.S.⁴⁷

Who cross-lists? The evidence shows that firms establishing depository facilities in the United States come heavily from emerging market economies; indeed, 73% of the non-U.S. companies establishing such facilities in one recent study were from emerging markets.⁴⁸ Thus, it would not be surprising if the Latin American experience were to be repeated elsewhere, with order flow migrating to the U.S. in response to cross-listings. Still, this hypothesis needs to be qualified in two important respects: (1) A unique feature of most Latin American markets, and particularly the Mexican market, is that they overlap heavily with the U.S. market in terms of trading hours,⁴⁹ and (2) U.S. institutional investors may have been more heavily invested in Latin American markets than in other emerging markets. Accordingly, if the migration of order flow to the U.S. is predominantly caused by U.S.

⁴⁷ See Ian Domowitz, Jack Glen, and Ananth Madhavan, International Cross-Listing and Order Flow Migration: Evidence from an Emerging Market, 53 J. Fin. 2001, 2002 (1998) (discussing Mexican market).

⁴⁸ See Miller, *supra* note 44, at 104 (209 of 289 issuers establishing sponsored depository receipt facilities in 1994 were from emerging market countries).

⁴⁹ For example, the Mexican market is open from 9:30 a.m. to 5:00 p.m. EST in the United States and thus fully overlaps with trading on the NYSE and Nasdaq. See Domowitz, et al., *supra* note 47, at 2003.

investors retreating to U.S. exchanges in order to trade in dollar-denominated securities, the likely flow back to the U.S. and resulting decline in local liquidity as a result of cross-listings will be less dramatic in the case of those emerging markets whose trading hours do not overlap with those of U.S. markets.⁵⁰

B. IPOs in International Markets

Issuers can go one step beyond cross-listing on a foreign exchange; they can do their initial public offering and listing on such an exchange and simply ignore their host country exchanges. This would not be a logical step for most young companies because they have greater visibility in their home country, where price discovery can naturally occur more quickly and with less transaction costs.

Still, there is an exception to this generalization: young Israeli companies have in large number forsaken their home exchange (the Tel Aviv Stock Exchange) and done their initial public offering on Nasdaq in the United States. Nasdaq currently lists 96 Israeli companies, “more than from any other country outside of North America,” and the dollar value of equity trading in Israeli stocks was estimated to be \$44 billion in 1999.⁵¹ In 1999, ten Israeli companies raised more than \$1 billion on Nasdaq, and since 1995, at least 88 percent of all equity capital raised by Israeli firms was done through offerings on Nasdaq.⁵² Consequently, Israel has the highest ratio of foreign to domestic market capitalization:

⁵⁰ Pulatkonak and Sofianos find that a market’s “time-zone distance from the U.S.” best predicts the likelihood that trading will flow back to the U.S.; that is, markets within, or near to, U.S. time zones will experience the largest trading volume loss because of cross-listing. See M. Pulatkonak and G. Sofianos, “The Distribution of Global Trading in NYSE-Listed Non-U.S. Stock,” NYSE Working Paper 99-03 (March, 1999).

⁵¹ See Edward Rock, Greenhorns, Yankees and Cosmopolitans: Venture Capital, IPOs, Foreign Firms and U.S. Markets, (forthcoming in *Theoretical Inquiries in Law*) (2001) at p. 7 (quoting Nasdaq’s website).

⁵² Id.

95.7% in 2000.⁵³ In effect, it has largely piggybacked on U.S. markets rather than developing its own.

Why do these Israeli companies ignore their home country exchange (or at least accord it little active role)? Professor Edward Rock has examined these offerings and found a common denominator:

“Without exception, the audience is a relatively small group of U.S. institutional investors.”⁵⁴

In effect, these offerings are marketed to a small group of U.S. institutional investors, ten of whom may easily control a majority of the firm’s shares (and sometimes virtually all the shares). In addition, the venture capitalists who originally financed the infant firm (typically, a collection of U.S. and Israeli firms) had themselves obtained much of their capital from U.S.-based venture capital investors, with the result that beneficial ownership was in effect being transferred on the IPO from one cohesive group of largely U.S. owners to another such group by means of Nasdaq. Moreover, some of these Israeli issuers have actually incorporated in the United States (where they typically have significant operations and market their products).

In this light, the Israeli example does not necessarily prove that other young companies can adopt the U.S. market and abandon their own. Rather, these Israeli companies typically were staffed by Israeli executives and employees having extensive experience in the U.S. (both in graduate school and in employment, typically in Silicon Valley). They chose a U.S. market in substantial part because (i) U.S. investors in high-tech industries had greater sophistication and would accept higher price

⁵³ See Stijn Claessens, Daniela Klingebiel, and Sergio Schmuckler, “The Future of Stock Markets in Emerging Economies: Evolution and Prospects” (Working Paper December 2001) at p. 16.

⁵⁴ Id at p. 14.

earnings multiples than investors elsewhere, and (ii) their products or services would also be heavily marketed within the U.S.

Does the Israeli example have relevance for other countries? Or is it sui generis because of the closer affinities between the U.S. and Israel than between the U.S. and most emerging markets? If we define the key criteria for this pattern to be that the offering involves (1) a high technology company for which U.S. investors would pay more (at least in the recent past); (2) a passage of ownership from venture capitalists, who are heavily U.S. financed, to U.S. institutional investors; (3) an executive cadre which has extensive prior experience in the U.S. (and a willingness to reside there some of the year); and (4) products or services that will be primarily marketed in the U.S., then it is possible that at least several other countries could also produce infant firms meeting the same criteria. If U.S. venture capitalists were, for example, attracted to high-tech companies in India or Taiwan and these firms also were staffed by young executives or entrepreneurs with a U.S. education, this pattern could be repeated. To be sure, it is unlikely to become common, but neither must it be unique or even rare.

C. Satellite Markets and Market Networks

A final mechanism for increased competition among market centers involves the unusual act of bringing the mountain to Mohammed: namely, exporting the international market to other areas of the world through satellite operations or a network of affiliations. This approach involves significant start-up and operating costs, and thus might be beyond the financial capacity of many exchanges, which generally have limited capital resources.

Nonetheless, one U.S. market - - Nasdaq - - has aggressively sought to expand on a global basis, this year acquiring Easdaq, a pan-European electronic market, and establishing Nasdaq Japan in

2000. Its goal is to create an integrated global marketplace that would offer round-the-clock trading, and its timetable has been to link its Asian and European outposts with its U.S. trading operations by 2003.⁵⁵ However, its success to date has been limited. For example, in Japan, its affiliate, Nasdaq Japan, has acquired only 56 listings.⁵⁶ What explains Nasdaq's inability to achieve a broader acceptance despite its strong brand name? The prevailing interpretation appears to be that, as an outsider, it has inevitably encountered resistance from entrenched interests within the local region.⁵⁷ Also, local issuers may prefer to list on the major local exchange, which at least for the present has greater reputational capital for them.

In this light, the more logical means of extending the competitive range of an exchange may be to buy, merge, or affiliate with the leading local exchange. This appears to be the New York Stock Exchange's strategy: namely, to negotiate affiliations with other exchanges and seek cross-listings.⁵⁸ Nasdaq's strategy is not, however, necessarily ill-considered. By establishing outposts and acquiring a European electronic market (i.e., Easdaq), it establishes relationships and potentially develops loyalties among firms not yet ready to enter the U.S. market or reconcile their financial statements to U.S.

⁵⁵ See "Vision Test: Nasdaq's Drive to Build Global Exchange Hits Some Major Potholes," *The Wall Street Journal*, June 25, 2001 at p. A-1.

⁵⁶ *Id.*

⁵⁷ *Id.* The *Wall Street Journal* reporters emphasize Nasdaq's affiliation with Softbank, a firm that has been the subject of some controversy in Japan and is perceived by some as excessively critical of the traditional Japanese style of "clubby" networks. Yet, it seems inevitable that a new entrant will have to affiliate with relative outsiders.

⁵⁸ *Id.* at A-6 (quoting NYSE Chairman Richard Grasso that "We are not going to plant our flag in Tokyo.").

GAAP. These firms cannot list on either the NYSE or Nasdaq, but they can trade on a Nasdaq subsidiary outside the U.S., and eventually many will mature to a point where a U.S. listing becomes attractive. From Nasdaq's perspective, this early association will hopefully allow Nasdaq to steal a competitive march on the NYSE in their battle for listings. But only time will tell.

The leading example of growth through merger is Euronext, a combination of the Paris, Amsterdam and Brussels exchanges, which the Lisbon exchange is also scheduled to join in 2002.⁵⁹ Almost concomitantly with the creation of Euronext, the Deutsche Boerse and the London Stock Exchange negotiated a similar merger, only to see it ultimately collapse over control issues. O.M. Gruppen Inc., the owner of the Swedish exchange, later made an unsuccessful hostile bid for the London Stock Exchange, (which it has more recently threatened to renew), thereby foreshadowing the likelihood that as exchanges are privatized, their control may become increasingly contestable in the market. Still another variation is reciprocal cross-listing agreements; for example, the Singapore and Australian exchanges have agreed to cross-list all traded shares.⁶⁰ Such arrangements appear, in substance, to amount to "implicit mergers" that form networks capable of excluding rivals.⁶¹

As a competitive strategy, exchange mergers or similar affiliations may be motivated by any or all of the following purposes: (1) a desire to preclude rivals; (2) a desire to increase the merged

⁵⁹ Id.

⁶⁰ See S. Claessens, et. al., *supra* note 33, at 18. Obviously, such an agreement invites head-to-head competition for trading, but it still precludes third party exchanges who not similarly invited.

⁶¹ See DiNoia, *supra* note 4, at 55-56.

market's capitalization beyond the sum of those of the combining markets by breaking down market segmentation; (3) a desire to achieve operating efficiencies, either through simplified clearance and settlement procedures or reduced costs; and (4) a desire to attract listings based on an enhanced "brand name" or reputational capital. Additional efficiencies seem possible in the future. For example, as markets combine, it may become more feasible to drop the existing and costly system of depository receipt facilities and simply cross-list shares. Even without a merger, the NYSE has done this with Canadian equity securities cross-listed on it, but, with the notable exception of a handful of German and Dutch companies, other issuers continue to list their ADDS.⁶²

Given these advantages, market consolidation - - either through mergers or, more likely, through network alliances - - seems the most likely scenario for the future, with relatively few exchanges seeking to cross national borders and establish outposts in foreign jurisdictions. Over the near future, affiliations among market centers may begin to be negotiated with the same competitive intensity as were diplomatic alliances in the 19th Century, in both cases based primarily on the fear that those who are left out will become the most vulnerable.

II. WHY DO FIRMS CROSS-LIST?: The Competing Explanations

To this point, it has been argued that cross-listing is the dynamic and de-stabilizing force that will move liquidity from local exchanges to international "super-markets," thereby impelling a consolidation among market centers. But this explanation leads to an obvious further question: what

⁶² As of early, 2001, a small handful of German companies, led by Daimler Chrysler AG, have listed global shares on the NYSE. See Gruson, *supra* note 37, at 187 n.1. In addition, Dutch companies have listed "N.Y. shares," which have U.S. transfer agents and registrars. *Id.* at 195 n. 23.

motivates firms to cross-list?

The answer may seem obvious: firms can increase their value through cross-listing. The evidence here is relatively clear.⁶³ But there answer only leads to a further question: why do stock prices increase when firms cross-list? Here, there are two competing explanations, one old and one new. The traditional explanation was that cross-listing broke down market segmentations and allowed the firm to reach trapped pools of liquidity.⁶⁴ Segmentation of markets because of investment barriers (e.g., taxes, regulatory restrictions, or informational constraints) creates an incentive for firms to cross-list in order to achieve market integration. Economic theory has long suggested that stock prices should rise for firms in segmented markets that cross-list.⁶⁵ A variation on this basic theory has suggested that, as cross-listing increases the shareholder base, the firm's risk is shared among more shareholders,

⁶³ See Craig Doidge, G. Andrew Karolyi, and Rene Stulz, Why Are Foreign Firms listed in the U.S. Worth More?, Working Paper (August, 2001) (finding sharply higher valuations and Tobin's q ratios for foreign firms listed in the U.S. even after controlling for various differences); Miller, supra note 44; see also Stephen Foerster and G. Andrew Karolyi, The Effects of Market Segmentation and Investor Recognition on Asset Prices: Evidence from Foreign Stocks Listing in the United States, 54 J. Fin. 981 (firms cross-listing in U.S. earn cumulative abnormal returns of 19% in year before listing).

⁶⁴ See N. Jayaraman, K. Shastri, and K. Tandon, The Impact of International Cross Listings on Risk and Return: Evidence from American Depository Receipts, 17 J. Of Banking and Finance 91 (1993); Foerster and Karolyi, supra note 40; Gordon Alexander, Cheol Eun and S. Janakiraman, Asset Pricing and Dual Listing on Foreign Capital Markets: A Note, 42 J. Fin. 151 (1987).

⁶⁵ See, e.g., Robert Merton, Presidential Address: A Simple Model of Capital Market Equilibrium With Incomplete Information, 42 J. Fin. 483 (1987); Alexander, Eun and Janakiraman, supra note 64. These studies predict, or are at least consistent with a finding, that cross-listing between two segmented markets leads initially to a higher equilibrium market price and a lower expected return thereafter.

which reduces the firm's cost of capital.⁶⁶ For a time, the empirical evidence seemed to confirm this explanation because abnormal returns incurred by cross-listing firms seemed to rise and then decline post-listing.⁶⁷ Until recently, little evidence suggested that a dual listing actually increased firm value.⁶⁸

But at least one recent study has found a different pattern: cross-listing results in positive abnormal returns that are statistically significant and that do not dissipate post-listing.⁶⁹ Unlike earlier studies, this study focused on the announcement date of the decision to cross-list, not the actual listing date.⁷⁰ The announcement date is clearly the theoretically more appropriate date because the market should react to news of the expected improvement, and frequently there is an appreciable delay between the announcement and the actual listing. In addition, this study by Professor Darius Miller (the "Miller Study") found that the abnormal returns were considerably greater in magnitude when the firm cross-listed on the NYSE or Nasdaq than when the firm just established a depository receipt facility in the United States and listed only on an over-the-counter market.⁷¹ Although these findings are not necessarily inconsistent with the market segmentation hypothesis, they better fit an alternative hypothesis

⁶⁶ See Foerster and Karolyi, *supra* note 63, at 988 to 995.

⁶⁷ *Id.* at 993-995; Alexander, Eun and Janakiraman, *supra* note 64 (also finding post-listing decline).

⁶⁸ See Miller, *supra* note 44, at 104.

⁶⁹ *Id.* The Miller study utilized a sample consisting of 181 issuers domiciled outside the United States that announced their first depository receipts program over the period from 1985 to 1995. *Id.* at 108.

⁷⁰ *Id.* at 105.

⁷¹ *Id.* at 104 (finding that "abnormal returns are the largest for firms that list on major U.S. exchanges such as NYSE or Nasdaq rather than OTC 'pink sheets' or PORTAL.")

that this article will call the “bonding hypothesis.”

Essentially, the bonding hypothesis posits that cross-listing on a United States stock exchange (including Nasdaq) commits the listing firm to respect minority investor rights and to provide fuller disclosure. Listing on a U.S. exchange does so both because (i) the listing firm becomes subject to the enforcement powers of the SEC; (ii) investors acquire the ability to exercise effective and low-cost legal remedies (such as a class action) that are not available in the firm’s home jurisdiction; and (iii) the entry into the U.S. markets commits the firm (at least when it lists on an exchange or Nasdaq) to provide fuller financial information and to reconcile its financial statements to U.S. GAAP accounting principles.⁷² The premise of this hypothesis follows from the work of LaPorta, Lopez-de-Silanes, Shleifer & Vishny (“LLS&V”), who have shown in a series of important studies that immense differences exist between the capital markets of common law countries and those of civil law countries, with capital markets in the former jurisdictions being much deeper and apparently significantly more able to support dispersed ownership and a separation of ownership and control.⁷³ LLS&V have attributed these differences to the greater protections that common law legal systems provide minority shareholders. In short, investors lacking adequate protections will not buy shares, or will only buy shares at severely discounted prices, in firms incorporated in jurisdictions with weak corporate

⁷² For a synopsis of the U.S. securities law rules applicable to such issuers, see *supra* note 24.

⁷³ See R. LaPorta, F. Lopez-de-Silanes, A. Shleifer and R. Vishny, Legal Determinants of External Finance, 52 J. Fin. 1131 (1997); R. LaPorta, F. Lopez-de-Silanes, A. Shleifer and R. Vishny, Law and Finance, 106 J. Pol. Econ. 1113 (1998); R. LaPorta, F. Lopez-de-Silanes, and A. Shleifer, Corporate Ownership Around the World, 54 J. Fin. 471 (1999).

governance systems. Hence, entrepreneurs controlling these firms find it easier to rely on bank or other debt financing and sell relatively little equity in the public market.

But firms incorporated in “weak” corporate governance jurisdictions that wish to utilize equity financing retain at least one strategic option: by listing their securities in the United States, they can voluntarily subject themselves to some of the legal rules of a “stronger” corporate governance jurisdiction. Although listing on a U.S. exchange does not mitigate all corporate governance deficiencies, it is a “bonding” mechanism, similar for example to the use of sureties or special monitors, that reduces the potential for the expropriation of minority investors. Because any bonding efforts that assure minority investors of both greater (if still incomplete) legal protections and fuller financial disclosures should affect the value of minority shares, this hypothesis provides an alternative explanation for the abnormal positive stock price increases that foreign firms experience on cross-listing in the United States.

As a matter of theory, there is nothing surprising or heretical about the bonding hypothesis. Economic theory implies that the more a firm credibly commits itself to increased levels of disclosure, the more that this action should reduce the informational asymmetry component of the firm’s cost of capital. Empirically, this view has been supported by a recent notable study that, as German firms switched from German accounting principles to U.S. or International GAAP principles, their bid-asked spread declined, and their trading volume increased.⁷⁴ Although these converting firms did not

⁷⁴ See Christian Leuz and Robert Verrecchia, The Economic Consequences of Increased Disclosure, 38 J. Accounting Res. 91, 121 (2000) (finding data to support hypothesis that as German firms switched from German accounting to U.S. or International GAAP standards, their stock price would rise).

technically “bond” themselves to observe higher standards, they did make a credible promise to provide superior disclosure, and the market reacted positively. Similarly, another recent study finds that as foreign firms cross-list in the U.S., they obtain significantly increased coverage by securities analysts and, as an apparent result, forecasts of their future earnings become more accurate relative to forecasts of firms that did not cross-list.⁷⁵ In short, there was less uncertainty surrounding their future earnings stream. Although, from this perspective, the mechanism bringing about greater accuracy was analyst attention, rather than private or public enforcement, analysts can also be seen as a bonding mechanism, because cross-listing companies are voluntarily subjecting themselves to their scrutiny. Hence, analysts are as much a watchdog as the SEC or plaintiffs’ attorneys.

Ultimately, neither the segmentation nor the bonding hypothesis requires the rejection of the other. They are to a degree complementary. But which explanation better fits the data? Four different types of evidence better support the bonding hypothesis than the segmentation hypothesis.

a. The Market Reaction to Cross-listings

An initial source of evidence consists of studies of the stock market’s reaction to a U.S. cross-listing by a foreign firm. Although there are numerous such studies, most do not consider the possibility that a U.S. cross-listing serves to protect and assure minority investors, and only one study has carefully focused on the market reaction around the announcement date, rather than the often much later date of the actual listing. The Miller Study found positive abnormal returns on the announcement of a

⁷⁵ See Mark Lang, Karl Lins, Darius Miller, ADRs, Analysts, and Accuracy: Does Cross Listing in the U.S. Improve a Firm’s Information Environment and Increase Market Value? (Working Paper 2002).

prospective U.S. listing, without any subsequent post-listing dissipation of those returns.⁷⁶ Alone, this is significant because proponents of the segmentation hypothesis have long interpreted their theory to predict that post-listing expected returns would decline because investors would accept a reduced rate of return with greater liquidity.⁷⁷ More importantly, the Miller study also found that the stock price performance of foreign firms that established a depository receipt facility depended heavily on whether they also listed on an exchange or Nasdaq. Those that did not experienced only modest positive abnormal returns,⁷⁸ while, in sharp contrast, those that also listed on the NYSE or Nasdaq experienced much larger positive abnormal returns, which were in fact more than double those of the firms that did not list.⁷⁹ Finally, foreign firms that only did private placements under Rule 144A in the U.S. market and then listed on PORTAL, a special electronic market restricted to large institutional investors, had

⁷⁶ Miller, *supra* note 44, at 111. Miller finds the abnormal returns around the announcement date to be “positive and significant,” amounting to 0.0115 ($t=3.87$). In addition, he found that “the increase in share value around the announcement date appears permanent,” with the post-announcement cumulative abnormal return between day +2 and day +25 being 0.0071 ($t=0.84$). *Id.* Over the 125 day post-listing period that he observed, the average abnormal return was 0.0030 ($t=0.16$). *Id.* at 112-12.

⁷⁷ See Foerster and Karolyi, *supra* note 63, at 982 (post-listing “expected returns should fall as an additional built-in risk premium compensating for these barriers dissipates”).

⁷⁸ Miller, *supra* note 44, at 115 (Table 4). The average abnormal returns around the announcement date for foreign firms that listed on the over-the-counter or “pink sheet” market (i.e., a Level I facility) was 0.0127 ($t=2.83$), which was positive and significant, but less than one half the average abnormal returns of firms listing on the NYSE or Nasdaq. See note 79 *infra*.

⁷⁹ The average abnormal returns around the announcement data for foreign firms listing on the NYSE and Nasdaq was 0.0263 ($t=6.64$). *Id.* at 114-115. This was twice the level of abnormal returns for firms listing only in the over-the-counter market. See note 78 *supra*.

the smallest abnormal returns.⁸⁰

Why are these differences significant? Here, it is necessary to understand that a foreign firm wishing to access the U.S. capital markets by establishing a depository receipt facility has a choice of essentially four options. First, it can establish only a “Level I facility,” which means that while a U.S. bank, or other agent, will hold its shares and issue receipts reflecting interests in them to investors, trading in these receipts will be conducted only on the over-the-counter market (typically, on bulletin boards or in the so-called “pink sheet” market). Secondly, the foreign firm can again establish a depository receipt facility, but now the firm lists its ADR securities on an exchange or Nasdaq (this is called a “Level II” facility). Third, the foreign firm can establish the same depository facility, list its securities, and in addition conduct an underwritten public offering in the U.S. markets - - in effect, entering the primary market as well as the secondary market (this is known as a “Level III” facility). Finally, one last alternative is to conduct a Rule 144A private offering (which does not entail SEC registration or sales to public retail investors) and then list these securities on PORTAL, which is a private electronic market on which only very large institutional investors can trade (who are known as “Qualified Institutional Buyers” or “QIBs”).⁸¹ This last technique is sometimes referred to as a

⁸⁰ The average abnormal returns around the announcement date for foreign firms listing on PORTAL was actually negative (-0.0109) (t=-1.47), but was statistically insignificant. Id. at 114-115. The difference between a NYSE/Nasdaq listing and a PORTAL listing was 3.72% (t-statistic of difference = 6.49). Id. at 115.

⁸¹ Rule 144A (“Private Resales of Securities to Institutions”), 17 C.F.R. 230.144A, exempts resales made by the initial purchasers of securities to “Qualified Institutional Buyers,” who generally must manage a portfolio in excess of \$100 million in order to so qualify, from the registration requirements of the Securities Act of 1933. PORTAL is a electronic secondary market operated by the National Association of Securities Dealers (“NASD”) in which only QIBs may trade.

“RADRs” (that is, a Rule 144A offering of ADDS), and it does not involve any entry into the public markets (either the primary or secondary markets) in the U.S.

Legally, there are important differences between these various levels. Basically, firms that establish only a depository facility without listing on an exchange or Nasdaq (a “Level I” facility in the standard parlance of securities lawyers) are not required to become “reporting companies” under the U.S.’s federal securities laws, need not reconcile their financial statements in accordance with U.S. GAAP,⁸² and need not file Form 20-F with the SEC.⁸³ Rather, an exemptive SEC rule (Rule 12g3-2(b)) permits foreign private issuers to simply continue to file the same documents that they file with their home country regulator and/or stock exchange with the SEC.⁸⁴ In short, from a corporate

⁸² Disagreement persists as to whether U.S. GAAP accounting principles provide more or better disclosure than International GAAP (or “IAS”). See Christian Leuz, IAS versus U.S. GAAP: A (New) Market Based Comparison (Working Paper 2001) (arguing that they are functionally equivalent) (available on SSRN electronic library at id=275340). This issue of the differences between IAS and U.S. GAAP dominates the current agenda of the International Accounting Standards Committee. Yet, even if IAS and U.S. GAAP are of similar quality, many emerging market issuers use accounting principles that do not comply with IAS, and hence a U.S. listing necessarily implies a substantial upgrade in the quality of the financial disclosures provided.

⁸³ Form 20-F is the SEC form for foreign issuers corresponding to Form 10-K, which domestic issuers must file once they become subject to Section 13 or 15(d) of the Securities Exchange Act of 1934. Unlike domestic issuers, foreign private issuers need only file Form 20-F within six months after the end of their fiscal year. Basically, Form 20-F requires the same financial information as Form 10-K, but permits the foreign issuer to file this information in accordance with non-U.S. GAAP principles, if a reconciliation to U.S. GAAP is included. See Item 17 to Form 20-F.

⁸⁴ See 17 C.F.R. 240.12g3-2(b). This rule exempts foreign issuers who otherwise would be required to become a “reporting company” under Section 12(g) of the Securities Exchange Act of 1934 if the foreign issuer has more than 300 holders of record resident in the United States from the obligation to register under Section 12(g), provided that the exempted foreign issuer must agree to file with the SEC the same

governance perspective, little of significance happens when only a Level I facility is created; there is no upgrading in the quality of financial disclosure and no bonding of any consequence. In contrast, when a foreign firm lists on a U.S. stock exchange or with Nasdaq, it must become a reporting company, must annually file Form 20-F with the SEC, and must reconcile its financial statements to U.S. GAAP.⁸⁵ In addition, it becomes subject to SEC oversight and to private enforcement in the U.S. courts through class and derivative actions. In short, there are meaningful corporate governance changes, and thus the Miller study's findings support the interpretation that the market has responded to these changes by increasing the firm's share price.

Finally, when a foreign firm both establishes a depository facility in the U.S., lists on a stock exchange, and makes a public offering of securities in the U.S. (i.e., a Level III facility), the Miller study found a much stronger positive market reaction than when the firm simply listed on an exchange or Nasdaq (i.e., a Level II facility).⁸⁶ Intriguingly, this is in sharp contrast to the normal U.S. experience in which public firms announcing a public offering of equity typically experience an abnormal negative

documents and information it files with its home country regulators or home stock exchange or that it otherwise distributes, or is required to distribute, to its security holders. Hence, firms listing on Nasdaq must become "reporting companies," and in the case of foreign issuers this requires them to file Form 20-F.

⁸⁵ Rule 12g3-2(b) does not apply to firms listed on Nasdaq after October 5, 1983. See Rule 12g3-2(d)(3).

⁸⁶ See Miller, *supra* note 44, at 117. Foreign firms raising capital in a public equity offering (i.e. a Level III facility) "experienced a positive and significant stock price reaction of 0.0323 (t=5.67)." *Id.*

stock price movement.⁸⁷ Further complicating the picture is another finding in the Miller study: when foreign firms sell equity in the U.S. markets in a private transaction under Rule 144A, there is a negative price reaction, while in contrast U.S. firms increase shareholder wealth on average by making private placements.⁸⁸ The apparent paradox then is that while a public sale by a foreign issuer in the U.S. market increases firm value, a private sale does not, whereas the reverse is true in both cases for domestic issuers.

Curious as this pattern may seem, it makes sense from a corporate governance perspective. By making a public registered sale in the U.S., a foreign issuer voluntarily subjects itself to the strict liability provisions of Section 11 of the Securities Act of 1933. In principle, this gives added credibility to what it says (because it faces high liability for any material misrepresentation or omission). In contrast, a foreign issuer that merely lists on the NYSE or Nasdaq faces antifraud liability only under Rule 10b-5, which places on the plaintiff the burden of proving the defendant's fraudulent intent (or "scienter"). The difference between strict liability versus liability only for statements made with fraudulent intent is

⁸⁷ For example, one study finds that public equity offerings by U.S. firms decrease shareholder wealth by an average of 3%. See R.W. Masulis and A. Korwar, Seasoned Equity Offerings: An Empirical Investigation, 15 J. Fin. Econ. 3 (1986). The standard interpretation for this pattern is that when a seasoned firm announces an intent to make a public offering it, the market takes this announcement as a signal that the firm does not consider its stock to be underpriced (and may consider it to be fully priced or more). In effect, the market realizes that the firm possesses asymmetric information about its future prospects and sees this announcement as implicitly revealing that they will not improve in the short-term.

⁸⁸ See Miller, *supra* note 44, at 117 (finding small negative price reaction to a Rule 144A private placement by a foreign firm). In contrast, an earlier study of U.S. firms making private placements finds that they result in an average increase in shareholder wealth of 4%. See Karen Wruck, Equity Ownership Concentration and Firm Value: Evidence from Private Equity Financing, 23 J. Fin. Econ. 3 (1989).

ultimately a difference in the degree to which the firm has “bonded” itself to tell the truth. Also, a public offering in the U.S. involves the preparation of a detailed registration statement which will provide more current information than the typical Form 20-F.⁸⁹ Arguably, the positive market reaction to a public offering by a foreign firm reflects both the value of more information and enhanced credibility.

Ultimately, the marked improvement in the stock price reaction to foreign firms that conduct a public offerings in the U.S. versus foreign firms that simply list on the NYSE or Nasdaq corroborates the bonding hypothesis much more than it supports the market segmentation explanation. Once a foreign firm has listed on the NYSE or Nasdaq, market segmentation has been largely broken down, and the international capital markets have been integrated as to that security. Thus, if the market responds positively to the additional fact that the firm announces a public offering, this additional share price increase seems logically best attributed to an explanation other than the market segmentation explanation. Arguably, the public offering can be seen as a signaling device (much as stock splits are viewed as positive signals).⁹⁰ Still, no inherent reason suggests why the announcement of a public

⁸⁹ A foreign issuer making, its first offering in the U.S. will typically use Form F-1, which will require it to provide current information as of a date close to the effective date of the registration statement. In contrast, a Form 20-F provides less historical information and can become relatively stale because it need not be filed until six months after the close of the issuer’s fiscal year. For example, as of May, 2002, a foreign issuer’s last public filing on Form 20-F need only cover the year ending December 31, 2000, while a domestic U.S. issuer would have had by this point to have filed its Form 10-K covering its 2001 fiscal year.

⁹⁰ This suggestion has been made to me by my colleague, Professor Jeffery Gordon. Although I am doubtful that the announcement of a public offering signals the existence of undisclosed, positive information for reasons hereafter discussed, it is much more possible that such an offering by a foreign issuer signals the issuer’s intent to abide by a different set of corporate governance policies than it has previously observed (including a policy of full disclosure).

offering in the U.S. would be seen as a positive signal of still undisclosed information, particularly when the firm has every incentive to disclose such information or delay the offering until it can be disclosed, in order in either case to assure that the positive information has been incorporated into its share price. Even if a U.S. listing and/or a U.S. stock offering are seen as positive signals, they are so in large part because of the bonding associated with a U.S. offering. Necessarily, the market realizes it can rely with greater assurance on the issuer's statements in a U.S. prospectus, because (a) the issuer faces strict liability for material misstatements or omissions, (b) a powerful engine of private enforcement (i.e., the contingent fee-motivated plaintiff's bar) stands ready to enforce the U.S.'s legal rules, and (c) more reliable gatekeepers (i.e., U.S. underwriting and auditors) have performed "due diligence" on the offering and also face high liability for negligent errors or omissions.

A final source of possible evidence of bonding may lie in the differing market reaction to the announcement of a foreign firm's decision to list on a U.S. exchange depending on the particular firm's geographic location. The Miller study finds that, over a three-day announcement window, foreign firms in emerging markets experienced nearly double the cumulative abnormal returns of firms from developed markets.⁹¹ However, this study also found that this difference was not statistically significant.⁹² Still, after further refinement of its data, the Miller study ultimately concluded that, on announcement of a U.S. exchange listing, firms within a subcategory that it defined as the "Free Emerging" market experienced a statistically significant share price gain that was nearly double that

⁹¹ Miller, *supra* note 44, at 115 (Emerging market issuers had a three day announcement period abnormal return of 0.0154 (t=2.39), while developed market firms had a similar period return of 0.0087 (t=2.84)).

⁹² Id.

experienced over this same period by developed market firms.⁹³ Although Miller attributed this difference to the breakdown of market segmentation, it is likely that the firms within this sub-category would have been rated as having weak corporate governance by more recent researchers.

Another study has also found a positive and permanent market reaction for Asian firms that list in the United States.⁹⁴ While the magnitude of this positive movement was modest, it did not fade away post-listing. This was in contrast to the finding in these same studies that most non-Asian foreign firms earn high positive abnormal returns in the year prior to listing, but then experience high negative abnormal returns in the year after listing. What could explain the persistence of these gains in the case of Asian firms? Recent empirical research on corporate governance has identified several Asian countries as having corporate governance systems that particularly expose minority shareholders to expropriation by controlling shareholders.⁹⁵ Although these findings do not apply to all Asian countries, they could explain, at least in part, why a sample of Asian firms cross-listing on U.S. exchanges would

⁹³ Id. at 117.

⁹⁴ See Foerster and Karolyi, *supra* note 63, at 994 (Table IV). Although Asian firms underperform other firms both in their stock market performance during the year prior to listing and during the window period surrounding the listing (but in a statistically insignificant fashion) in this study, they were almost unique in their positive post-listing performance. On average, other firms declined during the year following U.S. listing (and to a statistically significant degree), but Asian firms and European firms (other than those in the United Kingdom) had a modest positive market reaction. The implication is apparently that Asian firms do behave differently.

⁹⁵ See Stijn Claessens, Simeon Djankov, Joseph Fan and Larry Lang, On Expropriation of Minority Shareholder: Evidence from East Asia (World Bank Working Paper February 2000) (available on SSRN Electronic Library at id=202390); Michael Lemmon and Karl Lins, Ownership Structures, Corporate Governance, and Firm Value: Evidence From the East Asian Financial Crisis, (Working Paper April 2001) (available on the SSRN Electronic Network at id=265108).

show a more permanent stock market reaction: namely, because such a market reaction is more consistent with the bonding hypothesis than with market segmentation explanation.

All these studies are, however, dated in at least two critical respects: First, they examine periods prior to the Asian financial crisis of 1997-1998. Corporate governance theorists have plausibly proposed that the expropriation of minority shareholders is not a constant, steady phenomenon, but rather an episodic one that occurs primarily in periods of declining expectations, particularly following major stock market retreats.⁹⁶ The Asian financial crisis may thus have produced an increased rate of expropriation, and in response portfolio investors may have become more skeptical of such firms. Accordingly, Asian firms wishing to access international equity markets thereafter would have increased incentive to bond in order to overcome this skepticism.

Second, even if market segmentation once supplied the principal reason for cross-listing as issuers sought to tap the deep U.S. capital market that was otherwise foreclosed to them, this explanation is increasingly becoming dated. Today, global financial institutions can routinely execute brokerage transactions in foreign countries, typically on behalf of U.S. institutional investors seeking to diversify their portfolios against country-specific risk.⁹⁷ As a result, cross-listing, which is costly, may

⁹⁶ See Simon Johnson, Alasdiar Breach and Eric Friedman, Corporate Governance in the Asian Financial Crisis, 1997-1998 (Working Paper, March 1999) (available on SSRN Electronic Library at [id=155008](#)).

⁹⁷ For a description of this process, and its possibly negative impact on Nasdaq's attempt to build a global market, see "Vision Test," *supra* note 1. A cross-listing on a U.S. exchange may, however, permit U.S. institutional investors to purchase foreign securities where they otherwise would be subject to self-imposed investment limitations on foreign holdings. See Gruson, *supra* note 37, at 191 (noting that U.S. institutional investors do not consider NYSE-listed ADRs to be "foreign" securities).

not be necessary to reach the U.S. institutional market, although it may remain necessary to make a credible commitment to full financial disclosure.

b. The Cross-Listing Premium

A second source of data involves a comparison of the foreign firms that do cross-list in the U.S. versus those that do not. A 2001 study by Doidge, Karolyi and Stulz focused not on stock price reaction but on the valuations of foreign firms that cross-list in the United States in comparison to a control group that did not so cross-list.⁹⁸ Using the Worldscope database of firms, they find that “the firms listed in the U.S. have a Tobin’s q ratio that exceeds the q ratio of firms from the same country that do not list in the U.S. by 16.5% on average.”⁹⁹ This valuation difference, which they call the “cross-listing premium,” depends significantly on the particular form of listing chosen and is largest for exchange-listed firms, where it reaches 37%.¹⁰⁰ In the abstract, such a valuation disparity could reflect either segmentation or bonding. Because an exchange listing increases the firm’s liquidity, it is fully consistent with the market segmentation hypothesis, but at the same time the bonding hypothesis is also supported because an exchange listing requires the issuer to reconcile its financial statements to U.S. GAAP.

Yet, if this data does not seemingly favor one explanation over the other, two additional factors suggest at least the special relevance of the bonding hypothesis:

⁹⁸ See Craig Doidge, G. Andrew Karolyi, and Rene Stulz, Why Are Foreign Firms Listed in the U.S. Worth More? (Working paper August 2001).

⁹⁹ Id. at, 1.

¹⁰⁰ Id.

First, firms “from countries with poorer accounting standards” were found “more likely to list in the U.S.”¹⁰¹ This makes sense from a bonding perspectives, because a U.S. listing would uniquely signal for such companies that their accounting had been upgraded.

Second, those firms that not only cross-listed on an exchange but also raised equity capital in connection therewith (i.e., a level three facility) had a “significantly higher premium.”¹⁰² Again, because an exchange-listed firm already has high liquidity, this added premium for capital raising efforts suggests that the fact of SEC registration and the use of a U.S. underwriter is interpreted by the market as further and persuasive evidence that the issuer has credibly committed itself to a full disclosure policy.

c. Post-Listing Behavior: Common Law Firms Versus Civil Law Firms

Although the foregoing stock price studies did not consciously seek to test the bonding hypothesis (and indeed may have been unaware of it), one study has made a deliberate effort to test this explanation by comparing firms incorporated in common law jurisdictions to civil law jurisdictions. The premise to this comparison is the well-known assertion made by LLS&V (and, more recently, by others) that the civil law provides inferior protection for minority shareholders. If this is true, it would also logically follow that firms incorporated in civil law jurisdictions would gain more from cross-listing in the United States.

To test this hypothesis, William Reese, Jr. and Michael Weisbach examined the composition and post-listing behavior of foreign firms that cross-listed in the United States and concluded that the evidence tends to corroborate the bonding hypothesis. Among their principal findings were the

¹⁰¹ Id. at 21.

¹⁰² Id. at 24.

following:

1. Firms incorporated in countries with legal systems deriving from French civil law, which according to LS&V provides the weakest shareholder protections, were the most likely to cross-list in the United States;¹⁰³
2. Such French civil law firms are also the most likely to cross-list on securities exchanges, such as the NYSE and Nasdaq, while firms incorporated in English civil law jurisdictions are more likely to establish only Level I facilities and remain on the over-the-counter market;
3. Firms that cross-list in the United States significantly increase their equity offerings following a U.S. listing.¹⁰⁴ This would appear consistent with the hypothesis that a U.S. listing in some way protects minority shareholders;
4. The post-listing increase in equity offerings occurs both inside and outside the United States. The substantial increase in post-listing equity offerings outside the United States that they find cannot be explained in terms of a market segmentation hypothesis, but is consistent with a bonding explanation;¹⁰⁵ and
5. The weaker the shareholder protections in the foreign firm's home jurisdiction, the greater the quantity of equity offered by the firm after

¹⁰³ William Reese, Jr. and Michael Weisbach, Protection of Minority Shareholder Interests, Cross-listings in the United States, and Subsequent Equity Offerings, (NBER Working Paper No. 8164 March 2001) (available on the SSRN Electronic Library at [id=263426](#)).

¹⁰⁴ In their sample, 167 equity offerings were effected in the two year period subsequent to a U.S. listing, which was 46% higher than the 114 offerings that these same firms engaged in the two year period prior to cross-listing in the United States. Id. at 2.

¹⁰⁵ Reese and Weisbach find that the average firm in their sample increased "its equity offerings outside the United States by a factor of more than three from .083 to .275 per firm from the two years prior to the listing to the two years subsequent to (and including the time of) the offering." Id. at 3.

the time of its U.S. listing.¹⁰⁶ Finally, equity issuances following cross-listings tend to be inside the U.S. for “common law” firms with strong legal protections, but outside the U.S. for French civil law firms. This suggests that “common law” firms come to the U.S. to tap its capital markets, while “civil law” firms come more for bonding purposes.

The reverse side of this coin has been investigated by Pagano, Roell and Zechner.¹⁰⁷ They find that the number of U.S. companies cross-listing in Europe shrank over the 1986 to 1997 interval (despite continued expansion by U.S. firms in Europe). Moreover, European firms cross-listing in the U.S. behaved very differently from European firms cross-listing on other European exchanges. European firms cross-listing in the U.S. pursued a strategy of rapid expansion fueled by high leverage before the listing and made large equity offerings after the listing.¹⁰⁸ They also tended to be in high-tech industries. In contrast, European firms cross-listing in Europe did not grow at a more rapid rate than a control group and did not tend to make equity offerings after the offering, but rather increased their leverage after the cross-listing.¹⁰⁹ They conclude that “the motivation for a U.S. listing appears to be the need for an equity infusion by rapidly expanding, highly leveraged companies that plan to expand their sales internationally and/or belong to high-tech industries.”¹¹⁰ Although this finding is consistent with the bonding hypothesis, it suggests that those firms that enter for the U.S. market from a particular country differ distinctively from those firms in that same country that do not enter the U.S., quite apart

¹⁰⁶ Id.

¹⁰⁷ See Pagano, Roell, and Zechner, *supra* note 15.

¹⁰⁸ Id. at 29.

¹⁰⁹ Id.

¹¹⁰ Id.

from the fact that those that do enter the U.S. may provide greater legal protection or more credible disclosure to their shareholders. As next discussed, this ex ante difference between listing and non-listing firms requires some reinterpretation of the bonding thesis.

d. Flow back and Market Share

That a foreign firm lists on the NYSE or Nasdaq does not imply that its common stock will principally trade there (as opposed to on its home country exchange). In general, the NYSE fraction of total global trading volume for foreign firms listed on the NYSE ranges from as low as 1 percent to more than 90 percent.¹¹¹ In most cases, the allocation of trading between the NYSE and the home country exchange is constrained by an inherent limitation in the nature of the securities traded: the NYSE will trade the issuer's ADRs, while the home country exchange will trade the issuer's ordinary shares. This was not the case, however, when DaimlerBenz AG merged in a share-for-share exchange with Chrysler Corporation in 1998. Rather, DaimlerBenz carefully designed a new security - - a Global Registered Share - - that could trade and settle on both the NYSE and the Frankfurt Stock Exchange (and other exchanges).¹¹² Freed from the usual constraints that restrict flow back, 95 percent of the trading in the DaimlerChrysler promptly flowed back to Frankfurt.¹¹³ Yet, DaimlerBenz had

¹¹¹ See Andrew Karolyi, DaimlerChrysler AG, The First Truly Global Share (Working Paper May 2001) at 15 (citing M. Pulatkonak and G. Sofianos, The Distribution of Global Trading in NYSE-listed Non-U.S. Stocks (NYSE Working Paper 99-03).

¹¹² See Karolyi, *supra* note 111.

¹¹³ Id. One additional factor should be noted: right after the merger, Standard & Poor announced that DaimlerChrysler (the merged company) would be dropped from the S&P 500 index. Although this led indexed investors to sell DaimlerChrysler, it gave no relative advantage to the Frankfurt market and indeed arguably only created a level playing field.

elaborately negotiated its listing on the NYSE only a few years earlier and had undergone the painful experience of converting its earnings from German to U.S. GAAP, which transition had turned a reported profit (under German principles) into a loss (under U.S. GAAP).¹¹⁴ In short, Daimler management saw a U.S. listing as important to it, but its shareholders still preferred to trade in Germany. Such evidence suggests that, although the U.S. listing was useful to Daimler, its value lay not in breaking down market segmentation or in improving liquidity, but in serving as a mechanism for bonding. Without a NYSE listing, Daimler could not have made a major U.S. acquisition for stock, because U.S. shareholders would not be satisfied with holding a foreign, risky and illiquid security in lieu of their former Chrysler shares. Still, the need to assure U.S. shareholders that they were protected against expropriation did not require that trading actually occur in the U.S., and it quickly migrated back to Germany.

This phenomenon of “flow back” thus supports the bonding hypothesis, because it shows that the value of a U.S. listing may have little to do with improving liquidity. However, it also suggests that a U.S. exchange may have little incentive to cause foreign issuers to bond in this fashion, because the U.S. exchange does not necessarily capture the trading in that stock.

e. Contrary Evidence and a Reinterpretation

The simple bonding story has its critics. One response has been that increased enforcement

¹¹⁴ When Daimler-Benz agreed to reconcile its accounting to U.S. style GAAP for purposes of listing on the NYSE, its 1993 net income fell from Deutsche Marks (DM) 615 million under German GAAP to a loss of DM 1,839 million under U.S. GAAP. See Dennis Logue and James Seward, Challenges to Corporate Governance: Anatomy of a Governance Transformation: The Case of Daimler-Benz, 62 Law & Contemp. Problem 87, 92 (summer 1999).

risk associated with a U.S. listing has been exaggerated. For example, one skeptic argues that SEC actions against foreign firms listed in the U.S. have been rare.¹¹⁵ Similarly, another U.S. study finds that between January, 1995 and June, 2001, the SEC took legal action against just five foreign firms with listed ADRs.¹¹⁶ Private enforcement of the securities laws against foreign firms also appears to have been limited. The same study finds only a total of twenty-five private actions against foreign firms between the enactment of the earliest federal securities laws and July 31, 2001.¹¹⁷

This evidence is, however, far from dispositive. First, the SEC has recently brought high-profile enforcement actions against foreign firms listed on U.S. exchanges,¹¹⁸ and private class actions involving foreign companies listed in the United have similarly been filed and settled at significant cost to the foreign defendants.¹¹⁹ Second, as with other administrative agencies, the SEC's litigated actions

¹¹⁵ See Jordan Siegel, Can Foreign Firms Bond Themselves Effectively By Submitting to U.S. Law? (MIT Working Paper September 10, 2001).

¹¹⁶ *Id.* at 25. The SEC did, however, initiate some 54 legal actions against foreign firms over this same period, but only six of these were listed firms.

¹¹⁷ *Id.* This computation was based on a search of LEXIS records.

¹¹⁸ An important and much noticed recent SEC enforcement action was In the Matter of E.ON. AG, Securities Exchange Act Release No. 43372, 2000 SEC LEXIS 2055 (Sept. 28, 2000). There, the SEC sued a German corporation, Veba AG, for misleading statements (made in Germany) in which it falsely denied the existence of merger negotiations with another German corporation, which negotiations eventually resulted in the creation of the third largest German industrial holding company. The defendants quickly agreed to a settlement within the SEC.

¹¹⁹ Two recent examples show the same fact pattern involved in the proceeding footnote being litigated by private plaintiffs in class actions: (1) Buxbaum v. Deutsche Bank AG, 2002 U.S. Dist. LEXIS 1893 (S.D.N.Y. February 7, 2002) (denying defendants' motion for summary judgment in a class action alleging that Deutsche Bank made misleading statements to the market in connection with its merger with Bankers Trust);

resemble the tip of the proverbial iceberg. More enforcement occurs through informal contacts, warnings, and administrative enforcement than through litigated actions. If the SEC is skeptical of a company or its disclosures, it can exercise very practical, but low-visibility, sanctions, such as simply failing to clear or declare effective a registration statement. Such warnings are likely to be particularly respected by a foreign issuer, who is typically used to deferring to governmental instructions.

More generally, it is a fundamental mistake to believe that the deterrent threat of a legal standard can be reliably inferred from evidence about the actual rate of apprehension or the actual severity of sanctions. Deterrence theorists have long recognized that the population to be deterred has only limited and generally inaccurate knowledge of the “true probabilities” of a detection.¹²⁰ More important is the manner in which the legal threat is communicated. Here, the corporate bar in the United States is the government’s natural ally, because it maximizes its own importance by focusing its client on the possibility of SEC enforcement (and thus on the need to consult closely with U.S. counsel). Moreover, the basic message communicated by U.S. counsel that there are legal risks associated with entering the U.S. is one that much of the world already understands, because the United States is widely perceived by foreign firms and their officers as a litigation-crazed environment in which almost

and (2) In re Alcatel Alsthom Securities Litig., MDL 1263 (E.D. Tex. 2001) (approving \$75 million settlement paid by Alcatel to former shareholders of DSC Communications Corp., which Alcatel acquired in a stock-for-stock merger based on allegedly inflated financial statements). Although the Alcatel settlement is not reported on LEXIS or Westlaw, a \$75 million settlement is substantial and will come to the attention of the extremely entrepreneurial plaintiff’s bar that enforces the federal securities laws in the United States.

¹²⁰ See Franklin Zimring and Gordon Hawkins, *DETERRENCE: The Legal Threat in Crime Control* (1973) at 101-103, 144-45.

any dispute ends up in court. Overstated as this perception possibly may be, it is the subjective perception that counts for deterrence purposes.

Accordingly, the apparent paucity of actual enforcement precedents cannot refute the bonding thesis, because deterrence depends on the actor's subjective perceptions, not on the actual objective risks. All that is necessary for the bonding hypothesis to have a measure of validity is that the defendant's perceived risk of liability rises marginally with its entry into the U.S. markets, not that the SEC or private enforcers will always be omniscient or vigilant policemen. If, as a result, the controlling persons of the foreign issuer provide superior disclosure or consume less private benefits of control, even if they do so only marginally upon their firm's entry into the U.S., then the share value of the public shares in such companies should logically rise (and it does). To be sure, if the deterrent threat were greater, the price rise in the stock of foreign firms listing in the U.S. might also be greater, but both logic and the evidence support the existence of a correlation.

A second problem with the simple bonding story may require, however, greater reformulation of this thesis. Here, the problem is that when we compare firms that cross-list into the U.S. from any given country with those firms in that same country that do not, we are essentially comparing apples and oranges. Even prior to their entry into the U.S. markets, these two classes of firms were different. The Doidge, Karolyi and Stulz study with its finding of a higher Tobin's q for cross-listing firms reinforces the Pagano, Roell and Zechner study with its finding of higher leverage and recent rapid expansion by firms cross-listing into the U.S.¹²¹ Together, they suggest that firms cross-listing into the U.S. have higher growth prospects (and hence higher a Tobin's q).

¹²¹ See notes 98 and 107-110.

This apparent finding that firms cross-listing into the U.S. have superior growth prospects makes obvious sense because it explains a motivation for cross-listing: to obtain the higher valuations that those growth prospects would command if the issuer's public statements were deemed credible by the market. The firm with such prospects needs the certification that entry into the U.S. market provides far more than does the firm without such prospects. Also, such an issuer may need an equity infusion in order to finance those growth prospects, and this will be obtained with less dilution if the issuer provides its new minority shareholders with superior legal protections. Both these reasons in turn explain why controlling shareholders might be willing to forego some private benefits of control: namely, they expect to gain more from enhanced valuations than they lose in private benefits.

Yet, this interpretation implies that firms cross-listing into the U.S. are signaling superior growth prospects (which signal is credible because the controlling shareholders will be sacrificing some measure of private benefits). Hence, the positive stock price reaction to cross-listing in the U.S. is not exclusively a reaction to bonding. Rather it is mixed response to bonding (i.e., superior legal protections) and signaling (i.e., superior earnings growth indications). No simple formula seems possible by which to allocate the stock price reaction between these two categories.

Where does this interpretation leave us? It suggests, that the bonding hypothesis explains some of the motivation to list on a U.S. exchange or Nasdaq, but that we cannot measure with precision the actual price reaction attributable to bonding. Finally, one additional reason for skepticism about bonding should be acknowledged, at least in passing. Some of the motivation to cross-list in the U.S. could be explained by the claim that the equity market in the United States experienced a bubble during the latter half of the last decade. On this premise, foreign issuers rushed to cross-list in the U.S. to

participate in stock market valuations not attainable elsewhere (because they were irrational). Although this premise could have some partial explanatory power, it cannot easily explain the decade-long migration of foreign issuers to the U.S. Nor has it been only high-tech firms that have cross-listed. Finally, high stock market valuations also characterized other markets outside the United States during this period (emerging markets may have had even more unrealistic valuations prior to the 1997-1998 Asian financial crisis). The bubble hypothesis works only to the extent that there is a relative disparity in valuations between the U.S. and other markets that cross-listing exploits. At most then, the bubble hypothesis should lead us to be cautious about how much of the valuation premium inherent in cross-listing should be attributed to the bonding effect.

III. THE CURRENT COMPETITIVE LANDSCAPE

Can foreign markets compete at bonding? Or is it a game that only the U.S. can play? The manner in which stock exchanges and other market centers might compete in the future will likely be affected by a variety of forces, of which only one is the possible desire of some non-U.S. issuers to assure minority investors of their credibility. Other forces must also be factored into the balance, some of which are reviewed in this section.

A. The Trend Towards Demutualization

Historically, securities exchanges in the U.S. and generally elsewhere have operated as non-profit mutual or membership organizations. As such, they behaved more like sluggish monopolies than dynamic entrepreneurs. That pattern is, however, rapidly changing. The first exchange to demutualize was the Stockholm Stock Exchange in 1993; it was quickly followed by the Helsinki Stock Exchange in 1995, the Copenhagen Stock Exchange in 1996, the Amsterdam Stock Exchange and the Borsa

Italiana in 1997, and the Australian Stock Exchange in 1998.¹²² This year, each of the London Stock Exchange, the Deutsche Boerse, and Euronext N.V (itself the union of the Paris, Brussels, and Amsterdam stock exchanges) have completed their initial public offerings, and the Italian Bourse has announced similar plans.¹²³

Within the U.S., Nasdaq has been partially privatized, with its former parent (the NASD) now owning only a 27% equity interest in it (but still holding majority voting control until the SEC acts on its pending application to convert to the formal status of a stock exchange under the Securities Exchange Act of 1937). A Nasdaq initial public offering appears likely in 2002. Alone, the NYSE has not changed. Although it has publicly discussed the possibility of demutualization, it has backed off this proposal at least for the present, apparently because of internal tensions.

What will demutualization imply for competition and consolidation? When organized as a membership or mutual organization, the governance of American stock exchanges generally gave the specialists and certain market-making members control of the price, quality and range of services offered by the exchange.¹²⁴ With demutualization comes a more simplified governance structure in which the interests of the new shareholders are likely to dominate over those of the constituent groups within the exchange who formerly exercised veto power. Shareholders in turn will predictably wish to

¹²² For a brief overview of this trend, see Roberta Karmel, The Future of Corporate Governance Listing Requirements, 54 SMU L. Rev. 325, 348 (2001).

¹²³ See Nasda Hobday, "LSE Shares Dip on Market Debut," *The Daily Deal*, July 20, 2001.

¹²⁴ This is also the conclusion reached by Professor Karmel (a former SEC Commissioner). See Karmel, *supra* note 122, at 347-48.

maximize the share value of their investment, and so will look favorably both upon acquisition and merger proposals and innovation generally. This does not mean that such proposals will necessarily be accepted (managements of private corporations in the U.S. and elsewhere have a long history of blocking them), but the rate of merger and acquisition activity seems likely to grow and, independently, the profitability of the exchange will become the dominant consideration.

B. The Shaky Status of Exchanges Transitional Economies

Of the twenty–six transition economies, stock markets have emerged or been created in twenty of them, beginning with the Prague Stock Exchange in 1992.¹²⁵ Typically, the new exchange in these transitional economies simply listed the shares of all mass-privatized companies. This was the Czech model, but it produced disastrous results for the credibility of these new exchanges. Mass listing of all privatized companies produced a very large number of listings, but relatively thin trading in most of these stocks. Illiquidity in turn invited market manipulation, and a series of scandals accompanied the early history of exchanges that followed this approach. Ownership of these firms quickly concentrated, leaving only a small minority float in the public market.

In contrast, in a few transitional markets (most notably, Hungary and Poland), a different approach to privatization was followed, and fewer companies were listed.¹²⁶ In these markets, the principal route to listing was through an initial public offering conducted through the exchange. While less stocks were listed, they enjoyed more liquid trading.

¹²⁵ See Claessens, et. al., *supra* note 33, at 1.

¹²⁶ For a more detailed review of the Czech and Polish approaches, see John C. Coffee, Jr., Privatization and Corporate Governance: The Lessons from Securities Market Failure, 25 J. Corp. L. 1 (1999).

Not surprisingly, the number of listed companies on those exchanges that listed virtually all mass-privatized companies has subsequently shrunk. Nor have most of these exchanges been able to provide equity financing. The Prague Stock Exchange still has not seen a single initial public offering.¹²⁷ This inability to provide equity financing can partly be ascribed to regulatory failures and a resulting lack of investor confidence in many transitional economies. But this is not the total explanation. In many Central and Eastern European countries, large firms could obtain bank credit through political lobbying.¹²⁸ The cost of equity was high in comparison to lower-cost debt from often state-controlled banks, and hence equity financings by already privatized firms were not sought (in part also because it would dilute the controlling stakes of those running the privatized firm).

As a result, of the twenty stock markets in transition countries, only four - - Estonia, Hungary, the Czech Republic, and Poland - - have market capitalization-to-GDP ratios in excess of 20 percent (which is a standard benchmark that many emerging market countries have surpassed).¹²⁹ The average capitalization-to-GDP ratio in transition economies is only 11%.¹³⁰ Market turnover (defined as the value of trading over market capitalization) is similarly low, with Hungary (93%), the Czech Republic (81%) and Poland (69%) standing apart and comparing favorably with Latin American countries.¹³¹

¹²⁷ See Jervis, *supra* note 17, at C-16 (noting postponement of first scheduled Czech IPO).

¹²⁸ See Claessens et. al., *supra* note 33, at 2.

¹²⁹ *Id.* at 4 (Figure 2).

¹³⁰ *Id.* at 3.

¹³¹ *Id.* Market turnover in Latin America averages around 50%. *Id.* Several transitional markets in Central Asia have turnover ratios under 5% and are effectively illiquid.

The average turnover ratio in the transitional economies is only 30%.¹³²

Transitional stock markets are also typically dominated by a few, disproportionately large firms. The top five percent of listed companies account on average for 75 percent of all turnover (Poland is a dramatic exception to this pattern, with the top five percent accounting for only 40 percent of all turnover).¹³³ Although similar patterns can be found elsewhere, relatively few companies comprise the top 5 percent in many transitional markets. Indeed, in a number of transitional markets, five or fewer firms account for 95 percent or more of the total market turnover.¹³⁴

Consistent with the earlier discussed pattern of dual listings, larger public companies in transitional economies have listed in the U.S. or on the London Stock Exchange. At the end of 1999, some 72 companies from transitional economies had listed on the NYSE or Nasdaq, and 61 such companies had listed in London.¹³⁵ Trading has similarly migrated abroad, with “the number of shares traded abroad ...[being]... twice as high as the number of shares traded locally.”¹³⁶ As local trading dries up, smaller public firms in transitional economies, which would not qualify for a NYSE listing, have also begun listing on German exchanges, most commonly the Frankfurt.¹³⁷

¹³² Id.

¹³³ Id.

¹³⁴ Id. This is true even in the case of some large countries, such as the Ukraine.

¹³⁵ Id.

¹³⁶ Id. at 7.

¹³⁷ See Jervis, *supra* note 17.

Cross-listing is not motivated solely (or even principally) by the desire of issuers in transitional economies to find greater liquidity abroad. Most transitional countries provide fairly weak protection for minority shareholders, and even those with well developed legal codes may lack adequate enforcement systems or may be vulnerable to political or other pressures that can make the risk of expropriation of minority shareholders seem unacceptable to investors. Thus, some firms may wish to list abroad (most likely in United States) to compensate for either weak laws or ineffective enforcement.

The potential magnitude of this motivation comes into clearer view when one examines the results of recent efforts to rate the level of shareholder protection in transition economies. Column A below sets forth the shareholder protection ratings for the principal transitional economies, as determined by Katharina Pistor based on an examination of the statutory law in each country and using the rating system devised by LS&V.¹³⁸ Column B provides the “effectiveness” ratings for these same countries, as determined by Stefka Slavova after considering relative enforcement mechanisms (and using the United States as a benchmark).¹³⁹ Such ratings are, of course, necessarily subjective and open to a variety of methodological challenges. Nonetheless, the following table suggests that, at least for issuers in some countries, the current level of protection is low and thus credible bonding could create substantial increases in firm value:

¹³⁸ Katharina Pistor, Patterns of Legal Change: Shareholder and Creditor Rights in Transition, Working Paper 49, European Bank of Reconstruction and Development (2000).

¹³⁹ Stefka Slavova, “Law and Finance in Transition” (Working Paper 2000).

<u>Shareholder Protection in Transition Economies, 1998¹⁴⁰</u>		
<u>Country</u>	<u>Shareholder Protection Rating</u> (United States = 5)	<u>Effectiveness of Shareholder Protection</u> (United States =100)
Armenia	5	21
Azerbaijan	2	25
Bulgaria	4	62
Croatia	2	71
Czech Republic	3	56
Estonia	3	62
Hungary	3	71
Kazakhstan	4	56
Kyrgyz Republic	2	29
Latvia	3	50
Lithuania	3	53
Macedonia, FYR	2	24
Moldova	3	46
Poland	3	69
Romania	3	44
Russia	5	49
Slovak Republic	2	57
Slovenia	3	40
Ukraine	2	54
Uzbekistan	3	28

¹⁴⁰ This table is derived from Claessens et. al., supra note 33, at 9.

The obvious implication of the above table is that a firm in Armenia or Romania has far greater incentive than a firm in Hungary or Croatia to list in the United States in order to attempt to assure investors of credible financial information and fair treatment. Although this assessment leaves open the question of whether such “bonding” will truly work for these companies (which will be addressed shortly), it does suggest that Western portfolio investors are likely to remain apprehensive about investments in countries that provide little legal protection for minority investors. Added to the inherent economic risks are additional legal risks that, even if the firm is successful, its profits may be diverted away from minority shareholders.

In this light, the prospects for many transitional stock markets are not encouraging. A World Bank study, released in September 2000, predicts that even by the year 2005 and “under the best possible policy outcomes,” only six of the twenty-six transitional economies will have by the year 2005 securities markets with market capitalizations equal to twenty-five percent or more of GDP - - a level that is more or less the median for other emerging markets today.¹⁴¹ Market turnover is also predicted to remain low in most transitional economies, with only a minority approaching the 50 percent level needed to assure liquidity.¹⁴² Low liquidity then seems an endemic problem for these exchanges.

To achieve economies of scale sufficient to produce decreasing costs in the processing of trades, some estimate that a securities market needs to have a market capitalization in excess of \$15

¹⁴¹ Id. at 16.

¹⁴² Id. (predicting that only the Czech Republic, Hungary, Kazakhstan, Macedonia, Moldova, Poland, Romania, the Slovak Republic, and Slovenia would under ideal circumstances achieve this level).

billion.¹⁴³ On this basis, only four transitional economies are likely to reach this point by 2005: the Czech Republic, Hungary, Poland and Russia.¹⁴⁴ This analysis suggests that trading costs will remain comparatively high on most smaller markets, further inhibiting their ability to compete on an international level. In turn, this may motivate issuers on these markets to seek other trading venues, even if they are not interested in improving their corporate governance.

This bleak picture does not establish that smaller markets will necessarily fail. For political reasons, including nationalistic pride, some may be subsidized, much as have been national flag airlines. But the combined impact of demutualization and poor economic prospects suggest that others will seek alliances, including mergers. Although mergers have been admittedly rare to this point, a precedent has been set by the three Baltic exchanges (Estonia, Latvia, and Lithuania), which have merged and also established a linkage with the Helsinki Stock Exchange.¹⁴⁵ All in all, it is difficult to describe a future for securities exchanges in traditional economies that does not involve radical consolidation. Even regional exchanges may find it hard to survive - - unless they are either (1) subsidized by the state, or (2) establish a “brand name” that attracts listings.

C. A Success Story?: The Ups and Downs of The Neuer Markt

The foregoing bleak description of the stock markets in transitional economies may suggest that the odds are stacked formidably high against any new entrant. But one counter-example may show that these odds can be overcome. Established in 1997 by its parent, the Deutsche Borse, the Neuer Markt

¹⁴³ Id. at 18.

¹⁴⁴ Id.

¹⁴⁵ Id.

swiftly became Europe's dominant market for growth firms, both in terms of number of listings and market capitalization.¹⁴⁶ Indeed, in so doing, it has outdistanced both Easdaq, which eventually was acquired by Nasdaq, and Nasdaq's own more limited efforts to enter the European market.

Intended as a market for high growth firms, Neuer Markt has adopted a unique style: it has admitted itself as "the most regulated market in Europe,"¹⁴⁷ and it regularly stresses its high disclosure and transparency standards, which it has continued to update. Listing eligibility on this market requires that an issuer: (1) adopt either IAS or US GAAP; (2) publish quarterly financial reports within two months after each quarter; (3) hold at least one analyst conference per year; (4) prepare and publish audited annual financial statements no later than three months after the end of its fiscal year; (5) have a minimum free float of 20%; (6) adhere to a six-month lock-up period following its initial public offering before insiders can sell their shares; and (7) disclose all share transactions by managers, the company, and supervisory board members.¹⁴⁸ In addition, the contents of the required IPO prospectus are also elaborately specified.¹⁴⁹

In substance, these requirements are more rigorous than those specified either by its parent, the Deutsche Boerse, or, more surprisingly, by the SEC which permits foreign issuers to file only its Form 20-F. In comparison to the Neuer Markt's quarterly reporting and tight deadlines, Form 20-F does

¹⁴⁶ See Leuz, *supra* note 82, at 8-9.

¹⁴⁷ See Fuhrmans, "Playing By the Rules: How Neuer Markt Gets Respect," *Wall Street Journal*, August 21, 2000 at C-1.

¹⁴⁸ See Leuz, *supra* note 82, at 8-9.

¹⁴⁹ *Id.*

not require quarterly reporting and permits the issuer to delay until six months after its fiscal year before filing its annual audited financial report. The Neuer Markt's strategy appears to have worked: it has quickly grown from only 2 listed companies in 1997 to 302 in 2000 and acquired a market capitalization of \$172 billion in only three years.¹⁵⁰ Only a handful of exchanges have larger capitalizations.

More recently, however, the Neuer Markt has been plagued by scandals and has seen its market capitalization slide by 73% from since the end of 1999.¹⁵¹ All this is not surprising for an exchange populated with low-priced, high risk stocks. In response, however, the Neuer Markt has tightened its rules, requiring more disclosure and adopting standards that will delist an apparently significant number of firms.¹⁵² Even more interestingly, it has done so under pressure from its larger, more established issuers, which have pressured the Neuer Markt to purge its more questionable listed firms.¹⁵³ In economic terms, network externalities appear to link firms traded on the same principal market and give them a common interest in delisting those who will injure their common reputation.

¹⁵⁰ See Fuhrmans, *supra* note 147.

¹⁵¹ See Jack Ewing, "The Neuer Markt: Can It Hang On?," *Business Week*, July 30, 2001 at p. 18; see also, Alfred Kueppers, "A Busy Bidder in Germany Highlights Flaws In Neuer Markt's Efforts to Challenge Nasdaq," *The Wall Street Journal*, August 6, 2001 at C-11; Alfred Kueppers, "Deutsche Boerse Sets Up New Rules for Neuer Markt," *The Wall Street Journal*, July 19, 2001 at A-19 (noting that "a series of scandals and insolvencies tarnished the four-year old exchange").

¹⁵² *Id.*; see also Alfred Kueppers, "Deutsche Boerse Sets Delisting Terms for Penny Stocks," *The Wall Street Journal*, July 23, 2001 at A-12 (adopting "one euro" standard as minimum trading price for purposes of delisting).

¹⁵³ See Neal Boudette and Alfred Kueppers, "Frustrated Neuer Markt Members Push for Tightening Listing Rules," *The Wall Street Journal*, July 11, 2001 at C-12.

More importantly, the Neuer Markt's problems underscore the inevitable limits on self-regulation. Observers report that many of the scandals plaguing it are the product of a shortfall in deterrence attributable to the lack of enforcement of insider trading restrictions in Germany.¹⁵⁴ Hence, there may be outer limits on the increases in share value that bonding can produce, which are partly determined by the strength of the legal protections in the jurisdiction of listing.

Even the Neuer Markt's early success cannot, of course, be easily or endlessly replicated by other exchanges. It filled a special niche, as the European parallel to Nasdaq. High-tech firms looking for such a trading venue are less common outside the U.S. and Europe (and those that do emerge elsewhere, as the Israeli experience shows, may simply turn to Nasdaq). Still, there is evidence that some issuers in emerging markets do desire to bond themselves to minority investors by adopting U.S.-style corporate governance provisions. Surveying Russian corporations, Professor Bernard Black has found that firm-specific corporate governance practices can greatly increase the value of companies incorporated under weak corporate governance legal regimes.¹⁵⁵ Using corporate governance rankings prepared by one Russian investment bank, he compared these ratings with a "value ratio" of actual market capitalization to theoretical Western market capitalization for these same firms prepared by another investment bank. The value ratios ranged widely, from as low as .01% of the Russian firm's estimated Western market value (in the case of a firm with controlling shareholders having a reputation for expropriating value from minority shareholders) to as high as 50% of that value in the case of a firm

¹⁵⁴ See Kueppers, *supra* note 151, at C-11.

¹⁵⁵ See Bernard Black, Does Corporate Governance Matter?: A Crude Test Using Russian Data, 149 U. Pa. L. Rev. 2131 (2001).

that had already cross-listed on the NYSE. Most importantly, the correlation between a high corporate governance ranking and a high value ratio was statistically significant.¹⁵⁶ The logical inference from this data is that those firms that wished to maximize their share value had installed corporate governance reforms that protected minority shareholders from expropriation (for example, by requiring a shareholder vote in the corporate charter before certain actions could be taken or by similarly specifying a low vote necessary to call a special shareholders' meeting). The adoption of such governance provisions show firms in weak governance jurisdictions responding to the market's preference for stronger minority protections. To be sure, firms with controlling shareholders interested in maximizing the private benefits of control are unlikely to pursue this option. But a sufficient number of firms from multiple countries may be willing to undertake such bonding efforts as to create an adequate supply of listings for a securities market eager to present itself as a "protective" market.

IV. HOW MARKETS WILL COMPETE: Rival Scenarios

To this point, it has been argued that world of securities markets is in flux: exchanges are privatizing; issuers are cross-listing; some markets may fail; and others may consolidate by any of several techniques. But will this new competition produce greater transparency and more rigorous listing standards (i.e., a race to the top) or greater laxity in order for exchanges to attract more listings or greater liquidity from dealers (i.e., the race to the bottom)? A case can be made for either scenario.

A. The "Race to the Top" Scenario

The case for transparency as a strategy to increase the competitiveness of a market center is easily made. A study this year by Pricewaterhouse Coopers of eight Asian countries finds that the lack

¹⁵⁶ Id. at 2133 and 2143.

of transparency increases the cost of capital: 233 basis points on average for Hong Kong companies; 1,316 basis points in the case of mainland Chinese companies.¹⁵⁷ In contrast, Singapore-based companies incurred no basis points penalty in this study, apparently because of the higher transparency in its market.¹⁵⁸ Obviously, the lesson for Asian companies based on this study is that they may be able to reduce their cost of capital by listing on the Singapore Stock Exchange (or another high transparency exchange). Similarly, a study conducted in 2000 by Credit Lyonnais found that, between 1997 and 2000, emerging market companies having highly rated corporate governance practices rose an average of 370 percent (as against an average of 170 percent for the overall average of public companies incorporated in these countries over this period).¹⁵⁹ If these studies are correct, “good” corporate governance pays for itself.

Some finance theorists agree, arguing that, in a competitive world market, high-disclosure exchanges will dominate low-disclosure exchanges. Huddart, Hughes and Brunnermeier claim that liquidity traders will opt to trade on high-disclosure exchanges and that informed traders (i.e., those possessing material non-public information) will follow them in order to “exploit the disguise afforded by the greater depth on that exchange.”¹⁶⁰ Unfortunately, this theory is driven by the premise that insiders will seek to use their asymmetric information by trading in the deepest market, and thus it may fail to

¹⁵⁷ See Justin Doebele, “We Won’t Be Bullied, We’ll Sue!,” *The Business Times* Singapore, April 28, 2001 at p. 22.

¹⁵⁸ *Id.*

¹⁵⁹ *Id.*

¹⁶⁰ See Huddart, Hughes and Brunnermeier, *supra* note 7, at 1-2.

take sufficient account of the differences in legal liability associated with such conduct depending on the jurisdiction.¹⁶¹ That is, insider trading on the NYSE is far more likely to be detected and prosecuted than similar conduct on the LSE, and even less prospect exists of actual legal liability for insider trading on less liquid exchanges. Still, their point seems valid that liquidity traders will prefer the high disclosure exchanges, and insiders will follow them because large traders are more likely to move the market on a less liquid exchange. Other studies have agreed and suggested that “cracking down” on insider trading will similarly attract liquidity to a market.¹⁶²

In overview, there appear then to be two distinct arguments for high disclosure as a competitive strategy: (1) It reduces the issuer’s cost of capital, and (2) Other things being equal, traders will flock to the high liquidity exchange.

The “race to the top” scenario has, however, at least one important shortcoming: exchanges may not benefit by establishing themselves as high quality, “high disclosure” exchanges if the trading in the foreign issuers that list on these exchange flows back to the issuer’s home country exchange. This was the DaimlerChrysler experience,¹⁶³ and it may accelerate as firms come to replace ADRs with global

¹⁶¹ This model also assumes that the listing decision is controlled by those who wish to exploit their asymmetric information. This may greatly overstate the case, particularly with regard to controlling shareholders, who know that they cannot dump their 70% to 80% block in the market.

¹⁶² See Bhajwan Chowdhry and Vikram Nanda, Multimarket Trading and Market Liquidity, 4 Review of Financial Studies 483 (Fall 1991).

¹⁶³ See text and notes supra at notes 110 to 114.

shares that can settle in either country.¹⁶⁴ If a foreign issuer can list on the NYSE, and yet 90% or more of the trading in its stock eventually flows back to the issuer's home country exchange, the NYSE gains little from such a listing.¹⁶⁵ This may explain why the NYSE has long been more willing to waive listing requirements that it applies to domestic issuers in the case of foreign issuers.¹⁶⁶ That is, if an exchange does not profit from its "high quality" reputation to the same extent in the case of the foreign issuer, it has a rational incentive to be less demanding in their case and instead list them on a high volume basis.

B. The "Race to the Bottom" Scenario.

The alternative perspective begins with the recognition that firms with controlling shareholders may not wish to upgrade their disclosure or governance practices because controlling shareholders enjoy (and do not wish to reduce) high private benefits of control. Indeed, on any given exchange outside the U.S. and the U.K., firms with such controlling shareholders are likely to be in the majority and to be able to outvote those firms that wish to bond (if the latter group were to seek to change and upgrade the local exchange's rules). Shareholders in a privatized exchange (or the dealers in a still quasi-public exchange) will also have little interest in changing the exchange's rules if this might cause

¹⁶⁴ For discussions of the advantages of the new global share, see Gerson, *supra* note 37, and Karolyi, *supra* note 111.

¹⁶⁵ To be sure, the NYSE gains a listing fee, but these are likely to be set based on trading volume. As discussed later, this may suggest that the listing fees charged foreign firms by U.S. exchanges should be increased.

¹⁶⁶ For example, the NYSE has long sought to convince the SEC to permit it to list issuers that do not comply with U.S. GAAP and has waived corporate governance standards that it requires in the case of domestic companies. See note 24, *supra* (citing SEC Exchange Act Rel. No. 24,634 (June 23, 1987)).

the delisting of a significant number of listed companies who were unwilling to comply with the upgraded rules. Hence, a powerful coalition of forces appears likely to resist change.

Dealers also may have little innate desire to upgrade transparency or disclosure standards. Bloomfield and O'Hara point to two recent examples in which non-transparent ones seem to have dominated transparent ones.¹⁶⁷ First, the London Stock Exchange was able to outcompete the Paris Bourse for large block traders by permitting dealers to delay the reporting of such block transactions for as much as several days.¹⁶⁸ So much of the block trade volume migrated from Paris to London that the Paris Bourse was compelled to change its trade reporting rules to match London. Similarly, they report that large traders in the United States were increasingly moving "off-board," either by trading on alternative trading systems (known as "electronic communication networks" or "ECNs") or trading after hours outside of the United States, in both cases in order to avoid trade reporting. The SEC responded by requiring ECNs to disclose their best bid and ask quote in order to restore transparency.¹⁶⁹

To be sure, these examples in which transparency lost to opacity involve trade reporting and not corporate disclosure. Still, these examples tend to show that dealers and large traders may prefer low transparency; indeed, a market (such as the LSE) may gain liquidity to the extent that its dealers can "trade in the dark."

¹⁶⁷ See Robert Bloomfield and Maureen O'Hara, Can Transparent Markets Survive?, 55 J. Fin. Econ. 425 (2000).

¹⁶⁸ Id. at 426; see also G. Gemmill, Transparency and Liquidity: A Study of Block Transactions in the London Stock Exchange Under Different Publication Rules, 60 J. Fin. 1765 (1996).

¹⁶⁹ Id. at 426. Regulation ATS requires a broker-dealer to display their best bid and asked quote plus quotes received from other broker dealers.

C. Combining the Scenarios: A Mixed World of High and Low Disclosure

Assume for a moment that those controlling many listed issuers outside the U.S. and the U.K. will may prefer to enjoy the private benefits of control, rather than maximize their market valuations through bonding. If so, why might it be plausible that additional “high disclosure” markets could still develop? Of course, one answer is that we have already witnessed the appearance of a “high disclosure” exchange in Europe in the form of the Neuer Markt, and its example has been copied elsewhere.¹⁷⁰ But the fuller answer is that, at least for some controlling shareholders, the private benefits of control that they would sacrifice by cross-listing is exceeded by the market valuation premium that would accrue to them in a more transparent market. The best illustration of such a case would be a company with high growth prospects that needed to raise equity capital because it could not safely rely upon (or perhaps even obtain) additional debt financing.¹⁷¹ Pagano, Roell and Zechner have found that this was basically the profile of European firms that cross-listed in the United States during the 1986 to 1997 period that they studied.¹⁷² Indeed, this may also have been the profile of the typical company listed on the Neuer Markt, whose listings were heavily populated with high-tech companies

¹⁷⁰ Brazil’s Novo Mercado is probably the clearest example of “exchange plagiarism,” as it has largely copied the Neuer Markt. In fact, it invited U.S. institutional investors to help design its listing rules, which forbid the issuance of non-voting shares and require compliance with either U.S. or IAS GAAP. See Craig Karmin & Jonathan Karp, “Brazilian Market Tries Friendly Approach,” *The Wall Street Journal*, May 10, 2001 at C-1. As with the Neuer Markt, its standards appear to be higher than those of the established Brazilian exchanges.

¹⁷¹ This example has been emphasized by Doidge, Karolyi, and Stulz, *supra* note 98, as the principal reason for non-U.S. issuers to migrate to U.S. exchanges.

¹⁷² See Pagano, Roell, and Zechner, *supra* note 15.

(real and purported) whose volatile future earnings prospects made them apprehensive about reliance on debt financing. Facing the prospect of high earnings growth, controlling shareholders could easily decide to surrender some private benefits of control in order to obtain attractive equity financing and thereby realize high growth and a correspondingly higher stock market valuation.

This scenario carries an important further implication: if firms that migrate to “high disclosure” exchanges do so in order to realize high growth prospects through equity financings, then cross-listing on such an exchange may come to be seen as a signal that the firm possesses asymmetric information that it has high growth prospects. Indeed, it is arguable that cross-listing is already seen as such a signal, because the positive stock price gain is greatest for a cross-listing firm that also announces an equity offering at the time that it announces its intent to cross-list.¹⁷³ Such a signal is credible because the controlling shareholders appear to be spurning some measure of private benefits in order to realize this earnings growth. In turn, this means that the positive abnormal price movement on the announcement of a cross-listing on a U.S. exchange by a non-U.S. firm may be a response to both bonding and this signal of expected earnings growth. At least in part, this confounds the simple bonding explanation because it suggests that the market may be responding more to this implicit earnings signal than to the fact of bonding.

High growth prospects are not, however, the only reason that a firm might migrate to a “high disclosure” exchange, even at the cost to its controlling shareholders of foregoing some of the private benefits of control that they previously enjoyed. An alternative scenario starts from the fact that, as the

¹⁷³ See text and notes *supra* at notes 86 to 89 (citing Miller, *supra* note 44, at 117).

barriers to product market competition have fallen, firms are forced to grow to global scale.¹⁷⁴ That is, an auto maker based in Sweden or Germany must, with the integration of the European market, expand its activities to a European-wide scale or expect that its rivals that do will soon dwarf it and realize probable economies of scale and scope. The most ambitious firms in the field will go even further and expand to become world-wide manufacturers (as clearly some U.S., German, and Japanese producers have done). In this process of expansion to global scale, the quickest, most logical mechanism for expansion is the cross-border merger or acquisition.

On this playing field of cross-border mergers, firms with dispersed ownership that are listed on “high disclosure” exchanges have a distinct advantage. Their stock will predictably trade at less of a discount to reflect the lesser prospect of expropriation by controlling shareholders. Hence, other things being equal, they will find it easier to make acquisitions with equity securities. To be sure, firms with concentrated ownership can make acquisitions for cash, but there may be a ceiling on magnitude of cash acquisitions that are feasible. For example, one has difficulty imagining Daimler acquiring Chrysler for \$50 billion in cash, and hence the prior decision of Daimler to list on the New York Stock Exchange may have been a necessary prerequisite to this transaction being accomplished. Other recent large acquisitions (including British Petroleum’s 1999 acquisition of Amoco for \$48 billion, Ford’s purchase of Volvo, and the Exxon/Mobil merger) seem also to strain the limits of practical finance if these were attempted as cash transactions. The point is not simply that equity exchanges are easier, but that firms that maximize the value of their publicly held shares can make acquisitions at less dilutive cost

¹⁷⁴ The author has made this argument at length elsewhere and will not embellish it here. See Coffee, *supra* note 23, at 676-83.

to themselves. As a result, firms listed on “high disclosure” exchanges are more likely to be the survivors and acquirers, rather than the targets, in the wave of acquisitions that the drive for global scale entails. Indeed, the parade of large German firms recently listing on the New York Stock Exchange evidences the fact that corporations seeking global scale see the need for a listing on a “high disclosure” exchange.¹⁷⁵

Even if “high disclosure” exchanges can thus attract listings from high growth or acquisition-oriented companies and even if some controlling shareholders would willingly abandon some private benefits of control to achieve these ends, two practical issues remain. First, how can existing exchanges exploit this potential when many or most of their listed companies do not fall into this higher-growth category, but rather have controlling shareholders who would prefer to reap the private benefits of control? The majority of the listed companies on most European exchanges probably fit this profile and therefore would logically vote down any proposed reforms that were intended to improve their exchange’s reputation by restricting their controlling shareholders’ receipt of private benefits of control. Likely as such a rejection seems, the Neuer Markt example may show the practical answer to this problem: exchanges can create subsidiaries that specialize in high disclosure and high standards (as the Deutsche Boerse did in founding the Neuer Markt) without jeopardizing their existing inventory of listed companies. That is, if some firms desire stronger disclosure standards in order to obtain higher market valuations, they can list on this special exchange, while the majority remains on the “lower disclosure,” traditional exchange. In effect, the population of listed companies on the exchange self-segregates into two subsidiary populations: those that wish to bond and those that don’t.

¹⁷⁵ Id. at 677 and n. 129.

Second, even if there is a market for high disclosure exchanges, has the U.S. already satisfied that demand? Here, an incomplete answer may be that many issuers cannot satisfy the listing standards of the NYSE or even Nasdaq, but may still benefit from bonding. Regional exchanges may also have a significant cost advantage over U.S. exchanges.¹⁷⁶ Finally, there is already substantial variation among exchanges. For example, exchanges in Australia and Singapore are thought to have higher listings and transparency standards than other exchanges in the same region.

In this light, regional “super-markets” might develop from exchanges that already had relatively high disclosure standards and could offer greater credibility to companies incorporated in jurisdictions perceived by investors as having weak governance standards. Conversely, firms less interested in attracting minority investors (but still desiring some degree of liquidity) might trade only on lower-disclosure exchanges (such as the Korean or Shanghai Stock Exchanges). This prediction has two implications: (1) High and low disclosure exchanges could both persist, each attracting a different core constituency of issuers; and (2) The fiercest competition will be between those regional exchanges that aspire to attract dual listings from issuers originally listed on smaller exchanges (for example, the Australian and Singapore exchanges in Asia and the London Stock Exchange and Euronext in Europe are natural competitors). Although single country exchanges will probably endure in large market countries (e.g., Korea in Asia or Milan in Italy), they seem likely to progressively lose trading volume to the regional “super-market.” Exchanges in small market countries (i.e., many of the transitional stock exchanges) will either close, consolidate, or be subsidized by the state. Whatever the outcome, they

¹⁷⁶ LaPorta, Lopez-de-Silanes, and Shleifer conclude that “a New York listing is prohibitively expensive for many companies.” See LaPorta, Lopez-de-Silanes, and Shleifer, Corporate Ownership Around the World, 54 J. Fin. 471, at 512 (1998). If so, regional exchanges have a niche.

will lose liquidity.

If some exchanges are likely to see an advantage in upgrading their disclosure standards (or in organizing a subsidiary market that does so), what specific reforms are most likely? The Neuer Markt's experience suggests that the following standards could become more common:

1. Quarterly reporting. This is already common in the case of foreign issuers reporting on SEC's Form 20-F, even though it is not required by that form;
2. IAS or US GAAP. Again, this seems a minimum requirement for any exchange seeking to promote itself as having high disclosure standards.
3. Management's Discussion and Analysis of Financial Conditions and Results of Operations ("MD&A") Disclosures. There is evidence that share pricing in the United States became more accurate following the introduction of the SEC's "MD&A" required disclosures,¹⁷⁷ which require a company to identify and evaluate "known trends or any known demands, commitments, events or uncertainties" that are "reasonably likely to result in "material changes in the issuer's liquidity or any "known trends or uncertainties" that the issuer expects will have a material impact on results of operations.¹⁷⁸ Investors in Rule 144A transactions have come to expect such disclosures (although again they are not legally required), and an exchange could mandate them as a competitive strategy.

In addition, it is possible to imagine exchanges competing in terms of their listing rules by, for example, requiring listed companies to comply with certain corporate governance requirements. Here

¹⁷⁷ See Artyom Durney, Merrit B. Fox, Randall Morck, and Bernard Yeung, "Law, Share Price Accuracy and Economic Performance: The New Evidence" (Working Paper June 2001).

¹⁷⁸ This is the language of Item 303 of Regulation S-K. Both in any prospectus and in its periodic reports on Forms 10-K and 20-F, an issuer must identify and discuss these "known trends and uncertainties."

again, however, organizational problems surface. Assume that an exchange is eager to signal that it will protect minority investors. Conceivably, such an exchange might impose the NYSE's "one share, one vote" rule, even with regard to foreign issuers (which the NYSE, itself, does not do¹⁷⁹). Yet, the ability of most exchanges to engage in such a competition is highly constrained. Established exchanges must consider the impact of new listing requirements upon their inventory of already listed companies. In turn, this means that their ability to compete on this basis depends heavily upon the existing composition of their client base. For example, if a hypothetical exchange had few listed companies that provided for unequal voting rights, the exchange could potentially adopt the NYSE's "one share, one vote rule" and apply it universally. However, if many of its already listed companies would not be in conformity with this new rule, the imposition of this new rule could cost the exchange more in delistings than it would gain the exchange in new listings. In such a case, the logical answer seems again to form a "new market" for those firms eager to signal their willingness to bond. The formation of a Neuer Markt again stands then as the rational response of an exchange dominated by listed firms with controlling shareholders.

Exchanges are obviously not on a level playing field when it comes to their ability to compete in terms of listing standards. A stock exchange in a jurisdiction with very concentrated ownership (for example, the Korean Stock Exchange) cannot as easily adopt corporate governance reforms as an exchange in the same region (hypothetically, the Australian Stock Exchange) that already has a membership of listed companies in substantial compliance with the proposed governance reform. One

¹⁷⁹ Foreign issuers are generally exempt from the corporate governance listing standards of U.S. stock exchanges, so long as they are in compliance with the "laws, customs and practices" of their country of origin. See supra note 24.

exchange is simply requiring laggards to catch up, while the other would be mandating an entirely new reform on its entire membership.

Although this difference is clearest in the case of corporate governance requirements, the same pattern also applies to financial disclosures. If, for example, the majority (or a sizable percentage) of the listed companies on a particular exchange did not comply with IAS or US GAAP, but only with the more modest requirements of their home country's accounting standards, it would be difficult for such an exchange to upgrade its financial disclosure requirements. Again, this factor may explain why the Neuer Markt requires compliance with IAS or US GAAP, while its parent, the Deutsche Boerse, does not. In short, the new entrant has a competitive advantage, because having no inventory of listed companies, it can devise its competitive strategy unconstrained by the impact of its proposed rules on its existing inventory of firms.

These observations may also explain why we have not previously seen much competition in terms of listing standards. Not only was the potential for such a "race to the top" not perceived, but existing exchanges were largely disabled from competing on this basis. The new destabilizing force is the appearance of new exchanges, such as the Neuer Markt, which are unconstrained by existing clients and so can compete by imposing higher listing requirements to attract an audience interested in bonding. Hence, the logical organizational move by an exchange seeking to market itself as a "high disclosure" exchange may be to form a subsidiary exchange which would upgrade its standards beyond that of the parent exchange.

D. Other Competitors: Who Else Can Offer Bonding Services?

To this point, it has been argued that (i) there is a demand for "bonding" services; (ii) exchanges

can compete in offering such services; (iii) “demutualized” exchanges now have the entrepreneurial incentive to expand their range of services to compete for new listings by offering such services; and (iv) a sizable potential market exists in those companies incorporated in transitional economies where governance is weak and where the existing markets are unlikely in any event to be able to offer sufficient liquidity. There is, however, still a further element to the puzzle: who else besides traditional stock exchanges could offer bonding services? If others can do it better or cheaper, exchanges may find it unprofitable to compete on this playing field.

Initially, the most obvious candidate to challenge the traditional exchange might seem to be the “electronic communications network” or “ECN.”¹⁸⁰ Although these electronic markets have captured an impressive share of overall trading volume, they have essentially followed an old competitive strategy: free ride on the price discovery process conducted by traditional exchanges but offer lower-cost and faster executions.¹⁸¹ This strategy may capture trading volume, but free-riding does not position ECNs to offer bonding services or other reputational benefits. First, ECNs do not have listing standards of their own, but simply trade stocks that are listed elsewhere. Second, because ECNs are not good liquidity providers, they cannot cope with large blocks because they have little capacity to

¹⁸⁰ Essentially, ECNs are less regulated electronic markets that are not required to register or qualify as exchanges under the Securities Exchange Act of 1934. They are, however, required by the SEC to register as broker-dealers under the same act. The term “Electronic Communications Network” is defined in Rule 11Ac1-1(8) under the Securities Exchange Act of 1934. See 17 CFR § 240.11Ac1-1(8). By most estimates, ECNs are now involved in over 25% of the trading on Nasdaq, but a much lower percentage of the trading on the NYSE.

¹⁸¹ Exactly this strategy was followed by the Consolidated Stock Exchange, when it challenged the NYSE in the late 19th Century. See text and notes supra at notes 28-31.

adjust their prices for such blocks or, more generally, to handle price discovery when a large block hits the market. As a result, ECNs are likely to be only a secondary market, and not the primary market, for most companies. In particular, ECNs are unsuited to handle companies that trade inactively or sporadically because ECNs only provide matching of buy and sell orders and not the residual liquidity offered by dealers or specialists.

The real significance of ECNs is that they represent one more competitor that can trade securities that are listed on a “high quality” exchange. Thus, as in the earlier discussed case of trading that flows back to the home country, ECNs erode the incentive for an exchange to invest in reputational capital or to maintain high listing standards if the exchange cannot fully capture the trading in that security.¹⁸² For example, if a foreign corporation were to list on the New York Stock Exchange but still trade 50% on its home country exchange and 25% on ECNs, then the NYSE might well have conferred a reputational benefit on the foreign company, but it would capture only 25% of the trading in this example. This mismatch means the NYSE may be under-rewarded for the benefits that it in fact provides to the foreign-listed company and hence has only a limited incentive to market bonding services to such companies.

The more fundamental future challenge to exchanges will more likely come not from ECNs, but from brokers. In overview, the most probable alternative to the contemporary pattern of corporate issuers cross-listing in order to break down market segmentations is for large, world-class brokerage

¹⁸² One partial answer to this problem is to charge higher listing fees to foreign firms than domestic firms, in part because the foreign firm gains more from a U.S. listing than does a domestic firm and in part because more of its trading volume is likely to be diverted elsewhere.

firms to do essentially the same thing: that is, cross borders to search out attractive investments for their clients.¹⁸³ Potentially, either the issuer on the sell side or the broker on the buy side can today cross borders to link investors with issuers. Indeed, if brokers will do so, issuers can stay at home and avoid the costs of cross-listing. Thus, the issue from a transaction cost perspective becomes: who can cross borders more cheaply?

Because cross-listing can be expensive (both in terms of listing expenses and the reconciliation of financial statements), the intuitive answer to this question would seem to be that the broker can cross borders more cheaply than can issuers.¹⁸⁴ Moreover, the broker has a natural ally: namely, the traditional exchange that is today faced with the risk that it will lose substantial order flow to a more liquid market when its listed companies cross-list elsewhere. In turn, this natural combination suggests the logical strategy for these traditional exchanges that cannot easily engage in the kind of competition that the Neuer Markt has pioneered is to seek to make themselves cheaper, and hence more attractive, to international brokerage firms. Rather than raise listing standards, such exchanges could seek to reduce costs to attract international brokers and thereby similarly break down market segmentations.

¹⁸³ Today, modern information technology enables the global brokerage firm to execute orders quickly around the world. For a description of this process, see “Vision Test,” *supra* note 1.

¹⁸⁴ Some evidence suggests that brokers are already overtaking exchanges in making foreign securities accessible to investors within their jurisdiction. Professor Howell Jackson and Eric Pan report that brokers in Europe have developed cross-border linkages between markets that “have reduced the need of European markets to make special efforts to reach retail investors in other European countries.” See Jackson and Pan, *supra* note 9, at 655. Thus, rather than a French issuer listing on the London Stock Exchange, it can rely on British brokers directly placing orders for its stock on the Pans Bourse through French brokers for its British retail investors. *Id.* at 656n.2.

But even if such an alliance is possible, what relevance does it have for any future competition to provide bonding services? The answer is that brokerage firms could potentially provide a form of bonding through the stable of securities analysts that they employ. This strategy would require that the foreign firm adopt charter and/or bylaw provisions that protected minority shareholders, including a commitment to “high” disclosure, and that securities analysts be capable of verifying the adequacy of such private, self-help efforts. If this is possible, foreign firms would not need to cross-list; instead, global brokerage firms would focus the attention of their securities analysts on selected foreign stocks that they expected to trade globally. This scenario is plausible precisely because analyst attention has long been a key attraction luring foreign issuers to list on U.S. exchanges. On cross-listing, foreign firms receive greater analyst coverage and forecasts of their future earnings become correspondingly more accurate relative to those made with respect to firms that do not cross-list.¹⁸⁵ These are important advantages to the firm, but to the extent that such analyst attention can be achieved without cross-listing, the foreign issuer has an obvious incentive to use the less costly alternative in order to bond its implicit promise not to expropriate minority investors. In short, analyst attention and cross-listing are not inextricably linked, and the former can potentially be achieved without the latter. If so, an alliance between brokers and foreign firms to trade on less costly exchanges offers gains to both and thus constitutes the gravest threat to more costly, “high disclosure” exchanges.

This potential approach does, however, shift costs in a manner that may not be necessarily attractive to the brokerage firm. Although the issuer avoids the costs of both establishing a depository

¹⁸⁵ See Mark Lang, Karl Lins, and Darius Miller, ADRs, Analysts and Accuracy: Does Cross-Listing in the U.S. Improve a Firm’s Information Environment and Increase Market Value? (Working Paper March 2002).

receipts facility in the U.S. and listing on a U.S. exchange, the broker incurs (and must pass on to some degree to its customers) the costs of foreign execution, clearance, and settlement. On the other side of the ledger, however, the broker obtains trading that might have otherwise gone to an ECN if the firm had instead cross-listed in the U.S. Hence, although the broker may incur some increased costs, the net balance is indeterminable. Whatever the balance, total costs should be determinative over the long run, and these logically should induce firms to use brokers, rather than cross-listing, if the total costs are lower. This point has a further implication: if the driving force behind cross-listing were only the desire to break down market segmentation, one would logically expect that the cheaper means to this end would be through international executions by a global brokerage firm, not by the issuer listing globally. Hence, the fact that many firms are cross-listing again suggests again that the market segmentation hypothesis cannot fully explain this phenomenon.

The real difference between bonding through cross-listing and bonding through private, self-help measures that the securities analyst verifies is that, in the latter case, the issuer does not subject itself to private litigation in the United States (and is also far less likely to be the target of SEC enforcement actions when it is not listed in the U.S.). This difference poses the currently unanswerable question of whether bonding can occur in the absence of a strong enforcement mechanism. Clearly, issuers would prefer to offer the promise of better disclosure - - without also incurring the heightened risk of litigation. But can issuers have one without the other? Those who believe that securities class actions achieve much will argue that it can, and those who disagree will note that this alternative means to bonding has never developed (even though it may be cheaper). Whether bonding requires exposure to litigation thus remains a currently unresolved possibility.

Subject to this caveat, the bottom line is that rival strategies are possible and thus may lead exchanges increasingly to polarize and signal very different strategies. Some exchanges will race “for the top” in the manner of the Neuer Market, while others should increasingly pursue a cost-minimization strategy. Those opting for the latter approach may focus also on speed of settlement and seek a reputation for relative regulatory “flexibility.” Conceivably, issuers that did cross-list on a “high quality” exchange might also deliberately maintain their listing on a lower quality market in order to escape regulatory oversight for some transactions that their controlling shareholders wished to engage in.

CONCLUSION

Cross-listing has accelerated during the 1990s, while at the same time the costs of information technology have declined radically. Because high information costs were one of the barriers that kept markets segmented, the increase in cross-listings in the face of declining information costs strongly suggests that the motive for cross-listing involves more than simply the issuer’s desire to tap the liquidity of segmented markets. Precisely what issuers gain from cross-listing remains debatable. Cross-listing may in part be a signaling device that the firm has high growth prospects, in part a bonding mechanism to assure public investors that they will not be exploited, and in part a means of attaining greater investor recognition and analyst attention. Our understanding of the motives that drive it is far from complete. Yet, precisely because cross-listing is costly on a variety of levels (both in terms of expense and legal risk), it cannot continue to be satisfactorily explained simply as simply a search for additional sources of capital in a segmented world.

In an increasingly competitive and consolidating environment, few stock exchanges can maintain a “business-as-usual” policy over the next decade and expect to survive. The key competitive decision

for most exchanges involves in which direction to move: (1) toward the high disclosure, high transparency approach that both the NYSE historically and the Neuer Markt more recently have pursued, or (2) toward the low transparency, cost minimization approach that most European and Asian stock exchanges have traditionally followed. This article has suggested that different exchanges will move in different directions, because they have (or can attract) different clienteles of listed companies. How they will behave also depends on whether smaller exchanges can forge alliances - - both with each other and with international brokerage firms to integrate their operations.

Predicting which strategy will dominate is speculative because the relative costs and benefits of cross-listing versus broker linkage of global markets are likely to change over time. At present, most issuers wishing to secure greater analyst attention and investor recognition outside their home markets must cross-list and enter a larger securities market, but this pattern could easily change if global brokerage were to direct their securities analysts to search abroad for firms they wished to market to their institutional clients. For the short-run, exchanges may remain focused simply on making acquisitions or negotiating alliances in order to form regional (or world-wide) “super-markets.” The urgency behind this process lies in the fact that those excluded from major alliances will be at a significant competitive disadvantage (much like the losers in the traditional game of musical chairs, they will be left out when the music stops). But the longer term issue involves whose preferences will be decisive: the controlling shareholders’ desire for private benefits or the issuer’s desire to maximize share value. In truth, attitudes can shift over time, and the strength of preferences can wax and wane. Still, the strength of the issuer’s preference for high disclosure is likely to be a direct function of the magnitude of investors’ fear of expropriation. That fear seems greatest in a post-crash environment, and this in turn

suggests that the race for the near future should be more towards the top.

Although this article has skirted the proliferating debate over regulatory competition and issuer choice,¹⁸⁶ one closing observation seems unavoidable: the proponents of regulatory competition have given insufficient attention to the implications of the bonding hypothesis. If issuers are enabled to obtain higher market valuations and to credibly signal higher earnings prospects by cross-listing on a “high disclosure” exchange, some forms of regulatory competition undercut this ability. For example, if foreign issuers could cross-list in the United States while complying only with the laws of their home country (or some other legal regime),¹⁸⁷ this would cloud the signal that a U.S. listing today carries. Foreign issuers could not as easily bond by cross-listing in the U.S. or subjecting themselves to U.S. law. Today, there is a network externality associated with listing on the NYSE or Nasdaq, as investors can assume that similar high disclosure standards apply to all companies listed thereon. Unfettered regulatory competition that enables individual issuers to choose their own legal standards both unravels this network and/or imposes cost on investors to learn what those new standards are.¹⁸⁸

¹⁸⁶ See sources cited supra at note 4.

¹⁸⁷ This is essentially what proponents of “issuer choice” advocate. See text and note supra at note 6.

¹⁸⁸ This leads to the obvious question: Why do not U.S. exchanges seek to resist regulatory competition? This article’s answer has been that because exchanges do not today capture the full value of their impact on foreign-listed firms (because trading substantially occurs elsewhere), they do not seek to protect themselves from regulatory competition. Indeed, they may anticipate greater revenue from maximizing the number of listed companies (as the LSE clearly does) than from charging higher fees to foreign issuers.

On the other hand, the bonding hypothesis does not preclude other forms of regulatory competition. Cross-listing is ultimately a legitimate form of regulatory competition. Additionally, if a U.S. company were to list only abroad (or were to switch its listing from a U.S. exchange to a foreign exchange after a shareholder vote), little injury would follow to other issuers or to investors with differing perceptions of the significance of a U.S. listing.¹⁸⁹ In short, because multiple forms of regulatory competition are possible, the case for unfettered “issuer choice” becomes correspondingly weaker, because this form of regulatory competition alone dissipates the signal that other firms wish to send.

Finally, precisely because exchanges do not today capture the full value of the bonding services that they provide to issuers (both because of flow back, ECNs and other means that divert trading away from exchanges), there is a case for regulatory oversight to protect and preserve the reputational benefits of exchanges listing. The “race to the top” should continue - - but it will not if “issuer choice” is permitted.

¹⁸⁹ In response, it may be argued that regulatory standards should be left entirely to the exchanges themselves. But this position overlooks that exchanges will wish to maximize trading volume and will equally wish to attract both foreign firms seeking only to reduce market segmentation and foreign firms seeking to bond.