
ARTICLES

THE USES OF NEW CAPITAL MARKETS: ELECTRONIC COMMERCE AND THE RULES OF THE GAME IN AN INTERNATIONAL MARKETPLACE*

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INTRODUCTION

One cannot open a newspaper today without reading about the formation of a new trading consortium or market. Electronic technology makes it increasingly easy to develop both local niche and broad-based international markets.¹ Electronic technology readily and cheaply spans geographic boundaries, cultures, and time zones. Markets using such technology can—and do—deliver the power of immediate information and direct trading access into the hands of customers, wherever they are located. Many functions, such as loans, insurance, and utility rates, as well as many property interests, such as emissions, bandwidth, or air rights, have been securitized or commoditized so that they can be more efficiently priced in a central marketplace.² Centering demand is easy electronically. In principle, most financial activity now can occur on markets. Some have called this phenomenon a capital markets revolution.³

1. At least in the United States, securities regulators have made it easier, as well, by permitting alternative trading systems (“ATS”) to organize as broker-dealers under specified conditions. See 17 C.F.R. § 240.3b-16 (1999); Regulation of Exchanges and Alternative Trading Systems, 63 Fed. Reg. 70,844 (1998) (codified at 17 C.F.R. pts. 202, 240, 242, 249) (changing the definition of “exchange” in Rule 3b-16 to “give securities markets a choice to register as exchanges, or to register as broker-dealers and comply with Regulation ATS”), corrected by 64 Fed. Reg. 13,065 (1999); 64 Fed. Reg. 19,450 (1999) (furnishing, retrospectively, technical amendments to final rule); *A New Regulatory Framework*, Report of the Commodity Futures Trading Commission Staff Task Force (Feb. 22, 2000) <<http://www.cftc.gov/reports.htm>> (stating a proposal for exempting certain electronic multi-lateral transaction execution facilities from application of the Commodity Exchange Act and providing for two streamlined market designation categories—“recognized derivatives transaction facility” and “recognized futures exchange,” which, when fully implemented into Commission rules, may materially reduce the costs of regulatory compliance for certain proposed electronic markets); see also CFTC Releases Proposal on New Regulatory Framework, No. 4405-00 (June 8, 2000) (visited June 12, 2000) <<http://www.cftc.gov/opa/regulatory.htm>>.

2. See PATRICK YOUNG & THOMAS THEYS, CAPITAL MARKET REVOLUTION: THE FUTURE OF MARKETS IN AN ONLINE WORLD 1-22 (1999) (discussing innovations made possible by electronic technology).

3. See *id.* Although electronic markets have advantages with respect to spanning

The premise of this Article is that so long as property and contractual rights are protected by, and enforceable in, the pertinent legal systems, markets in general, and electronic markets in particular, can in principle be the perfect international trading vehicles. Theoretically, the contractual nature of market conventions can permit a third world system to have a first world market infrastructure.⁴ Theoretically, technology can export a first world market around the globe in real time to wherever trading demand is located.

Why is this premise important to industries such as energy, to political initiatives such as improving the quality of the global environment, to brokers and dealers who want to access multiple products and jurisdictions from a single platform, and to financial markets regulators coping with adapting national regulatory systems to an international marketplace? Because, while national legislatures struggle to keep pace with technological change, and international organizations of financial services regulators labor to produce cross-border minimum standards and guidance on best practices, electronic derivatives markets have the free market incentives and the resources to harmonize jurisdictional differences *right now*.

This Article outlines the structural characteristics of markets that enable them to transcend national law. It then discusses three examples of current initiatives seeking to use these characteristics to the best advantage: (1) the London Clearing House Limited's SwapClear program for registering and clearing certain privately

jurisdictions and time zones and automating trading rules and conventions, there may remain issues regarding how such markets can (1) provide liquidity as volume increases or decreases, (2) address large orders, (3) secure proprietary (private) information, (4) respond to capacity or response time constraints, (5) provide for the handling of errors, and (6) assure system integrity generally. This Article does not address these issues. It also does not address whether the advent of electronic markets will lead to the organization of broad, integrated markets, or cause fragmentation or undesirable disintermediation. To the extent that there are additional or different issues of concern in equity securities markets, this Article does not address those issues. Rather, this Article focuses on the capacity of electronic derivatives markets by contract to facilitate market access across borders generally, whether to broad-based or local niche markets. International alliances established by contract to engage in trade or to provide financial services are not new. Consider, for example, the Hanseatic League and the Wendish Monetary Union. *See generally* CHARLES P. KINDLEBERGER, A FINANCIAL HISTORY OF WESTERN EUROPE 44 (2d ed. 1993).

4. *See infra* note 13 and accompanying text (explaining that market regulations can be determined by contract). From a competitive perspective, this is both the "good news" and the "bad news" in that technology, by reducing the cost of competition, potentially expands both the range and the quality of the international competition for any given market.

negotiated over-the-counter ("OTC") derivatives transactions;⁵ (2) BrokerTec Global, LLC's proposal for the development of a twenty-four hour single electronic facility or platform for execution, and potentially, the related clearing of international fixed-income cash and listed futures and options products;⁶ and (3) the Kyoto Protocol, which includes provisions to permit the trading of internationally-recognized greenhouse gas emission allowances.⁷ This Article concludes that, with transparent rules in a legal system that protects and enforces property and contractual rights, and with fair governance (of the market⁸ and legal systems accessed), markets can improve on and harmonize national law by applying uniform rules to their participants. As a consequence, the development of markets that can deliver internationally efficient prices and risk shifting or management tools with legal certainty is very promising.⁹

I. STRUCTURAL CHARACTERISTICS OF MARKETS AND THE POWER OF THE EXCHANGE CONTRACT TO ENHANCE LEGAL CERTAINTY

Legal certainty and the efficiency of markets are a beneficial by-product of their structure.¹⁰ In essence, markets sell their rules as well as their trading (execution and prices) systems and back office

5. See Commodity Futures Trading Commission Release No. 4247-99 (Mar. 23, 1999), available at CFTC, Release #4247-99 (visited June 7, 2000) <<http://www.cftc.gov/opa/press99/4247-99.htm>> [hereinafter *CFTC Release 4247-99*] (finding that OTC transactions cleared on SwapClear do not lose their exempt status under the Commodity Exchange Act and related rules and describing various programs for registering and clearing certain privately negotiated over-the-counter derivatives transactions).

6. See Statement by BrokerTec Global, LLC, on Objectives for Listed Derivatives (July 13, 1999) (on file with *American University Law Review*). This statement was circulated privately to various exchanges and other interested parties. In this statement, BrokerTec noted that fair governance and equitable access are necessary attributes for a market to prosper. BrokerTec Futures Exchange (BTEX), an affiliate of BrokerTec Global, filed an application for designation as a contract market with the CFTC on May 8, 2000. See Fed. Reg. 36,667 (June 9, 2000) (applying for designation in U.S. Treasury Note and U.S. Treasury Bond Futures).

7. See *United Nations Framework Convention on Climate Control* (visited June 7, 2000) <<http://www.unfccc.org>>.

8. See Organization for Economic Cooperation and Development ("OECD"), *Principles of Corporate Governance* (visited June 7, 2000) <<http://www.oecd.org/daf/governance/principles.htm>> (listing a set of non-binding principles for corporate governance in OECD member countries).

9. See THE WORLD BANK'S INTERNATIONAL TASK FORCE ON COMMODITY RISK MANAGEMENT IN DEVELOPING COUNTRIES, DEALING WITH COMMODITY PRICE VOLATILITY IN DEVELOPING COUNTRIES: A PROPOSAL FOR A MARKET-BASED APPROACH (Sept. 1999) [hereinafter THE WORLD BANK'S INTERNATIONAL TASK FORCE ON COMMODITY RISK MANAGEMENT].

10. See Andrea M. Corcoran, *Developing Exchange Derivatives Markets* (Oct. 20, 1999) (Presentation given at the 1999 International Institute for Securities Market Development) (transparencies on file at the CFTC).

(clearing, settlement, and accounting) arrangements as part of their product.¹¹ Market rules define participants' contract with the market and ordinarily deal with:

- (1) who may trade;
- (2) what and how they may trade;
- (3) when and how much of the unit of trading can be traded;
- (4) how the product is delivered or settled;
- (5) the consequences of failures to meet trading commitments or otherwise abide by the rules of the game; and
- (6) built-in surveillance and crisis management procedures.¹²

Therefore, markets—through their rulemaking powers—have the means to transcend or improve upon national law. In particular, as discussed more fully below, they can provide:

- (1) common trading rules that are implemented without regard to the identity of the players or where they are located;
- (2) equitable cross-border access to transparent prices, and;
- (3) secure settlement of transactions or delivery to participants located in multiple jurisdictions.¹³

11. *See id.* The benefits for multilateral arrangements attributed to market rules that define trading and back office systems are attributes of open-outcry markets as well as electronic markets. This Article, however, focuses specifically on electronic markets.

12. *Id.*

13. The Chicago Board of Trade ("CBOT") Rules for Project A, its electronic system, state that:

The rules and regulations contained in this Chapter govern those Exchange contracts which are traded through the Project A system. To the extent that the provisions in this Chapter conflict with rules and regulations in other sections of the Rulebook, this Chapter supersedes such rules and regulations and governs the manner in which contracts are traded through the Project A system. Otherwise, contracts traded on the Project A system are fully subject to applicable general rules and regulations of the Association unless specifically and expressly excluded therefrom.

CBOT Rule 9B.01. The CBOT membership application reads, in pertinent part: "I do hereby agree that, if I am accepted as a member of the Association, I will observe and be bound by the Charter, Rules and Regulations of the Association, and all the amendments thereto." *See* Chicago Board of Trade, *Membership Agreement*. FutureCom, an internet-based exchange provides in its account agreement at XIII B: "Orders will be matched according to time price priority rules. Orders at the same price will be executed according to the first order placed in time. Orders with a price limit will be executed according to rules that fill the best price first." The account agreement thus states the rules contained in the algorithm. The FutureCom account agreement will be signed electronically and may also be signed manually to the extent required by relevant local law. The Chicago Mercantile Exchange ("CME") Rule 570 states that the rules of the CME apply to Globex (its electronic system). *See* CME Rule 570. Terminal operators using Globex must agree to be bound by the rules of the CME. *See* CME *Terminal Operator Identification* (on file with *American University Law Review*) (required of operators seeking user IDs). The Cantor Financial Futures Exchange (CFFE), Non-US Member Trader Application and

This is true notwithstanding a diversity of, or even diminished, legal and regulatory infrastructures in some of the jurisdictions where market counterparties are located.¹⁴

Although recognizing the critical importance of developing or revamping capital market legislative regimes to address the operations of an increasingly global marketplace, regulators cannot ignore that comprehensive regulatory change takes time.¹⁵ For regulators, a promising feature of evolving market structures is that, pending regulatory change, an enforceable self-regulatory infrastructure can be pursued by contract.¹⁶ The optimistic view is

Clearing Member Guarantee provides that "Clearing Member and each Trader hereby agree to be bound by the By-Laws and Rules and to be subject to the jurisdiction of the Exchange, the New York Cotton Exchange (including any successor thereto [the New York Board of Trade]) and the New York Clearing Corporation, as applicable." See CFFE, *Non-U.S. Trader Application and Clearing Membership Guaranty*. The CFFE is wholly owned by the New York Board of Trade.

14. See, e.g., Exchange-Traded Derivatives in Developing Capital Markets Report (1999) <<http://www.cftc.gov/oia/interpro.htm/InternationalPublications>> (describing the law, exchanges, and economic status of 24 jurisdictions).

15. For example, the 1989 reauthorization of the CFTC culminated in the Futures Trading Practices Act of 1992 (1992 Act). See Futures Trading Practices Act of 1992, Pub. L. No. 102-546, § 1(a), 106 Stat. 3590. The 1992 Act introduced several kinds of increased flexibility. The Act added Section 4c (7 U.S.C. § 6(c)), an exemptive provision that permits disapplication of the Commodity Exchange Act, with certain exceptions, where marketplace changes would warrant such disapplication. The related Conference Report directed the CFTC to use its Section 4c authority to address exempting "swaps" and "hybrids" among other things from the exchange trading requirement of the CEA. The 1992 Act also expanded relief with respect to exempt transactions from state anti-wagering laws (section 8(e), 7 U.S.C. § 12(e)), enhanced CFTC capacity to provide assistance to foreign jurisdictions (section 12(f), 7 U.S.C. § 16(8)), enhanced the ability to protect the confidentiality of information received from foreign authorities; and encouraged the development of electronic markets globally (section 12(g), 7 U.S.C. § 16(g)). It also added sections on exchange governance, conflicts of interest, new licensing requirements, additional sanctions, and mandated that the Commission commence multiple rulemakings. Similarly, the European Commission noted in a recent communication that the European Union's ("EU") single market in financial services had been under construction since 1973, and that it took over a decade for the EU member states to agree upon legislation to implement the philosophy of "single passport/home-country control." See *Financial Services: Implementing the Framework for Financial Markets: Action Plan*, COM (1999) 232, 11.05.99, pp. 1, 16; see also CFTC, *Regulation of Over-The-Counter Derivatives Transactions*, Mar. 1999, at 73-81 <<http://www.cftc.gov/oia/interpro.htm#>> [hereinafter *OTC Survey*] (giving, in the section on "Recent and Contemplated Changes," other examples of the time frame of major legislative initiatives in the financial services field). Compare Commodity Futures Trading Commission, *OTC Derivative Markets and Their Regulation*, (Oct. 1993), with President's Working Group on Financial Markets, *Over-the-Counter Derivatives Markets and the Commodity Exchange Act* (Nov. 1999). Notwithstanding the difficulties incident to the process of regulatory reform, however, international financial services regulators have identified as a priority the development of common principles and standards in the operation of regulated markets. See Technical Committee of the International Organisation of Securities Commissions ("IOSCO"), *infra* notes 17 and 50.

16. See HANS VAN HOUTTE, *THE LAW OF INTERNATIONAL TRADE* § 1.24-1.30 (1995) (discussing methods and applications for choice of law rules); see also RESTATEMENT

that although pending change often gets embroiled in the political process or in contentious battles among competitors, market-based solutions to international public policy problems or commercial needs nonetheless can go forward.¹⁷ Most importantly, their implementation can be accomplished in a manner that is consistent with the view that an appropriate infrastructure is vital to well-functioning markets.

A. *The Multilateral Exchange Contract and the Rules of the Game*

How can this be possible? A few examples are illustrative. Markets live and die by their operating rules. Regardless of who enacts the requirements, markets must have rules to function. These are often called “the rules of the game.” As such, exchange rules potentially can overcome uncertainties—not the least of which are non-existent, conflicting, or inadequate laws. In some ways, exchanges are mini-governments or self-governments¹⁸—so a fair governance structure is

(SECOND) OF CONFLICT OF LAWS §§ 187-188 (1971) (discussing validity and enforceability of choice of law provisions). International private law rules in most jurisdictions allow contracting parties to choose the law that will govern their relationship, provided that the laws of the country chosen do not violate either (1) the fundamental policy, mandatory laws, or *ordre public* of the country whose law would have applied in the absence of a choice of law provision, or (2) the fundamental policy, mandatory laws, or *ordre public* of the country of the court seized of the case, in either of which event the court may determine not to apply the laws of the country chosen in the contract. See generally Hiram E. Chodosh, *An Interpretive Theory of International Law: The Distinction Between Treaty and Customary Law*, 28 VAND. J. TRANSNAT'L L. 973 (1995); cf. *infra* note 24 and accompanying text (noting the ability of clearing organizations and markets to operate by rules agreed to on a multilateral basis).

17. Markets operate within a regulatory framework which, although not harmonized internationally because of historical, legal, cultural, and juridical differences, nonetheless ordinarily provides for accountability to the regulator and arrangements for policing market rules that meet the regulatory objectives of investor protection, fair, efficient and transparent markets, and reduction of systemic risk. See IOSCO Technical Committee, *Objectives and Principles of Securities Regulation* (Sept. 1998) (visited June 7, 2000) <<http://www.iosco.org/docs-public/1998-objectives.html>>.

18. At least in certain countries, self-regulation for markets (like internal controls and risk management for firms) is a required element of the regulatory structure. See, e.g., General Regulations under the Commodity Exchange Act, 17 C.F.R. § 1.51-1.52 (1999) (establishing the requirement that exchanges, *i.e.*, contract markets, maintain affirmative programs to enforce their own rules and to oversee their markets, and establish criteria for a self-regulatory organization adoption and surveillance of the minimum financial requirements applied to such organizations' members, respectively). Indeed, international standard-setters such as the Council of Securities Regulators of the Americas (“COSRA”) and IOSCO have endorsed the concept of self-regulation subject to appropriate oversight. See COSRA, *Resolution Concerning Principles of Effective Market Oversight*, at Principles 3 and 4 (May 30, 1995) (visited June 7, 2000) <<http://www.cvm.gov.br/ingl/inter/cosra/r-over-e.asp>> (setting forth mechanisms for “maintaining an effective system for enforcing laws, regulations, and self-regulatory organization rules governing the operation of . . . markets”); see also IOSCO Technical Committee, *Objectives and Principles of Securities*

critical to their proper function.¹⁹

Regulation, at Principles 6 and 7 (Sept. 1998) (visited June 7, 2000) <<http://www.iosco.org/docs-public/1998-objectives.html>> (noting that core objectives of securities regulation are the protection of investors, the assurance that markets are fair, efficient and transparent, and the reduction of systemic risk).

Even though the movement toward for-profit markets is testing the limits of the self-regulatory model, it is still an expected feature of market regulation and of required risk management practices that exchanges will enforce their rules and provide for orderly trading in an equitable manner. It is also still a feature of best practice that these compliance activities of markets would be subject to oversight or scrutiny by a regulatory authority. Exchanges have demutualized and become for-profit enterprises in the Netherlands, Germany, Sweden, Italy, the U.K., and Australia. See, e.g., London International Financial Futures Exchange, *Corporate Structure* (visited June 7, 2000) <<http://www.liffe.com/about/structure/index.htm>>; Australian Stock Exchange, *The Australian Stock Exchange* (visited June 7, 2000) <<http://www.asx.com.au/B1100.htm>>. Hong Kong Exchanges and Clearing Limited, the Stock Exchange of Hong Kong Limited, and the Hong Kong Futures Exchange Limited issued a joint press release on July 30, 1999, regarding the conclusion of negotiations for a merger of the exchanges, with the surviving exchange to be a for-profit company. On March 6, 2000, the Hong Kong Exchanges issued a further press release that such merger had been completed. See Hong Kong Futures Exchange, Inc., *Hong Kong Futures Exchange becomes a subsidiary of Hong Kong Exchanges and Clearing Limited* (visited June 7, 2000) <<http://www.hkfe.com/news/index.html>>. The New York Stock Exchange also has announced recently that it proposes to demutualize and to convert to a for-profit exchange. See Grep Ip, *Big Board May Go Public by November, But Tax Issues Could Become an Obstacle*, WALL ST. J., July 26, 1999, at C1 (discussing the New York Stock Exchange's proposed, but not yet implemented, conversion from a membership-owned entity to for-profit public company). In the case of for-profit markets, it may be that certain aspects of enforcement will be (or will be required to be) outsourced or unbundled from the marketplace itself or overseen by independent auditors or undertaken directly by the regulator to limit the potential for conflicts of interest or to render such activities cost efficient. For example, the National Futures Association, a U.S. self-regulatory organization, which is a registered futures association with statutory responsibilities under section 17 of the Commodity Exchange Act, indicates that several proposed new markets have requested that it perform their compliance and surveillance requirements. See Application of Merchant's Exchange of St. Louis, LLC for Designation as a Contract Market in Illinois Waterway and St. Louis Harbor Barge Futures Contracts, 65 Fed. Reg. 4805 (2000) (publishing notice of availability of the terms and conditions of proposed commodity futures contracts). Nevertheless, the market will continue to operate by rule, multilateral contract, and in the case of electronic markets, by algorithm, and will remain accountable to the regulator (and its participants) for the enforcement of its operating rules and the integrity of transactions conducted thereon. IOSCO's Consultative Committee has an ongoing project looking into this precise issue relating to new models for effective self-regulation. See *Final Communiqué of the 23rd Annual Conference of the International Organization of Securities Commissions* (visited Feb. 7, 2000) <<http://www.iosco.org/iosco.html>>; see also *Final Communiqué of the 25th Annual Conference of IOSCO "Global Markets, Global Regulation"* (May 2000) (visited May 24, 2000) <<http://www.iosco.org/iosco.html>> [hereinafter *25th Communiqué*]. At IOSCO's March 1999, meeting of its Technical Committee in Berlin, a Task Force was constituted to identify issues, such as responsibility for enforcement of exchange rules, related to demutualization. See *25th Communiqué supra*; see also *IOSCO Consultative Committee's Report, Model for Effective Self-Regulation* (May 4, 2000) (on file with *American University Law Review*) (stating that "SROs are effective in dealing with global issues because self-regulation is defined by contract—the rule book—versus national legislative acts").

19. Cf. Organisation for Economic Cooperation & Development ("OECD"), *Principles of Corporate Governance* (visited June 7, 2000) <<http://www.oecd.org/daf/>>

1. *Certainty and uniformity*

Commercial incentives favor fairness, especially if they are buttressed by required accountability to or oversight by a regulator. Fairness is necessary for the market to function properly. It promotes market confidence; market confidence supports liquidity; liquidity promotes efficient pricing; efficient pricing enhances market confidence and, in turn, attracts further liquidity. Fairness is also cost-effective. On markets, one set of rules generally applies across the board to all similarly situated market participants. In electronic systems, the algorithm that matches orders or trades constitutes the trading and execution rules that govern the priority and manner of trading. This leaves no room for disputes as to the applicability of the trading rules contained in the system. The rules also standardize the interest traded. This eliminates disputes about the validity of, or uncertainty as to the legality of, that interest.²⁰

As the algorithm enforces the trading rules, assuming the algorithm cannot be gamed or compromised, the system itself will assure uniform treatment in accordance with its matching and priority rules to all participants, and will provide a complete audit trail that cannot be circumvented.²¹

2. *Certainty, transparency, and equitable application of the rules*

All trading on the system can be made visible in real time to compliance personnel. Therefore, ongoing surveillance and reconstruction of trading is possible. Similarly, such trading potentially can be made transparent to the public in real time and wherever located, thereby reinforcing efficient pricing. Most systems include their own dispute resolution, disciplinary and emergency rules, error resolution procedures, and liability limitations, which each participant using the system subscribes or consents to by entering into an access arrangement or by becoming a member. These rules also govern the execution of trades.²²

governance/principles.pdf> (containing a set of non-binding principles that are intended to assist OECD member countries in their efforts to “evaluate and improve the legal, institutional and regulatory framework for corporate governance . . .”). See, e.g., 7 U.S.C. §§ 7a(a)(17)(A), 7a(c)(15)(A), 19 (1994).

20. See Andrea M. Corcoran, *Prudential Regulation of OTC Derivatives: Lessons from the Exchange-Traded Sector*, in PRUDENTIAL REGULATION OF BANKS AND SECURITIES FIRMS (G. Ferrarini ed., 1995).

21. See Andrea M. Corcoran & John C. Lawton, *Regulatory Oversight and Automated Trading Design: Elements of Consideration*, 13 J. FUTURES MARKETS 213, 217-18 (1993) (explaining that the nature of the algorithm can prevent trading abuses).

22. Compare IOSCO Technical Committee, *Principles for the Oversight of Screen-Based Trading Systems*, at Documents Library, (June 1990) (visited June 7, 2000) <<http://www.iosco.org/iosco.html>> (establishing standards for regulatory authorities

3. *Certainty and market integrity*

Exchange rules also govern the integrity of the transaction. Membership, eligibility, or access criteria are set to limit who can use or have direct access to the market (i.e., to filter out the unfit, the under-capitalized, or the improvident and to restrain trading within appropriate limits). Derivatives exchanges tend to collect obligations owed to them up front. Typically, they are pay-as-you-go systems that are intended to remove credit risk from the market or reduce it to the bare minimum on at least a daily basis.²³ Back-office (accounting for trades, positions, and financial results) and settlement functions also can in effect be built into the individual interests traded, the market's rules and the system, whether they are actually integrated into the market itself or linked to it through separate clearing facilities. As a consequence, multilateral netting of obligations can be made automatic and a part of market rules either through the market itself or through its clearing arrangements. Typically, the "market" or the relevant clearing system is a central counterparty which becomes the buyer to every seller and the seller to every buyer.²⁴ This feature is

responsible for oversight of screen-based trading systems for derivative products) (the principles are listed in the Appendix of this Article), with IOSCO Technical Committee, *Issues in the Regulation of Cross-Border Proprietary Screen-Based Trading Systems* (Oct. 1994) (visited June 7, 2000) <http://www.iosco.org/docs-public/1994-issues_in_regulation_of_cross-border.html> (identifying range of issues relevant to regulation of Proprietary Trading Systems ("PTS")). See, e.g., IOSCO Technical Committee, *Objectives and Principles of Securities Regulation*, at Principles 25-30 and section 13 (Sept. 1998) (visited June 7, 2000) <<http://www.iosco.org/docs-public/1998-objectives.html>> (asserting that trading systems should be subject to "regulatory authorization and oversight" to "promote transparency of trading" and to "detect and deter manipulation and other unfair trading practices").

23. See Andrea M. Corcoran, *Developing Financial and Operational Performance Standards for Exchange Derivatives Markets: A Modest Proposal for an International Dialogue*, 4 EUROPEAN FIN. SERVICES L. 145 (May/June 1997) (setting forth key components of assuring transaction integrity). Real-time gross settlement of obligations is one ideal—and an achievable ideal by the use of electronic systems—reducing the time exposure or credit risk of unsettled obligations to the legal risk of disparate national laws.

24. Generally, for a futures exchange's clearing organization, trading is a zero-sum game: The gains of the winners equal the losses of the losers. Gains and losses are matched and settled daily. In addition to netting cash flows efficiently, the clearing organization's taking of the opposite side of each trade and becoming the common counterparty for all traders results in another advantage. Such a counterparty relieves traders of the necessity to assess the financial condition of their actual counterparties in the market and thereby permits and facilitates anonymous transacting. However, market counterparties handling customer business must still assess their credit risk vis-à-vis their customers and customers must still assess the credit of any intermediary through whom they transact. Also, it is possible to unbundle the trade execution and clearing functions of an exchange and to clear transactions that are consummated over-the-counter or at another exchange through a clearing account. Clearing organizations, like markets, operate by rules agreed to on a multilateral basis by their members or participants. See, for example, Article V Section 3, "Conditions to Admission," of the Options Clearing Corporation, which

intended to leave no room for speculation as to what is valid or invalid netting or what is valid or invalid collateral for purposes of determining an individual market participant's exposures to its counterparties and to the market. This system also eliminates the need to return to the original, actual counterparty to a transaction to reverse or offset that transaction, and as a consequence, this system reduces asset liquidity risk and transaction costs.²⁵ Over-the-counter derivatives counterparties, and associations of OTC derivatives dealers, attempt to obtain the same result by standardizing master agreements and by choosing the law of, or advocating the choice of the law of, a particular jurisdiction to govern their contracts.²⁶

4. *Certainty in the event of default*

An exchange's rules also address market failures and the failure of market participants to perform.²⁷ Exchange rules typically permit

states that:

No applicant shall be admitted as a Clearing Member until the applicant . . . has signed and delivered to the Corporation an agreement . . . (b) to abide by all provisions of the By-Laws and the Rules and by all procedures adopted pursuant thereto, (c) that the By-Laws and the Rules shall be a part of the terms and conditions of every Exchange transaction or other contract or transaction which the applicant, while a Clearing Member, may make or have with the Corporation, or with other Clearing Members in respect of cleared securities or market baskets, or which may be cleared or required to be cleared through the Corporation.

Id. It specifically indicates that such members must, in the case of Non-US Securities Firms:

(i) comply . . . with the guidelines and restrictions imposed on domestic broker-dealers regarding the extension of credit as provided by Section 7 of the Securities Exchange Act of 1934 and Regulation T . . . with respect to any customer account that includes cleared securities issued by the Corporation . . . and (k) to consent . . . to the jurisdiction of Illinois courts and to the application of United States law in connection with any dispute with the Corporation arising from membership.

Id. The Clearing Member Agreement of the Board of Trade Clearing Corporation (that clears for the Chicago Board of Trade) provides: "The undersigned, while a clearing member, will abide by the Charter, Bylaws, rules, procedures and policies of the Clearing Corporation and all amendments and modifications thereto which may be adopted from time to time." See Board of Trade Clearing Corporation, *Clearing Member Agreement* (on file with *American University Law Review*); see also *supra* note 21. This Article does not explicitly address issues relevant to clearing organizations that seek to cross borders independent of markets.

25. See Corcoran, *supra* note 20; see also *infra* note 61 (discussing the London Clearing House's SwapClear program, used to clear over-the-counter transactions).

26. See, e.g., International Swaps and Derivatives Ass'n (visited June 7, 2000) <<http://www.isda.org>> (describing the International Swaps and Derivatives Association's ("ISDA") standardized documentation, netting opinion, and collateral enforcement projects); see also, e.g., Committee on Payment and Settlement Systems and the Euro-currency Standing Committee, Bank for International Settlements, *Report on OTC Derivatives: Settlement Procedures and Counterparty Risk Management* (Sept. 1998) <<http://www.bis.org/publ/index.htm>>.

27. Cf. Andrea M. Corcoran & Susan C. Ervin, *Maintenance of Market Strategies in*

open interest to be liquidated immediately, and subject margin and other collateral or security to the payment of the markets' claims against a defaulting party.²⁸ The national law of some jurisdictions explicitly permits disposition of such property in accordance with exchange rules.²⁹ Such exchange rules may include the value of a defaulting member's memberships or access arrangements in the property available to satisfy the claims of other exchange members against the defaulting member. Exchange rules should be enforceable by the market notwithstanding the bankruptcy of the clearing member.³⁰ Therefore, the property value of open interest, collateral, exchange memberships, or access arrangements may be accessible by the exchange to satisfy specified claims of its members (or contracting participants) and, in the event of a default, may be disbursed, liquidated, or transferred in accordance with exchange rules with a minimum of delay and interference from the courts.³¹

Futures Broker Insolvencies: Futures Position Transfers from Troubled Firms, 44 WASH. & LEE L. REV. 849, 851 (1987) ("[E]xamining one broker's failure . . . as an illustration of certain customer and market protection problems [that] can be engendered by a commodity broker's failure, assess[ing] current regulatory protections against such problems, and suggest[ing] potential improvements to the system.").

28. See *id.* at 849 (discussing scope of practices permitted by exchange rules).

29. See IOSCO, *Report on International Regulation of Derivatives Markets, Products and Financial Intermediaries: Common Framework of Analysis and Cross-Regulatory Summary Chart*, at 236-41 (1997), available at <<http://www.iosco.org/iosco.html>>; see also European Union Council Directive 98/26/EC, Official Journal L166/45 (June 11, 1998) [hereinafter Settlement Finality Directive] (discussing settlement finality in payment and securities settlement systems).

30. See, e.g., *Board of Trade v. Johnson*, 264 U.S. 1, 8, 15 (1924) (finding that a seat on an exchange owned by a bankrupt member passed, subject to the rules of the exchange, to the bankrupt's trustee in bankruptcy. The exchange rules provided that other exchange members to whom the bankrupt member owed exchange obligations could object to sale of the bankrupt member's seat as such members had a prior claim to the proceeds of any sale); CFTC Bankruptcy Rules, 17 C.F.R. pt. 190 (1999) (regulating, *inter alia*, the effect of bankruptcy proceedings on debtor's estate, commodity contracts, transfers, calculation of allowed net equity, allocation of property, and allowance of claims); *In re Drexel Burham Lambert Group Inc.*, 120 B.R. 724, 742 (S.D.N.Y. 1990) (deducing that where transactions involving the "purchase or sale of commodities . . . would appear to fall within the general competence of judges . . . there is plain merit in having [the Chicago Board of Trade] determine all of the . . . issues bearing on validity and amount of the Member's claims . . . relating to the liquidation of the Members' claims"); see also Settlement Finality Directive, *supra* note 29, at art. 7 ("Insolvency proceedings shall not have retroactive effects on the rights and obligations of a participant arising from, or in connection with, its participation in a system earlier than the moment of its opening such proceedings . . .").

31. See *Board of Trade v. Johnson*, 264 U.S. 1 (1924) and *supra* note 30. For examples in specific countries (France, Germany, Italy, Spain, and the United Kingdom), see *OTC Survey*, *supra* note 15, at 69-70. In some jurisdictions, these rules also apply to documented OTC transactions. See also 11 U.S.C. § 556 (1994) (explaining rights of U.S. domiciled derivatives clearing organization in bankruptcy).

5. *Certainty and consent to the rules of the game*

The consent of members (trading rights holders and/or market participants) to the rule structure of the market permits the exchange or clearing structure to enforce multilateral commitments of such participants to support the financial conclusion of transactions conducted on the market.³² Such consent also can overcome issues related to:

- (1) what information has to be provided to the exchange by market participants;
- (2) the use of information in the system by system supervisors or operators;
- (3) the sharing of appropriate information with regulators or authorities in other jurisdictions;³³ and
- (4) the resolution of disputes about executions, handling of errors, and liability for system failures.

In the case of electronic systems, the system itself can document this contract to abide by the rules of the game by making it part of the conclusion or execution of a transaction; that is, consent occurs by making it the assumed pre-condition of each and every trade. In many jurisdictions, the terms and conditions of standardized exchange contracts are themselves part of the exchange's operating rules, thereby reinforcing that the terms of the contracts are legal and enforceable.³⁴

32. Such commitments also may be supported by disapplication of local antitrust laws. *See* 7 U.S.C. § 19 (1994) (requiring CFTC to consider that the public interest is protected by antitrust laws and "to endeavor to take the least anti-competitive means of achieving" statutory objectives).

33. *See, e.g.*, Council Directive 95/46/EC of 24 October 1995 On The Protection Of Individuals With Regard To The Processing Of Personal Data And The Free Movement Of Such Data, art. 1, 1995 O.J. (L 281) 31, 38 [hereinafter Privacy Directive] (stating the purpose of the Directive is to regulate member states so that they will "protect the fundamental rights and freedoms of natural persons, and in particular, their right to privacy with respect to the processing of personal data"). Pursuant to the Privacy Directive, an individual must be given notice when personal data is proposed to be processed by another party, including processing that results in a dissemination of the data to another party. *See id.* at 42. The Privacy Directive allows the individual to control the use of personal data by giving him the right to object to and prevent the processing or dissemination of his personal data. *See id.* at 39. The Privacy Directive, however, also contemplates that an individual may be able to foresee the dissemination of data and that he may desire the dissemination of data. In such circumstances, the Privacy Directive allows the individual to consent to such processing or dissemination in advance. *See id.* at 39-41. Exchange rules are one potential means of providing consent.

34. *See* Office of International Affairs, Commodity Futures Trading Commission, *Futures Exchange and Contract Authorization, Standards and Procedures in Selected Countries* (Aug. 3, 1999) <<http://cftc.gov/oia/marketcontracts.pdf>> [hereinafter *Standards and Procedures in Selected Countries*] (furnishing a summary report in table format of "the results of a review of statutes and regulations of ten (10) jurisdictions in nine (9)

In sum, these features of exchanges facilitate asset liquidity and the reduction and isolation of credit risk, factors that usually are self-executing in the market. These features also serve to minimize conflicts of interest and issues of interpretation that may develop when bilateral contracts go awry.

B. Enhancing Legal Certainty—Could this Lead to a Race to the Top?

An exchange ordinarily must be authorized in the jurisdiction in which it is domiciled,³⁵ but it also may need approvals in other jurisdictions in which the exchange, its members, or its participants conduct business.³⁶ To the extent that domestic law or the law of an exchange's "home" jurisdiction gives markets their legal identity and shapes the manner in which they operate, concessions to or reinforcements of the enforceability of market rules are important elements of a mature jurisdiction's capital markets law. In addition to buttressing the exchange contract, such reinforcement can increase the attractiveness of an exchange-type vehicle domiciled in that location by increasing the likelihood that other jurisdictions will recognize the "home" jurisdiction's laws governing market rules, thereby harmonizing jurisdictional differences.³⁷

countries regarding (1) the authorization of exchanges; (2) the amendment of exchange rules; (3) the admission of contracts to trading on an exchange; and (4) the amendment of admitted contracts"). The CFTC recently adopted rules to permit the listing of a futures contract on an exchange without prior notice to the CFTC. See 64 Fed. Reg. 66,375 (1999). However, the CFTC retains supervision of the contracts that are immediately listed—there must be a certification that the terms and conditions meet CFTC guidance, the performance of the contract will be overseen, and the market may opt to seek specific approval as opposed to immediate listing. See CFTC Rule 5.3 (17 C.F.R. pt. 5, 64 Fed. Reg. 66,373 (1999)), available at <<http://www.cftc.gov/foia/fedreg99/991126a.pdf>>.

35. See *Standards and Procedures in Selected Countries*, supra note 34 (instructing that "jurisdictions require that exchanges be formally authorized by a regulatory authority").

36. Compare regarding French law, Article 18 of Law of 28 March 1885, as amended, together with Decree 90-948, dated 25 October 1990 pursuant to which such Law is enforced, with Council Directive 93/22/EEC of 10 May 1993 On Investment Services In The Securities Field, art. 3, 1993 O.J. (L 141) 27, 33-34, as amended at 1995 O.J. (L 168) 7 [hereinafter ISD] (governing conditions for taking up business, including requirement for obtaining authorization from home member states' competent authorities).

37. See Forum of European Securities Commissions, *Standards for Regulated Markets Under the ISD* (Dec. 22, 1999) <www.europefesco.org>; see also Financial Stability Forum, *Report of the Task Force on Implementation of Standards* (Mar. 15, 2000) (visited June 7, 2000) <<http://www.fsforum.org/Reports/RcplOS.html>>. The Financial Stability Forum is an initiative of the Group of Seven countries and describes itself as follows:

The Financial Stability Forum (FSF) was convened in April 1999 to promote international financial stability through information exchange and international co-operation in financial supervision and surveillance. The Forum brings together on a regular basis national authorities responsible for

Market operators may choose the most hospitable jurisdiction, from the perspective of its enabling law and infrastructure, in which to domicile or to organize an electronic market, and will tailor market rules to meet (or not be inconsistent with) the requirements of jurisdictions from which they wish to be accessed.³⁸ Such a choice permits the market to reach the broadest possible customer base. Theoretically, the choice of a jurisdiction that imposes the least amount of regulation, or that has a minimal regulatory infrastructure, would *not* occur.

Assuming that the more successful market jurisdictions have well-informed participants and regulators or other market authorities that address fraud, misinformation, and anti-competitive abuses, the effect of choosing more successful market jurisdictions could result in a “race to the top” rather than the alternative, which contemplates only regulatory costs and not regulatory benefits in market jurisdiction selection.³⁹ This effect occurs because the rules and the manner in

financial stability in significant international financial centres, international financial institutions, sector-specific international groupings of regulators and supervisors, and committees of central bank experts. The *FSF* seeks to co-ordinate the efforts of these various bodies in order to promote international financial stability, improve the functioning of markets, and reduce systemic risk.

Financial Stability Forum (last updated May 25, 2000) <<http://www.fsforum.org/Home.html>>.

38. A regulatory authority in a jurisdiction from which financial intermediaries access an electronic market in another jurisdiction may make its own determination regarding whether the electronic market must be authorized in its jurisdiction to provide services there. But, in making this determination, such regulatory authority is likely to take into account the quality of the regulatory system of the jurisdiction in which the electronic market is established and regulated and, likewise, it will consider the internal operating rules of the electronic market. *Compare* IOSCO Technical Committee, *Principles for the Oversight of Screen-Based Trading Systems*, *supra* note 22 (suggesting that all relevant regulatory authorities should assess a system’s compliance with the Principles).

39. Much has been written over time about the fear of a “race to the bottom” and “regulatory arbitrage.” It is true that users of markets may seek to reduce agency costs by choosing a particular method or place for transacting. Informal surveys generally identify liquidity as the primary goal of market users. But there is some evidence that users increasingly evaluate the transparency of rules and the strength of the market infrastructure. According to a November 1999 report by the Division of Economic Analysis of the CFTC, *THE GLOBAL COMPETITIVENESS OF U.S. FUTURES MARKETS REVISITED*: “As the trading statistics reviewed above demonstrate, there is a lack of solid evidence supporting the notion that disparities in regulatory schemes are having significant effects on the U.S. competitive position.” *DIV. OF ECONOMIC ANALYSIS, CFTC, THE GLOBAL COMPETITIVENESS OF U.S. FUTURES MARKETS REVISITED* 36 (1999) [hereinafter *GLOBAL COMPETITIVENESS*]. In the United States, recent initiatives of the SEC and the CFTC are intended to permit the election of higher regulation for its benefits. *See* 17 C.F.R. § 240.15c 3-1, Appendix F – Optional Market and Credit Risk Requirements for OTC Derivatives Dealers, and the CFTC’s Proposed New Regulatory Framework (Feb. 2000) (visited June 7, 2000) <<http://www.cftc.gov/reports.htm>>; *see also* Forum of European Securities Commissions, *Consultation Paper on Implementation of Article 11 of the ISD: Categorization*

which the rules control risk and the *integrity* of the transaction are part of the product being sold over the system. Choosing a jurisdiction with too low a regulatory level within which to frame the rules could compromise their enforceability, unduly limit the class of participants that would be able to trade on the system, or reduce the geographic scope of the market's business. Of course, market participants would take other factors into account in choosing a domicile, such as the most likely location of the bulk of the targeted customer base, the time zone coverage, the nature of the contract traded, the location where banking or delivery arrangements, if any, are likely to be located, the nature of the products on which reference prices are based, and whether the trade requires physical delivery rather than a cash settlement.

Interestingly, some jurisdictions have proactively adopted legislation or given judicial recognition that market rules will supersede certain contravening local laws. For example, the European Union ("EU") has adopted a directive that requires Member States to transpose into their national law certain provisions that will cause the rules of a securities settlement system to govern transactions on the system in lieu of, or with precedence over, conflicting national bankruptcy law provisions.⁴⁰

C. *Other Strategies to Achieve Legal Certainty Across Borders*

Given that a major benefit of electronic markets is their ability to

of Investors for the Purpose of Conduct of Business Rules, at ¶ 11 (November 1999) (visited June 26, 2000) <<http://www.europefesco.org>> (suggesting that professional investors should be permitted to request non-professional treatment, i.e. to opt for a higher level of protection). As mentioned above, the international standard-setting bodies, the International Organisation of Securities Commissions and the Basel Committee on Banking Supervision have conducted a standard-setting exercise intended to specify a set of core international standards applicable to investment services providers, including secondary markets and credit institutions, and have commenced an exercise that is ongoing to assess (or to cooperate in assessments conducted by the international financial institutions such as the International Monetary Fund and the World Bank) implementation of those principles by national jurisdictions. See Financial Stability Forum, *supra* note 37. This author has been advised that an initial step in implementing the Euronext platform providing a single facility for executing trades in Paris, Brussels, and Amsterdam securities markets will be a comprehensive exercise to harmonize the relevant component market rules. See *infra* note 67.

40. See Settlement Finality Directive, *supra* note 29, §§ 6-8 (discussing "Provisions Concerning Insolvency Proceedings" including the requirement that "[i]n the event of insolvency proceedings being opened against a participant in a system, the rights and obligations arising from, or in connection with, the participation of that participant shall be determined by the law governing that system"); and § 9 (providing that "[t]he rights of a participant to collateral security provided to it in connection with a system . . . shall not be affected by insolvency proceedings against [a] participant. . . . Such collateral security may be realised for the satisfaction of these rights").

link users located in multiple dispersed jurisdictions, the question remains whether international differences can reliably be bridged based solely on the assurance that the home or domicile of a market is conducive to enforcement of that market's rules? Alternatively, there may be other measures, in addition to assurances of market rule enforceability, on which market participants might rely to acquire confidence in the precise functioning of the market for remote or offshore users. In fact, as discussed below, market regulators—like markets—also have developed four innovative approaches to surmounting the lack of international protocols or rules to resolve jurisdictional differences. In doing so, they too have found that, although a clear international set of parameters would be desirable, the evolutionary state of international law need not necessarily be an obstacle to regulatory arrangements intended (1) to enhance the enforcement of exchange rules, (2) to facilitate cross-border access to markets, and (3) to deliver needed customer protections.⁴¹

1. *Follow the money*

The first approach is similar to the approach followed by all other sophisticated participants in financial markets: regulators can follow the money. The market system can require the money (margin) to

41. See, e.g., IOSCO, *Objectives and Principles of Securities Regulation*, pt. I.4, (Sept. 1998) (visited June 7, 2000) <<http://www.iosco.org/docs-public/1998-objectives.html>> (stating the three core objectives of securities regulation: “the protection of investors; [e]nsuring that markets are fair, efficient and transparent; [and t]he reduction of systemic risk”); see also *Declaration on Cooperation and Supervision of International Futures Markets and Clearing Organisations* § 1.5 (last amended Mar. 1998) <<http://www.cftc.gov/oia/bocadec0398.htm>> [hereinafter *Boca Declaration*] (stating a declaration of intent, supported by 27 regulatory authorities, “desiring generally to promote the sharing of information necessary to strengthen regulatory supervision, minimize systemic risk, prevent or limit potential abusive or manipulative practices and enhance customer and investor protection, the Authorities hereby intend, by use of the most appropriate lawful means at their disposal, to seek and assist parties . . .”). Such arrangements may be further supported by practitioner agreement on best practices. See, e.g., The Recommendations of the Global Task Force on Financial Integrity of the Futures Industry Association (visited June 26, 2000) <<http://www.fiafi.org/content/beta.asp?t=a>>; see also *Tokyo Communiqué on Supervision of Commodity Futures Markets* (Oct. 1997) (issued by representatives of the regulatory authorities of 16 jurisdictions responsible for the supervision of commodity futures markets following a conference in Tokyo, Japan); IOSCO Technical Committee, *Application of the Tokyo Communiqué to Exchange Traded Derivative Contracts* (Dec. 1998) (visited June 7, 2000) <http://www.iosco.org/docs-public/1998-exchange_traded_derivatives-document01.html> [hereinafter *Tokyo Communiqué*]; SUBCOMMITTEE ON THE LONDON COMMUNIQUÉ OF THE CONSULTATIVE COMMITTEE OF IOSCO, LONDON COMMUNIQUÉ PROJECT, RESPONSE TO THE SURVEY OF OPINION REGARDING ‘BEST PRACTICES’ FOR TERMS AND CONDITIONS OF COMMODITY CONTRACTS AND SURVEILLANCE OF COMMODITY MARKETS AND OVER-THE-COUNTER (OTC) COMMODITY FUTURES ACTIVITY (‘MARKET SURVEILLANCE’) (May 30, 1997) (on file with *American University Law Review*).

be located (and electronic means may further facilitate this) where enforcement of the market rules relating to the money's disposition are most likely assured. Indeed, systems can be designed where the system itself debits or credits a trading account based on linkages to banking facilities, thereby limiting, if not eliminating entirely in the case of cash-settled contracts, the time between conclusion of a trade and payment or settlement and the incumbent credit risk.⁴²

2. *Develop informal regulatory alliances or allocations of regulatory emphasis*

Second, just as markets can form alliances,⁴³ so too can regulators.⁴⁴ Regulators may be able to further harmonize or assure the

42. For example, U.S. exchanges clearing delivery rules involve arrangements with banks in the jurisdiction of the currency traded or used for settlement. But conceptually, a fund of customer accounts used for settlement could permit multi-currency settlement within the account, subject to a mechanism for handling imbalances. For example, FutureCom, an internet-based exchange designated as a contract market by the CFTC, Release #4378-00 (Mar. 14, 2000), provides for integrated clearing whereby each customer participant has its own individual clearing and margin account with the market. See Commodity Futures Exchange Commission Release No. 4378-00 (Mar. 14, 2000), available at CFTC, Release #4378-00 (visited June 7, 2000) <<http://www.cftc.gov/opa/press00/4378-00.htm>>.

43. See, e.g., *infra* notes 45, 48 (citing CME News Center and CME Trader's Corner materials referencing agreements between exchanges in Chicago, London, France and Singapore); Chicago Mercantile Exchange: Traders Corner, *CME/SIMEX Mutual Offset System, The Worlds Most Successful Trading Link* (visited June 7, 2000) <<http://www.cme.com/market/interest/mos.html>> (referring to the CME partnership with the Singapore International Monetary Exchange (SIMEX) that pioneered the Mutual Offset approach to futures clearing); Corcoran, *supra* note 19, at 145; see also Chicago Mercantile Exchange: News Center, *Chicago MERC Established Landmark Links with 2 European Exchanges: Agreements Pave Way for MERC in European Monetary Union* (visited June 7, 2000) <<http://www.cme.com/news/emulink.html>> [hereinafter *CME News Center*] (discussing information-sharing arrangements in connection with the links established through the agreements between CME, London International Financial Futures and Options Exchange ("LIFFE") and Marché à Terme International de France ("MATIF")); *infra* note 66 (describing European exchange alliances).

44. See, e.g., Commodity Futures Trading Commission, *The CFTC: An Active Partner in Global Cooperation Through Information-Sharing with Other Financial Regulators* (Apr. 28, 1999) <<http://www.cftc.gov/opa/background/mou.html>> [hereinafter *CFTC Backgrounder*] (reflecting the CFTC's ability as a regulatory body to form alliances); Memorandum from the Division of Trading and Markets on the Chicago Mercantile Exchange's Proposed New rule 575 and Cross-Exchange Access Program (Sept. 18, 1992) [hereinafter *Cross-Access*] (approving the proposed rule and Cross-Access Program with the Marché à Terme International de France, which specifies or allocates responsibilities between the markets subject to regulation for oversight of trading using Globex) (available from the Secretariat of the Commission); see also Coordination, Reporting and Publication of International Agreements, 22 C.F.R. pt. 181 (1999) (regulating coordination, reporting, and publication of international agreements); Department of State procedures set out in Volume 11, Foreign Affairs Manual, Chapter 700 (1985), available at <<http://foia.state.gov/Famdir/MasterDocs/11fam/11m0720.doc>> [hereinafter *Circular 175 Procedure*]; *Boca Declaration and Tokyo Communiqué, supra* note 41.

effectiveness of market rules in remote jurisdictions by promoting joint ventures, alliances, or memoranda of understanding that function in a manner similar to a type of contract among the affected regulatory authorities.⁴⁵ For such arrangements to be binding under international law, they may have to be negotiated among the relevant governmental authorities, subject to a potentially cumbersome foreign policy or treaty process.⁴⁶ Regulators, however, are free to adopt a statement of intention that is further supported by the operating rules of the market.⁴⁷ For example, regulatory authorities can indicate that there is an understanding among them to share oversight, supervisory information, and compliance responsibility under arrangements that take account of which regulator is best placed (by location or powers) to assume the responsibility, without invoking procedures relevant to concluding legal assistance treaties.⁴⁸ To date, this type of arrangement by regulators has been the vehicle of choice to address regulatory concerns arising from the increasing international scope of markets. The very fact that such smart strategies for overcoming a gap in international law can be, and in fact are, effective suggests that the practicability of these arrangements should be further explored by market developers and market regulators.

3. *Promote basic, high-level ground-rules*

A third possibility would be to encourage the relevant regional or

45. The *CFTC Backgrounder* describes information-sharing through Memoranda of Understanding. See *CFTC Backgrounder*, *supra* note 44, at 44 (listing countries with which the CFTC has entered into formal and informal arrangements for cross-border information-sharing and assisting foreign authorities with various surveillance and enforcement issues).

46. See IAN BROWNLIE, *PRINCIPLES OF PUBLIC INTERNATIONAL LAW* 610-16 (5th ed. 1998) (discussing the treaty-making process).

47. See generally Commodity and Exchange Act § 12(a), 7 U.S.C. § 16(a) (1994 & Supp. IV 1998) (defining CFTC operations and permitting cooperation with any foreign futures authority); see also Circular 175 Procedure, *supra* note 44.

48. See Status Report on Exchange-Traded Derivatives Markets in Emerging and Developing Countries (Aug. 1997) (listing Memorandums of Understanding ("MOU's") by country) (visited June 14, 2000) <<http://www.cftc.gov/oia/interpro.htm/InternationalPublications>>; see also *Boca Declaration*, *supra* note 41, § 1.3-1.4 (endorsing MOU's among futures exchanges and clearing organizations "to facilitate and strengthen sharing of relevant information . . . [and] to improve cooperation" among the parties with "respect to potential hazards to stability, safety and soundness of the international financial markets," and providing a mechanism whereby regulators can assist markets to share information with each other); see also Commodity Futures Trading Commission Release No. 4391-00 (Apr. 6, 2000), available at Commodity Futures Trading Commission, CFTC Release #4391-00 (visited June 7, 2000) <<http://www.cftc.gov/opa/press00/4391-00.htm>>; *CFTC Backgrounder*, *supra* note 44 (describing the CFTC's cooperation with regulatory and enforcement authorities through MOU's); Cross-Access, *supra* note 44.

international organization of market regulators, such as IOSCO, to develop some basic, high level ground-rules to which all participating countries generally would subscribe. The IOSCO Principles for the Oversight of Screen-Based Trading Systems for Derivative Products,⁴⁹ adopted in 1990, were developed for just this reason. IOSCO is the premier organization of securities and derivatives regulators; that is, it is the international standard setter for market regulators.⁵⁰ It has ninety-seven ordinary (securities commission) members and a total membership of 164,⁵¹ which includes international financial institutions (such as the World Bank), self-regulatory associations, and trade associations, as well as additional national governmental authorities with an interest in the development of appropriate infrastructure for financial markets.⁵²

The story behind the story of the development of the IOSCO Principles for the Oversight of Screen-based Trading Systems for Derivative Products is as follows: Developers of Globex, a planned, around-the-clock, around-the-globe trading system designed by the Chicago Mercantile Exchange and Reuters in the 1980s, wanted

49. See IOSCO Technical Committee, *Principles for the Oversight of Screen-Based Trading Systems*, at Documents Library, (June 1990) (visited June 7, 2000) <<http://www.iosco.org/iosco.html>> (adopting 10 principles that addressed areas of common regulatory concern). These principles are currently subject to a project to update and review their applicability to cross border contexts being conducted by Working Party 2 of the Technical Committee of IOSCO. See *supra* note 41; Financial Stability Forum Releases Grouping of Offshore Financial Centres (OFCs) to Assist in Setting Priorities for Assessment (May 26, 2000) (visited June 7, 2000) <<http://www.fsforum.org/Press/Home.html>> (promoting movement to agreed international standards).

50. IOSCO is an organization composed of national and international member agencies that have resolved:

- (1) to cooperate together to promote high standards of regulations in order to maintain just, efficient and sound markets;
- (2) to exchange information on their respective experiences in order to promote the development of domestic markets;
- (3) to unite their efforts to establish standards and an effective surveillance of international securities transactions; and
- (4) to provide mutual assistance to promote the integrity of the markets by a rigorous application of the standards and by effective enforcement against offenses.

IOSCO, *General Information on IOSCO* (visited June 7, 2000) <http://www.iosco.org/gen-info_main.html> [hereinafter *IOSCO General Information*].

51. See IOSCO, *IOSCO Membership Lists* (visited June 7, 2000) <<http://www.iosco.org/iosco.html>> (linking user to lists of ordinary members, associate members, and affiliate members).

52. See *IOSCO General Information*, *supra* note 50, at Applications for Membership (stating that securities commissions or similar government bodies are eligible for ordinary membership; national associations that consist of public regulatory bodies are eligible for associate membership, provided that a national regulatory body of the same country is an ordinary member; and self-regulating organizations ("SRO") or international bodies are eligible for affiliate membership).

international guidance in advance regarding the types of requirements that might be applied to placement of its computer trading screens in non-U.S. jurisdictions. Developers of Globex also wanted guidance on what would be the likely level of national regulatory interest in the major market jurisdictions in which they hoped to enter trading alliances, with respect to oversight of trading through such screens. At the same time, regulators wanted some guidance to assist them in addressing this proposal, then on the cutting edge of innovation. Indeed, at that time, there were very few, if any, rules governing screen access. Members of IOSCO's Technical Committee were seeking some international consensus on what level of national scrutiny for the market systems seeking to establish themselves by the placement of terminals or electronic access arrangements in multiple jurisdictions would not be protectionist or inappropriate.

The EU, in the Investment Services Directive ("ISD"),⁵³ addressed the issue of the cross-border access to markets and provision of services in the context of an economically integrating, supranational community of nation-states—a *sui generis* type of regional confederation—where services may be provided freely across borders. The EU balanced competing regulatory and other interests in favor of letting screen-based markets provide screen access to financial intermediaries operating anywhere within the EU under the basic home/host framework for allocating jurisdiction over the provision of financial services within the community.⁵⁴ The ISD provides a solid regulatory foundation for such an approach because it harmonizes certain major concepts relating to financial services regulation.⁵⁵ In the United States, both the SEC and the CFTC are examining issues related to screen-based markets. In the negotiation of the Agreement on the World Trade Organization and the General Agreement on Trade in Services, the contracting states favored open access regarding financial services, subject only to prudential and comparability reservations.⁵⁶

53. See ISD, *supra* note 36 (concerning investment services relating to securities which for purposes of the ISD include financial derivatives).

54. See *id.* at 38-39 (regulating home/host framework in Article 15).

55. See *id.* at 27 (justifying adoption of the Directive because of the "essential harmonization necessary and sufficient to secure mutual recognition of authorization and of prudential supervision systems" in the field of financial services). For example, Article 15 of the Directive governs requirements relating to membership in or access to regulated markets and their corresponding clearing systems in a "host" EU Member State by investment firms authorized in another "home" EU Member State. See *id.* at 38-39.

56. See General Agreement on Trade in Services, Annex on Financial Services,

4. Reinforce certainty by multilateral agreement

Fourth, as a practical matter, it appears much more difficult for a court to set aside a multilateral agreement among many users than a contract negotiated between two parties. This is especially true in cases in which exchange operating rules and contracts are agreements or sets of rules that have the imprimatur of the relevant regulator in the home jurisdiction and also meet certain parameters in the host jurisdiction.⁵⁷ It is not so easy for a judicial authority to determine, to disregard, set aside, or reinterpret the contract (and hence the expectations) of all the parties in such a case. Additionally, the symmetry of information access and the identity of trading rules incorporated in the trading system design prevents arguments as to asymmetry of information. Such arguments could be the basis for setting aside bilateral agreements on grounds of unequal access to information or unequal bargaining power if due to unforeseen price moves or other circumstances such agreements

Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1B, 108 Stat. 4809, 33 I.L.M. 1167 (1994). *See generally World Trade Organization* (last updated May 31, 2000) <<http://www.wto.org>> (providing World Trade Organization ("WTO") information and resources).

57. The CFTC Division of Trading and Markets has issued no-action letters regarding the placement of terminals in the United States to access foreign screen-based trading systems to London International Financial Futures Exchange; Eurex Deutschland; Parisbourse SBF SA; and to Sydney Futures Exchange Limited/New Zealand Futures and Options Exchange Limited ("SFE/NZFOE"); The International Petroleum Exchange of London Limited; and the Singapore International Monetary Exchange Limited. *See* LIFFE Admin. and Mgmt., CFTC No-Action Letter (July 23, 1999) (visited June 7, 2000) <<http://www.cftc.gov/tm/letters/99letters/liffe%20no-action.htm>>; Eurex Deutschland, CFTC No-Action Letter (Aug. 10, 1999) (visited June 21, 2000) <<http://www.cftc.gov/tm/letters/99letters/eurex%20no-action.htm>>; Parisbourse SBF SA, CFTC No-Action Letter (Aug. 10, 1999) (visited June 7, 2000) <<http://www.cftc.gov/tm/letters/99letters/parisbourse.htm>>; SFE/NZFOE, CFTC No-Action Letter (Aug. 10, 1999) (visited June 21, 2000) <<http://www.cftc.gov/tm/letters/99letters/sycom%20no-action.htm>>; The International Petroleum Exchange of London Limited (Nov. 12, 1999) (visited June 13, 2000) <<http://www.cftc.gov/tm/letters/99letters/ipenoaction.htm>>; Singapore International Monetary Exchange Limited, CFTC No-Action Letter (Dec. 17, 1999) (visited June 13, 2000) <<http://www.cftc.gov/tm/letters/99letters/99-63.htm>>. In issuing such no-action letters, the Division noted, among other things, that such exchanges are authorized under the laws of another country; the market members are subject to oversight in the other country by a legitimate regulatory authority that is responsible for ensuring their compliance with an extensive regulatory regime; the market adheres to the IOSCO Objectives and Principles of Securities Regulation; and the U.S. and foreign regulatory authority are parties to information-sharing arrangements applicable to the activities of the market. For historical background, see Access to Automated Boards of Trade, 64 Fed. Reg. 14,159 (1999) (to be codified at 17 C.F.R. pts. 1, 30), CFTC Order withdrawing such proposed rules dated June 2, 1999, and *CFTC Backgrounder*, *supra* note 44, which states that the CFTC enters into Memoranda of Understanding with foreign regulatory and enforcement agencies as a way to promote the sharing of information, which can be "critical in combating cross-border fraud and manipulation, addressing the financial risks of market participants, and sharing regulatory expertise on market oversight and supervision."

prove to be unduly onerous.⁵⁸

II. CURRENT INITIATIVES APPLYING THE ELECTRONIC EXCHANGE STRUCTURE TO ACHIEVE GLOBAL SCOPE

These would be merely theoretical musings as to the possible uses of a market format if there were no evidence that practitioners or regulatory authorities believe that “marketization” of financial instruments can have distinct advantages in this age of electronic globalization. Therefore, there follow three examples of current or projected initiatives that seek to exploit the synthetic governmental elements of exchanges: (1) The London Clearing House’s SwapClear program (“SwapClear”), a program for clearing OTC transactions; (2) BrokerTec Global, LLC (“BrokerTec”), a proposal to link various cash fixed-income and derivatives markets across borders through a common trading platform; and (3) the Kyoto Protocol, a proposal for emissions trading. These initiatives use a market framework (and, in particular, the market’s capacity to unbundle clearing, execution, and strategic services electronically) to resolve international differences in regulation.

A. *SwapClear*

SwapClear is a program for clearing OTC transactions together with exchange-traded contracts through the London Clearing House (“LCH”) in accordance with applicable clearing rules and procedures intended to permit a broader netting between types of products than otherwise would be achievable in most jurisdictions.⁵⁹ The program is promoted as a means to improve risk management of such contracts and to reduce legal uncertainty.⁶⁰ The clearing program is currently based in London, although clearing members need not necessarily be London-based. The rules of the clearing arrangements permit registered OTC contracts meeting certain specifications to be offset against exchange business and cash flows within the clearing system.⁶¹

58. See, e.g., *Procter & Gamble Co. v. Bankers Trust Co.*, 925 F. Supp. 1270, 1286-87 (S.D. Ohio 1996) (discussing symmetry of information access in concluding that the plaintiff used its own independent knowledge of the market in forming its expectations).

59. See *CFTC Release 4247-99*, *supra* note 5 (announcing the CFTC Order exempting SwapClear from most provisions of the Commodity Exchange Act).

60. See *id.* (citing former CFTC Chairperson Brooksley Born characterizing SwapClear as “a significant step toward protecting dealers in the over-the-counter derivatives market from counterparty credit risk”).

61. See *id.* (regarding CFTC’s order confirming certain swap agreements submitted for clearing through SwapClear would remain exempt from most provisions of the Commodity Exchange Act); see also *OTC Survey*, *supra* note 15, at 1,

These arrangements are supported by national and EU legislation intended to assure the desired treatment of, as well as to assure desired legal opinions relating to the rights and obligations of counterparties based in various jurisdictions.⁶² Contracts, wherever initiated, meeting SwapClear specifications should be capable of being cleared, provided that they do not infringe upon relevant local law.

The CFTC facilitated the use of these clearing arrangements by persons in the United States by removing any ambiguity as to the likelihood that the CFTC would take the position that U.S. counterparties, using the system to clear OTC business, would lose the protection of exemptions from the Commodity Exchange Act.⁶³ The LCH program takes advantage of applicable law (and also various legal opinions) that allows business combined and cleared through SwapClear to be protected from certain uncertainties and limitations that may afflict the use of master netting agreements because of variations in international insolvency law.⁶⁴

39-41 (furnishing survey results on which jurisdictions have clearing facilities for OTC transactions); President's Working Group on Financial Matters, *Over-the-Counter Derivatives Markets and the Commodity Exchange Act*, at 18-21 (Nov. 1999) (Electronic Trading Systems and Clearing Systems).

62. See Settlement Finality Directive, *supra* note 29, at 45-46 (discussing basis for the Directive and importance of reducing risks associated with participation in securities settlement systems as a way to assure desired treatment of participants); see also *OTC Survey*, *supra* note 15, at 69-70 (reviewing insolvency law with respect to OTC transactions and, specifically, the extension of market insolvency protections to cleared OTC derivative transactions in the United Kingdom).

63. See *CFTC Release 4247-99* (announcing the CFTC's order exempting SwapClear); see also Exemption of Swap Agreements, 17 C.F.R. pt. 35 (1999) (regarding the exemption of qualifying swap agreements from certain provisions of the Commodity Exchange Act).

64. See *supra* note 40 and accompanying text (discussing Settlement Finality Directive's insolvency provisions). For information regarding International Swaps and Derivatives Association ("ISDA") documentation and legislation projects regarding the enforceability of netting and collateral arrangements, see International Swaps and Derivatives Association, *ISDA Documentation: Current ISDA Documentation Projects* (visited June 7, 2000) <<http://www.isda.org/c2.html>> (naming documentation projects, furnishing status and projected completion of the projects); ISDA, *ISDA Documentation: Status of Netting Opinions* (visited June 7, 2000) <<http://www.isda.org/c4.html>> (listing status of netting opinions by country and counsel); ISDA, *ISDA Documentation: Status of Netting Legislation* (visited June 7, 2000) <<http://www.isda.org/c6.html>> (furnishing status of adoption of netting legislation by country as "adopted" or as "under consideration"); ISDA, *ISDA Documentation: Status of Collateral Opinions* (visited June 7, 2000) <<http://www.isda.org/c8.html>> (listing status of completion of collateral opinions by country and counsel as "completed" or as "pending"); see also Council Directive 96/10/EC of 21 March 1996 As Regards Recognition Of Contractual Netting By The Competent Authorities, 1996 O.J. (L 85) 17-21 [hereinafter Netting Directive] (permitting credit institutions to calculate their "own funds" (capital) on the basis of a net rather than a gross amount with respect to contracts that are subject to an enforceable bilateral netting arrangement). The Netting Directive requires that, to take advantage of the

B. BrokerTec, Global LLC

BrokerTec is a proposal that circulated during the summer of 1999 to a number of brokers and markets by a group of co-venturers from the cash and derivatives foreign-exchange industry.⁶⁵ That proposal sets out global clearing and execution objectives that the proponents believe can be met through establishing a single platform to access listed derivatives in multiple markets. The proposal would add to an inter-dealer cash brokerage arrangement the ability to cross-collateralize and potentially net cash flows with respect to futures related products. The proposal contemplates a fully international facility. The basic elements of the desired arrangements were outlined to a number of exchanges and dealers who could be potential co-venturers and who could have input into the design of the structure and governance of the project. The visionary theme of the project is to develop an electronic pan-global marketplace that improves the security, transparency, and integrity of transactions using a market format. Several combinations of exchanges within the EU are proposing similar plans for common pan-European platforms for trading and/or clearing.⁶⁶

Directive, the credit institution must have an opinion of counsel that the operative netting arrangements are enforceable in the pertinent jurisdictions. *See* Netting Directive, *supra*, at Annex II, Article 3(a)(i)-(ii) (displaying conditions for recognition of contractual netting arrangement).

65. *See* Statement by BrokerTec Global, LLC, *supra* note 6.

66. For example, during 1999 and early 2000, international press reported the following initiatives: eight of the principal European exchanges (those in Amsterdam, Brussels, Frankfurt, London, Madrid, Milan, Paris, and Zürich) recently signed an accord to form a European alliance with the long-term objective of creating a single common electronic platform with common rules. The ultimate objective of this accord was to build a unified pan-European market; however, this accord may not go forward. The regulated French markets, SBF, Matif S.A., Monep S.A. and Societe de Nouveau Marché recently merged to form ParisBourse SBF SA, bringing together all trading in equities, derivative products, and commodities, with each market maintaining its own regulations, identity, and members. Clearing for these markets was to take place through a separate entity, the Banque Centrale de Compensation, or Clearnet SBF SA, which ultimately proposes to provide pan-European clearing similar to that provided by the National Securities Clearing Corporation/Government Securities Clearing Corporation in the United States. The OM Stockholm Exchange and the Copenhagen Stock Exchange have commenced equity trading via a single electronic system using common trading rules. Seventy percent of the total equity market of the Nordic countries as a result was reported as accessible from this single system. *See* Amsterdam Exchanges, *Amsterdam, Brussels and Paris Merge to Create the Leading European Exchange* (Mar. 20, 2000) <<http://www.bourse-de-paris.fr/en/news7/fsg770.htm>> (announcing that the Amsterdam, Brussels, and Paris exchanges will merge into Euronext). Euronext will continue to pursue the goal of a pan-European trading infrastructure and to maintain existing alliances of each of the former exchanges. *See id.* The London Stock Exchange and Deutsche Börse also recently announced a proposed merger to form "iX," on which equities will be traded. *See* <http://www.exchange.de/cgi-bin/hframez.exe?FS@/INTERNET/EXCHANGE/home/topbar_e.htm@/INTERNET/E

C. *The Kyoto Protocol*

A third proposal, the Kyoto Protocol, memorializes the international objective of reducing greenhouse gasses (global carbon emissions) in the interest of protecting climatic conditions and the corresponding or related environmental benefits.⁶⁷ The Protocol anticipates the design of an emission trading program that would permit trading of surpluses or deficits in overall caps or limits across borders either by sovereign jurisdictions directly or domestically in the first instance and then internationally in the second instance.⁶⁸ The Protocol's expectation of using trading as a means of achieving the agreed-upon country goals of reducing particular emission levels is modeled on the highly successful SO₂ (acid rain) trading program in the United States, a cash market auction handled by the Chicago Board of Trade ("CBOT"). The program reportedly has contributed to implementation of current reduced levels at substantially reduced economic costs (about fifty percent) to those originally estimated.

To develop a trading program, a unit of trading would have to be identified; standardized tradable units, which legally can convey the interest, would have to be created; and verification, tracking and enforcement of subsequent use (expenditure or banking) of the

XCHANGE/fusion/sidebar_fusion_e.htm@/INTERNET/EXCHANGE/fusion/main_fusion_e.htm> (visited May 24, 2000).

67. For the full text of the Kyoto Protocol, see The United Nations Framework Convention on Climate Control ("UNFCCC"), *The Convention and Kyoto Protocol* (last modified June 5, 2000) <<http://www.unfccc.de/resource/convkp.html>>, which provides the status of signatories to the Kyoto Protocol and links to the Introduction and the full text of the Protocol and UNFCCC, *Home* (last modified June 6, 2000) <<http://www.unfccc.de/index.html>>, which provides ability to search UNFCCC websites for information regarding the "Kyoto Protocol," including information provided through a myriad of sources such as technical workshops, status of ratification summaries, press releases, secretariat resource sessions, documents of the conference of the parties, documents of subsidiary parties, official documents, and daily programs. See generally United States Environmental Protection Agency, *The Kyoto Protocol and the President's Policies to Address Climate Change* (July 1998) <http://www.epa.gov/oppeoe1/globalwarming/publications/actions/wh_kyoto/index.html> (analyzing the costs and benefits of complying with the Kyoto Protocol's emissions reduction target for the United States and concluding that the United States can reach its Kyoto target at a relatively modest cost because of the flexibility mechanisms included in the treaty and by pursuing sound domestic policies); see also generally United States Environmental Protection Agency, *The Kyoto Protocol on Climate Change* (Jan. 15, 1998) <http://www.epa.gov/oppeoe1/globalwarming/publications/actions/us_position/98_kyotofact.html> [hereinafter *Kyoto Protocol*] (publishing a fact sheet released by the Department of State, Bureau of Oceans and International Environmental and Scientific Affairs, that provides facts regarding the Kyoto Protocol, including data relating to background information, emissions targets, international emissions trading, joint implementation among developed countries, clean development mechanisms, developing countries, military emissions, and compliance, enforcement and entry into force).

68. See *Kyoto Protocol*, *supra* note 67, at International Emissions Trading.

interest would be required.⁶⁹ Assuming the cash instrument can be created, and the monitoring and scientific measurement issues resolved, developing a market that operates internationally should be possible using the force of contract law consistent with the principles and examples set forth above.⁷⁰ In this case, any international/supranational entity created to facilitate trading may receive legal or regulatory support from or in participating countries.

CONCLUSION

Private regulation of markets through rules places a premium on enforceability of contracts evidenced by market rules, particularly those related to the creation of tradable interests and to the protection under the exchange rules of enforcement of financial settlements embedded in the traded instrument. Markets arguably cannot flourish in environments where rules are applied disparately, where the governance of the market or of the jurisdiction where the market is located is suspect, or where money paid to the market could be diverted.⁷¹ To the extent an electronic system makes trading

69. Richard Sandor, a student of the history of markets, is responsible for "inventing" a number of new markets. He has noted:

a simple seven-stage process for market development: 1. a structural economic change that creates a demand for new services; 2. the creation of uniform standards for a commodity or security; 3. the development of a legal instrument which provides evidence of ownership; 4. the development of informal spot markets (for immediate delivery) and forward markets (non-standardized agreements for future delivery) in commodities and securities where "receipts" of ownership are traded; 5. the emergence of securities and commodities exchanges; 6. the creation of organized futures markets (standardized contracts for future delivery on organized exchanges) and options markets (rights but not guarantees for future delivery) in commodities and securities; and 7. the proliferation of over-the-counter markets.

Richard L. Sandor & Jerry R. Skees, *Creating a Market for Carbon Emissions: Opportunities for U.S. Farmers*, CHOICES, First Quarter 1999, at 13, available at <<http://www.envifi.com/Internal/Choices.htm>>.

70. For further discussion, see European Comm'n, COM(2000)87, Green Paper on Greenhouse Gas Emissions Trading within the European Union (2000), and the associated background documents: Studies on Climate Change; Foundation for International Environmental Law and Development Final Report: *Designing Options for Implementing an Emissions Trading Regime for Greenhouse Gases in the EC* (2000) and Center for Clean Air Policy Working Paper: *Design of a Practical Approach to Greenhouse Gas Emissions Trading Combined with Policies and Measures in the EC* (1999) (visited June 26, 2000) <http://europa.eu.int/comm/environment/docum/0087_en.htm> (initiating public discussion on the possible organization of a cash market in greenhouse gas emission permits within the EU).

71. See Corcoran, *supra* note 10 (discussing uncertainty about equitable application of laws, clearing arrangements, ability to repatriate funds, enforceability of obligations, and prices of underlying reference products as major impediments to successful market structures); see also THE WORLD BANK'S INTERNATIONAL TASK FORCE ON COMMODITY RISK MANAGEMENT, *supra* note 9 (advocating the use of market-based solutions to address commodity price volatility in certain developing countries).

system rules self-enforcing or embedded in the system and related settlement systems collect the money to secure market risk up-front, the potential for rule infractions, contractual breaches, or failures of the market to operate as intended is reduced.

With the foregoing caveats, markets potentially can harmonize requirements across borders where legislatures have failed (or have yet) to do so, and can provide internationally-ruled trading facilities notwithstanding the national nature of financial services law.

As detailed in this Article, increasingly, electronic markets are being created to monetize various rights and interests and to render them pricable and tradable. Also, increasingly, both traditional and new markets are interlinked electronically by common platforms serving products traded in more than one jurisdiction, by aggregation of components, such as execution and clearing facilities located in different jurisdictions, and by participants located in different jurisdictions. These developments, driven by changes in technology and by regional economic integration, particularly in Europe, have created increasing pressure for clarity as to applicable law defining the rights and interests of market participants.

This Article submits that the natural legal structure of derivatives markets provides one mechanism for providing clarity as to those rights and interests notwithstanding that the markets span several jurisdictions and are otherwise global in scope. Specifically, the market structure creates the property interest traded, provides the rules for transfer of that interest and transfer of funds reflecting gains and losses in that interest, and rules establishing the rights and interests of all relevant parties in the event of default. This is true whether or not enforcement of the market rules or contracts is undertaken by the market itself, outsourced to another authority, or enforced directly by the regulator. The choice of law embedded in this structure can, therefore, under general rules of international law, especially with reinforcement from related international law, promote both the harmonization of rules across jurisdictions and clarity as to the applicable law of the transaction and the property interest and other rights and interests related to the transaction. This aspect of markets deserves to be further explored and exploited in the face of burgeoning globalization.

APPENDIX

IOSCO PRINCIPLES FOR THE OVERSIGHT OF SCREEN-BASED TRADING
SYSTEMS FOR DERIVATIVE PRODUCTS REPORT OF THE IOSCO
TECHNICAL COMMITTEE, JUNE 1990

1. The system sponsor should be able to demonstrate to the relevant regulatory authorities that the system meets and continues to meet applicable legal standards, regulatory policies, and/or market custom or practice where relevant.

2. The system should be designed to ensure the equitable availability of accurate and timely trade and quotation information to all system participants and the system sponsor should be able to describe to the relevant regulatory authorities the processing, prioritization, and display of quotations within the system.

3. The system sponsor should be able to describe to the relevant regulatory authorities the order execution algorithm used by the system, i.e., the set of rules governing the processing, including prioritization and execution, of orders.

4. From a technical perspective, the system should be designed to operate in a manner which is equitable to all market participants and any differences in treatment among classes of participants should be identified.

5. Before implementation, and on a periodic basis thereafter, the system and system interfaces should be subject to an objective risk assessment to identify vulnerabilities (e.g., the risk of unauthorized access, internal failures, human errors, attacks, and natural catastrophes) which may exist in the system design, development, or implementation.

6. Procedures should be established to ensure the competence, integrity, and authority of system users, to ensure that system users are adequately supervised, and that access to the system is not arbitrarily or discriminatorily denied.

7. The relevant regulatory authorities and the system sponsor should consider any additional risk management exposures pertinent to the system, including those arising from interaction with related financial systems.

8. Mechanisms should be in place to ensure that the information necessary to conduct adequate surveillance of the system for supervisory and enforcement purposes is available to the system sponsor and the relevant regulatory authorities on a timely basis.

9. The relevant regulatory authorities and/or the system sponsor should ensure that the system users and system customers are adequately informed of the significant risks particular to trading through the system. The liability of the system sponsor, and/or the system providers to system users and system customers should be described, especially any agreements that seek to vary allocation of losses that otherwise would result by operation of law.

10. Procedures should be developed to ensure that the system sponsor, system providers, and system users are aware of and will be responsive to the directives and concerns of the relevant regulatory authorities.