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Onnig H. Dombalagian
*Tulane Law School*

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# Licensing the Word on the Street: The SEC's Role in Regulating Information

ONNIG H. DOMBALAGIAN†

## INTRODUCTION

Information is said to be the lifeblood of financial markets.[1] Securities markets rely on corporate disclosures, quotes, prices, and indices, as well as the market structures, products, and standards that give them context and meaning, for the efficient allocation of capital in the global economy. The availability of and access to such information on reasonable terms has been identified as one

† Associate Professor of Law, Tulane Law School. I would like to thank Roberta Karmel, Steve Williams, and Elizabeth King for their comments on prior drafts of this Article and Lloyd Bonfield, David Snyder, Jonathan Nash, and Christopher Cotropia for their helpful insights. Special thanks are due to the faculty and staff of the Georgetown University Law Center for the hospitality shown to my colleagues and me during the evacuation of New Orleans following Hurricane Katrina. I am also grateful to Christopher Kyle Johnston and Samuel Vigil for their research assistance and Toni Mochetta for her assistance in preparing this Article for publication. All errors are mine.

1. Arthur Levitt, Former Chairman, SEC, Quality Information: The Lifeblood of Our Markets (Oct. 18, 1999), *available at* http://www.sec.gov/news/speech/speecharchive/1999/spch304.htm; Christopher Cox, Chairman, SEC, Improving Financial Disclosure for Individual Investors (May 3, 2006), *available at* http://www.sec.gov/news/testimony/ts042506cc.htm ("When it comes to giving investors the protection they need, information is the single most powerful tool we have. It's what separates investing from roulette.").

of the essential characteristics of strong financial markets.[2] And yet because information is a commodity,[3] policymakers must balance the desirability of providing public access to such goods against the need to maintain appropriate incentives for information producers.[4]

In U.S. securities markets, the Securities and Exchange Commission (SEC or Commission) faces the primary challenge of regulating the balance between the commercial and social value of information. In some areas, the Commission has all but extinguished private rights, while in other areas, it has disavowed any authority to tread upon private rights in deference to federal or state intellectual property doctrines. In yet other areas, the SEC has created intricate entitlements tailored to historical market structures. Against this backdrop, self-regulatory organizations (SROs), securities intermediaries, and other entities have staked out proprietary claims to position themselves competitively in the ongoing transformation of the securities marketplace.

As we move away from the paradigm of the dominant national exchange to the reality of competing national and global trading venues, it is increasingly urgent that the Commission articulate an intellectual property policy.[5] The

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2. *See, e.g.*, Bernard S. Black, *The Legal and Institutional Preconditions for Strong Securities Markets*, 48 UCLA L. REV. 781, 783 (2001).

3. *See* RAYMOND T. NIMMER, INFORMATION LAW § 1:8, at 1-12 to -13 (2005) (defining the elements of information as the "communication or receipt" of raw data, linked to an "interpretation or understanding" that renders the data meaningful); *see also generally* Raymond T. Nimmer & Patricia Ann Krauthaus, *Information as a Commodity: New Imperatives of Commercial Law*, 55 LAW & CONTEMP. PROBS. 103 (1992) (discussing the framework for modern commerce and regulation of information law).

4. *See generally Market Data: Implications to Investors, Hearing Before the Subcomm. on Capital Mkts., Ins., and Gov't Sponsored Enters. of the Comm. on Fin. Servs.*, 107th Cong. (2001) (testimony by producers and consumers of market information on the appropriateness of granting proprietary rights in market information).

5. *See, e.g.*, Jonathan R. Macey & David D. Haddock, *Shirking at the SEC: The Failure of the National Market System*, 1985 U. ILL. L. REV. 315 (1985) (predicting the rise of market-based information and reporting systems as exchanges lose market dominance); Jonathan R. Macey & Maureen O'Hara, *From Markets to Venues: Securities Regulation in an Evolving World*, 58 STAN. L. REV. 563 (2005) (describing the paradigm shift in terms of transaction and agency costs).

demutualization of the Nasdaq Stock Market (Nasdaq) and the New York Stock Exchange (NYSE),[6] the completed and impending mergers of numerous national and international exchanges and market centers, and the prevalence of securities listed simultaneously on U.S. and non-U.S. exchanges[7] (the Sarbanes-Oxley Act notwithstanding) are likely to generate numerous disputes over the allocation of rights and interests in securities information.[8] Some articulated statement of policy would appear necessary to govern the Commission's regulation of rights in information, particularly given the incremental nature of the regulatory process and the delegation of authority within the Commission to its operating divisions.

This Article undertakes a comprehensive comparative analysis of the SEC's agencywide initiatives as regulator of information and other intellectual property rights. The Article considers the Commission's regulatory objectives—both with respect to the public availability of information and larger macrostructural objectives—as well as the means by which it has sought to achieve these objectives. In doing so, I draw upon general theories of intellectual property to illustrate traditional approaches to balancing private and public claims to information, as applied to the discrete situations in which the Commission has invoked, or refrained from invoking, its regulatory authority to advance the purposes of the federal securities laws. The Article ultimately suggests that the Commission adopt a consistent policy with respect to information and intellectual property regulation and seek to achieve its various regulatory objectives through means that affirm the baseline rights of information creators.

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6. *See* Caroline Bradley, *Demutualization of Financial Exchanges: Business as Usual?*, 21 NW. J. INT'L L. & BUS. 657, 668 (2001); *see also* Andreas M. Fleckner, *Stock Exchanges at the Crossroads*, 74 FORDHAM L. REV. 2541, 2562 (2006); Roberta S. Karmel, *Turning Seats into Shares: Causes and Implications of Demutualization of Stock and Futures Exchanges*, 53 HASTINGS L.J. 367, 368 (2002); Robert A. Prentice, *Regulatory Competition in Securities Law: A Dream (That Should Be) Deferred*, 66 OHIO ST. L.J. 1155, 1190-94 (2005).

7. *See, e.g.*, John C. Coffee, Jr., *Racing Towards The Top?: The Impact of Cross-Listings and Stock Market Competition on International Corporate Governance*, 102 COLUM. L. REV. 1757 (2002).

8. *See* Reena Aggarwal & Sandeep Dahiya, *Demutualization and Public Offerings of Financial Exchanges*, 18 J. APPLIED CORP. FIN. 96, 96-100 (2005); Fleckner, *supra* note 6, at 2571-2618.

Part I of this Article surveys the key types of information or intellectual property that have been implicated in securities litigation and regulatory action. Part II assesses the underlying justifications advanced by the SEC and others for acknowledging or subordinating such intellectual property interests in financial markets. Part III considers the various strategies used by the Commission and comparable regulators to manage intellectual property rights and their application to financial market regulation. Part IV synthesizes a set of principles to guide the SEC's regulatory agenda and illustrates how those principles might be implemented in various spheres of regulation.

## I. A TAXONOMY OF INFORMATION RIGHTS IN SECURITIES MARKETS

Scholars have long debated the level of protection that should be given to intellectual property (including information) that falls outside the traditional paradigms of patent and copyright law.[9] Since the seminal case of *International News Service v. Associated Press*[10] prominently posed the question whether such types of information should be entitled to limited protection, academics, legislators, and regulators have struggled with determining the bases for granting such rights and their appropriate scope.

At the heart of the debate is the perceived need to balance private incentives to produce information against the social benefit of making it broadly accessible.[11] Property rights are generally thought to promote the efficient allocation of private resources to the creation of socially beneficial goods by allowing creators to internalize their benefits—specifically, through the right to exclude others

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9. For a survey of hybrid intellectual property regimes, see J. H. Reichman, *Legal Hybrids Between the Patent and Copyright Paradigms*, 94 COLUM. L. REV. 2432 (1994).

10. 248 U.S. 215 (1918).

11. *See* WILLIAM M. LANDES & RICHARD A. POSNER, THE ECONOMIC STRUCTURE OF INTELLECTUAL PROPERTY LAW 11-36 (2003) (critiquing the "incentive-access" paradigm of traditional intellectual property scholarship); Glynn S. Lunney, Jr., *Reexamining Copyright's Incentives-Access Paradigm*, 49 VAND. L. REV. 483, 485 (1996).

from (or charge others for) access and use.[12] As exclusionary rights, however, they result in deadweight social losses when rightholders reject welfare-enhancing transactions or are unable efficiently to contract with all potential users due to high transaction costs.[13] Critics of property regimes therefore focus on the unbridled right of exclusion, particularly for goods without ready substitutes.[14]

Notably, many information goods and intellectual property rights are classified as "public goods"—goods which possess the characteristics of non-excludability and nonrival usage.[15] Special property regimes have been thought necessary to promote these goals when traditional intellectual property paradigms fail,[16] which in many cases

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12. *See* RONALD COASE, THE FIRM, THE MARKET, AND THE LAW 9 (1988); P. K. RAO, THE ECONOMICS OF TRANSACTION COSTS 49–50 (2003) (discussing the role of property rights in dealing with economic externalities); *see also* Harold Demsetz, *Toward a Theory of Property Rights*, 57 AM. ECON. REV. 347, 347-50 (1967); Harold Demsetz, *Toward a Theory of Property Rights II: The Competition between Private and Collective Ownership*, 31 J. LEGAL STUDS. 653, 655-57 (2002); J. Harold Mulherin, Jeffry M. Netter & James A. Overdahl, *Prices Are Property: The Organization of Financial Exchanges from a Transaction Cost Perspective*, 34 J.L. & ECON. 591, 626 (1997).

13. *See* F. Scott Kieff & Troy A. Paredes, *The Basics Matter: At the Periphery of Intellectual Property*, 73 GEO. WASH. L. REV. 174, 180-83 (2004). As Professors Kieff and Paredes note, an intellectual property owner's ability to price discriminate among potential users may reduce the deadweight loss, though scholars debate whether such price discrimination strategies may on occasion yield greater losses than an outright prohibition against price discrimination. *Id.* (citing Harold Demsetz, *The Private Production of Public Goods*, 13 J.L. & ECON. 293 (1970)).

14. *See, e.g.*, James A. Rahl, *The Right to "Appropriate" Trade Values*, 23 OHIO ST. L.J. 56, 73 (1962) (arguing for limited protection of trade secrets and other proprietary information); Leo J. Raskind, *The Misappropriation Doctrine as a Competitive Norm of Intellectual Property Law*, 75 MINN. L. REV. 875, 897 (1991) (finding that a policy of broad property rights in intellectual property may yield "socially undesirable excesses").

More generally, "property" rules may be contrasted with "liability" rules, as Guido Calabresi and Douglas Melamed have observed, which permit a prospective purchaser to pay the holder of an "entitlement" an objectively determined amount of damages, rather than forcing the purchaser to negotiate terms with the holder. Guido Calabresi & A. Douglas Melamed, *Property Rules, Liability Rules, and Inalienability: One View of the Cathedral*, 85 HARV. L. REV. 1089, 1089-93 (1972).

15. RAO, *supra* note 12, at 43.

16. *See, e.g.*, Marina Lao, *Federalizing Trade Secrets Law in an Information Economy*, 59 OHIO ST. L.J. 1633 (1998).

unbundle the rights typically associated with intellectual property—such as the right to copy, to use, to disclose, to modify, alter, or destroy, to transmit, or to access.[17]

For the purposes of this Article, I will focus on five specific types of information: (1) material information generated by public companies about their business and operations ("company information"); (2) quotations, transaction reports, and other forms of market information generated by exchanges and other market centers ("market information"); (3) indices and other formulae that underlie derivative products; (4) financial contract and product design; and (5) rules and standards for the preparation and dissemination of the foregoing.

### A. *Company Information*

Despite the long history of public company disclosures under federal securities law, company disclosures can be thought of as a regulated information commodity. For example, state law has recognized a proprietary interest in information that firms generate about their business methods and operations. Such protection has traditionally been conferred under the rubric of state "trade secret" law, in which a firm may seek to prevent misappropriation of information obtained "in breach of a confidential relationship or intrusion into a protected environment."[18] The value of such information, to the extent it may be quantified, is the competitive advantage obtained by keeping it confidential. In the case of unpatented technologies, for example, the value of confidential information to the firm might be the premium the firm would reap from the sale of a particular good or service over a competitively set price if others were able to replicate it.[19]

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17. *See* WILLIAM M. LANDES & RICHARD A. POSNER, THE ECONOMIC STRUCTURE OF TORT LAW 29 (1987); NIMMER, *supra* note 3, § 1:8, at 1-12 to -13.

18. NIMMER, *supra* note 3, § 2:39, at 2-127 to -128; *see also* SEC v. Talbot, 430 F. Supp. 2d 1029 (C.D. Cal. 2006); SEC v. Kornman, 391 F. Supp. 2d 477 (N.D. Tex. 2005).

19. *See, e.g.*, Sunds Defibrator AB v. Beloit Corp., 930 F.2d 564 (7th Cir. 1991) (basing damages on what a third-party purchaser would have paid the firm had its competitor not submitted a rival bid on the basis of technical information obtained in breach of a licensing agreement). To survive preemption under the federal Copyright Act, trade secret law imposes liability

The traditional justification for denying trade secret or other intellectual property protection to more abstract firm information is the inability to quantify its value or cost.[20] More practically, firms competing for capital investment must keep current and potential investors apprised of material information, if only to avoid adverse inferences vis-à-vis their more communicative competitors.[21] For example, prior to the adoption of the federal securities laws, exchanges developed public disclosure requirements for listed companies as a way to standardize disclosure and ensure accurate valuation of listed securities.[22] In enacting the federal securities laws, Congress extended the idea of mandatory minimum disclosures inherent in such private ordering to include disclosures in connection with public offerings of securities,[23] and periodic disclosures for issuers of exchange-listed securities, and since 1964, for issuers of

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only when there is a breach of a fiduciary relationship or other relationship of trust and confidence, such as a confidentiality or non-disclosure agreement. *See infra* notes 41-45. As such, liability requires "reasonable precautions" to keep information secret and "actual or constructive notice" of the alleged wrongful infringement. NIMMER, *supra* note 3, § 2:39 at 2-127; *see also, e.g.*, Rockwell Graphic Sys. v. DEV Indus., 925 F.2d 174 (7th Cir. 1991).

20. *See generally* John C. Coffee, Jr., *Market Failure and the Economic Case for a Mandatory Disclosure System*, 70 VA. L. REV. 717 (1984); Frank H. Easterbrook & Daniel R. Fischel, *Mandatory Disclosure and the Protection of Investors*, 70 VA. L. REV. 669 (1984); Donald Langevoort, *Information Technology and the Structure of Securities Regulation*, 98 HARV. L. REV. 747 (1985). It has been suggested, for example, that federal mandatory disclosure requirements rarely compel disclosure of truly "sensitive" information. *See* 17 C.F.R. § 229.101(c)(ii) (2006); Paul G. Mahoney, *Mandatory Disclosure as a Solution to Agency Problems*, 62 U. CHI. L. REV. 1047, 1102 (1995).

21. *See* Mahoney, *supra* note 20; FRANK H. EASTERBROOK & DANIEL R. FISCHEL, THE ECONOMIC STRUCTURE OF CORPORATE LAW 286-92 (1991). Game-theorists describe the voluntary disclosure of such information, at least when easily verifiable, as the "unraveling result." *E.g.*, DOUGLAS G. BAIRD, ROBERT H. GERTNER & RANDAL C. PICKER, GAME THEORY AND THE LAW 89-90 (1994).

22. Exchanges, in an effort to deter Congress from enacting securities laws, had increased their disclosure requirements throughout the turn of the century. *See* JOEL SELIGMAN, THE TRANSFORMATION OF WALL STREET 75-76 (3d ed. 2003). Moreover, because purchases or sales of securities on credit were routinely collateralized by equity securities, exchanges had an interest in ensuring that such collateral was appropriately valued; the variety of state corporation codes and the Exchange's reluctance to regulate financial disclosures limited the extent to which the New York Stock Exchange and others succeeded in such efforts. *See* MICHAEL E. PARRISH, SECURITIES REGULATION AND THE NEW DEAL 32-41 (1970).

23. Securities Act of 1933, 15 U.S.C. §§ 77e, 77j (2000).

publicly traded over-the-counter securities meeting certain size and shareholder requirements.[24] Over time, the SEC has used its statutory mandate to require not only the preparation of more "forward-looking" information and analysis, but also the preparation of additional "accuracy-enhancing" information and implementation of related internal controls.[25]

In addition to regulating what must be disclosed, the Commission has also sought to promote a "level" informational playing field for all investors. Accordingly, the Commission has sought to leverage its statutory authority over mandatory disclosures to prohibit selective disclosures of material non-public information,[26] and its antifraud authority to deter trading on the basis of material non-public information.[27] The Commission has recognized

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24. Securities Exchange Act of 1934, 15 U.S.C. §§ 78*l*, 78o(d) (2000). The express disclosures mandated by Congress in connection with public offerings under the Securities Act of 1933, 15 U.S.C. §§ 77a-77aa, replicated the disclosure requirements of the NYSE, which were based on the English Companies Act of 1929, 19 & 20 Geo. 5, ch. 23 (Eng.). *See also* Mahoney, *supra* note 20, at 1073-74.

25. *See* Mahoney, *supra* note 20, at 1078. These might include management's discussion and analysis of operations, GAAP-compliant financial statements and attendant auditors' reports, and the implementation and periodic review of internal controls to assure the completeness and integrity of such disclosures. *See id.* at 1106 (distinguishing the economic case for disclosure of information in management's possession to address agency costs and the economic case for compelling the preparation and production of accuracy-enhancing information). As discussed further below in Part II.A, such requirements have prompted many commentators to make the economic argument that the costs of "mandatory disclosure" may well not be justified by the expected social benefits. *See, e.g.*, Roberta Romano, *The Sarbanes-Oxley Act and the Making of Quack Corporate Governance*, 114 YALE L.J. 1521 (2005); COMMITTEE ON CAPITAL MARKETS REGULATION, INTERIM REPORT 115-34 (2006), *available at* http://www.capmktsreg.org/pdfs/11.30Committee_Interim_ReportREV2.pdf.

26. Regulation Fair Disclosure, 17 C.F.R. pt. 243 (2006).

27. *See, e.g.*, Exchange Act Rule 10b5-1, 17 C.F.R. § 240.10b5-1 (2006) (prohibiting trading on the basis of material, non-public information). The Commission's authority to regulate exogenous information about public issuers is somewhat more attenuated because of the general requirement of fraud or deception in § 10(b) of the Exchange Act. *See, e.g.*, Dirks v. SEC, 463 U.S. 646 (1983); Santa Fe v. Green, 430 U.S. 362 (1977). Thus, persons other than issuers, such as analysts, may independently collect and selectively sell information without regard to such restrictions, although proprietary research information may be entitled to copyright protection, *see, e.g.*, Chad Bray, *Brokerage Firms File Suit Against Theflyonthewall.com*, WALL ST. J. ONLINE, June 26, 2006, http://online.wsj.com, and information obtained in breach of a

limited exceptions for sharing non-public information with commercial vendors, such as rating agencies, but only with the expectation that ratings are published to the marketplace free of charge.[28]

Investors must rely more heavily on market-based approaches to disclosure when mandatory disclosure requirements do not apply. Securities privately placed with and traded among qualified institutional buyers under Rule 144A are accompanied by extensive offering disclosures, which are often compared favorably with mandatory disclosures for public companies.[29] By contrast, offerings of securities to retail investors not subject to SEC disclosure requirements routinely are thought to suffer from inadequate information, despite the existence of state "Blue Sky" laws that may impose independent disclosure requirements on securities offerings or publicly held securities.[30] Post-offering disclosures for purchasers and sellers in the secondary market are even more difficult to obtain. Investors in municipal securities and "pink sheet" securities not required to be registered under § 12 of the Exchange Act have, for example, access only to minimal periodic or transient disclosures under SEC rules,[31] and

relationship of trust or confidence with a person other than an issuer may give rise to antifraud liability, 17 C.F.R. § 240.10b5-1 (2006), as may information obtained regarding a pending tender offer, 17 C.F.R. § 240.14e-3 (2006).

28. *But see* Definition of Nationally Recognized Statistical Rating Organization, Exchange Act Release Nos. 8,570, 51,572, 70 Fed. Reg. 21,306 (Apr. 25, 2005) (to be codified at 17 C.F.R. pt. 240) (proposing that rating agencies be required to publicly disseminate their ratings at no cost to be designated a "nationally recognized statistical rating organization").

29. *See* Stephen J. Choi, *Selective Disclosures in the Public Capital Markets*, 35 U.C. DAVIS L. REV. 533, 557-58 (2002); Alan R. Palmiter, *Toward Disclosure Choice in Securities Offerings*, 1999 COLUM. BUS. L. REV. 1, 6 (citing Patrick McGeehan, *Money Raised in Private Placement of Issues Doubles as Companies Take Advantage of SEC's Rule 144A*, WALL ST. J., Jan. 2, 1998, at R38).

30. *See* Petition from Pink Sheets LLC to Nancy M. Morris, Secretary, SEC (Apr. 24, 2006), http://www.sec.gov/rules/petition/petn4-519.pdf; Michael K. Molitor, *Will More Sunlight Fade the Pink Sheets? Increasing Public Information About Non-Reporting Issuers with Quoted Securities*, 39 IND. L. REV. 309 (2006) (arguing for § 13-like disclosures for pink sheets).

31. Such disclosures, moreover, are required only by virtue of the SEC's authority over the broker-dealers intermediating transactions in such securities. *See, e.g.*, 17 C.F.R. §§ 240.15c2-11 to -12 (2006).

unlike investors in public companies,[32] must rely on individual broker-dealers or private information repositories to obtain such information.[33]

## B. *Market Information*

The SEC also regulates data regarding the negotiation and execution of secondary market transactions in publicly traded securities. Such "market information" includes pre-trade indications of trading interest ("quotations") and post-trade information on individual trades ("trade reports"). It may also include statistical information on the performance of individual stocks, commodities, or indices. More recently, with the advent of new trading systems, the term also fairly encompasses information regarding the statistical performance of individual market participants responsible

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32. For securities subject to the Exchange Act § 13 mandatory disclosure system, the Commission provides a free service—EDGAR—for the retrieval of public company information. While many value-added services exist, they cannot appropriate value from the exclusive right to distribute company information. *See* Free EDGAR: Free Real-Time SEC EDGAR Filings, http://www.freeedgar.com (last visited Jan. 17, 2007); Global Securities Information, Inc., http://.www.gsionline.com (last visited Jan 17, 2007).

33. For unregistered securities, only the initial quoting dealer is required to obtain the information required by Rule 15c2-11, 17 C.F.R. § 240.15c2-11 (2006), from the issuer and to provide such information to investors on request. The NASD requires a copy of such information to be filed prior to the quoting of pink sheet securities through its over-the-counter equity service. Nat'l Ass'n of Sec. Dealers, NASD Manual: Rule 6620 (CCH 2006), *available at* http://nasd.complinet.com/nasd/display/display.html?rbid=1189&record_id=115 9007297&element_id=1159000873&highlight=6620#r1159007297. Pink Sheets, LLC, a privately-owned provider of pricing and financial information for unregistered securities, has also developed disclosure policies to facilitate the sharing of periodic disclosures respecting such securities. *See* Pink Sheets, Electronic Quotation and Trading System for OTC Securities, http://www.pinksheets.com/about/index.jsp (last visited Jan. 19, 2007).

For municipal securities, Rule 15c2-12, 17 C.F.R. § 240.15c2-12 (2006), generally requires a participating underwriter to: (1) obtain and distribute to prospective investors an official statement from a municipal issuer containing information about a municipal securities offering; and (2) ensure that the issuer has undertaken to provide ongoing financial information and disclosure of certain material events to each "nationally recognized municipal securities information repository" (NRMSIR). *See* Municipal Securities Information Sources, http://www.sec.gov/info/municipal/nrmsir.htm (last visited Jan 19, 2007) (list of NRMSIRs).

for executing, or making execution decisions regarding, customer orders.[34]

Organized securities and commodity markets have long exerted significant effort to assert property rights in market data to prevent "free-riding." Unlike in the context of public company information, exchange competitors (such as market makers) may use an exchange's market information to execute transactions at comparable prices at a lower charge. Such "cream-skimming" practices are alleged not only to reduce the volume of transactions (and trading fees) an exchange would normally receive, but also to impair the quality of the information an exchange is able to generate because the exchange does not have the opportunity to control the interaction of all order flow in the marketplace.[35]

Exchanges have relied on the law of contract and the tort law concept of misappropriation to protect their interests, for want of any general federal information protection regime. Exchanges that disseminate transaction and quotation information to broker-dealers and professional investors have historically imposed conditions limiting the ability of recipients to redisseminate their information.[36] Courts have upheld such contracts, finding that exchanges have "the right . . . to keep the quotations to itself or [to] communicate them to others."[37] By analogy to "trade secrets," the mere fact that an exchange "communicat[es] the result [of its trading activity] to persons, even if many, in confidential relations," does not undermine the argument

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34. *See* 17 C.F.R. §§ 242.605-.606 (2006).

35. *See* John C. Coffee, Jr., *Comment*, *in* THE INDUSTRIAL ORGANIZATION AND REGULATION OF THE SECURITIES INDUSTRY 72, 82 (Andrew W. Lo ed., 1996). Market makers may be willing to share the profits from such cream-skimming practices with brokers in exchange for their willingness to route order flow. *See* David Easley, Nicholas M. Kiefer & Maureen O'Hara, *Cream-Skimming or Profit-Sharing? The Curious Role of Purchased Order Flow*, 51 J. FIN. 811 (1996).

36. *See, e.g.*, Mulherin, Netter & Overdahl, *supra* note 12, at 604-25 (describing key cases in the development of property rights in market information).

37. Hunt v. N.Y. Cotton Exch., 205 U.S. 322, 338 (1907).

that dissemination in breach of such trust is not actionable.[38]

Exchanges have also sought to characterize unauthorized redissemination or use of their data as a misappropriation of property or infringement of their price discovery function.[39] Recent developments, to a certain degree, have tended to narrow the range of claims that may be asserted. For example, the Copyright Act of 1976 preempted state law misappropriation claims to the extent they confer "equivalent right[s]" on works that come within the subject matter of copyright.[40] In *Feist Publications, Inc. v. Rural Telephone Service Co.*,[41] the U.S. Supreme Court restricted copyright protection for factual compilations only to the original aspects of their selection or arrangement of facts that possess a "minimal creative spark" or "quantum of creativity," but not to the facts themselves.[42] Several post-*Feist* cases confirm that compilations of pricing information may be protected under copyright law, for example, when they reflect appraisals or estimates based upon the application of judgment, rather than raw reports

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38. Bd. of Trade of Chi. v. Christie Grain & Stock Co., 198 U.S. 236, 250 (1905).

39. *See, e.g.*, *Market Data: Implications to Investors and Market Transparency of Granting Ownership Rights over Stock Quotes: Hearing Before the Subcomm. on Capital Mkts., Ins., & Gov't. Sponsored Enters. of the H. Comm. on Fin. Servs.*, 107th Cong. 74-81 (2001) (testimony of Richard P. Bernard, Executive Vice President & General Counsel, NYSE).

40. 17 U.S.C. § 301 (2000).

41. 499 U.S. 340 (1991).

42. *Id.* at 363. The Court referred to the definition of "compilation" in § 101 of the Copyright Act to identify the three distinct elements necessary for a work to qualify as a copyrightable compilation: "(1) the collection and assembly of pre-existing material, facts, or data; (2) the selection, coordination, or arrangement of those materials; and (3) the creation, by virtue of the particular selection, coordination, or arrangement, of an 'original' work of authorship." *Id.* at 357.

Scholars have questioned whether "originality" should be a necessary pre-condition for federal copyright protection, or why a lack of originality should result in preemption of state law claims. *See* Jane C. Ginsburg, *Creation and Commercial Value: Copyright Protection of Works of Information*, 90 COLUM. L. REV. 1865 (1990) (discussing the elimination of state law protection for compiled information); John Shepard Wiley, Jr., *Copyright at the School of Patent*, 58 U. CHI. L. REV. 119 (1991) (discussing originality as one of the central elements of the copyright doctrine that lacks justification and coherence).

of completed transactions[43]—perhaps such as on a quotation montage or limit order book.

Even if market information is not copyrightable, state law misappropriation claims for "hot news" may survive *Feist* and the Copyright Act's preemption provisions if such claims possess an "extra element" in addition to the acts of reproduction, performance, distribution, or display, in order to constitute a state-created cause of action. As with trade secret law, such claims must typically incorporate an element of wrongful conduct.[44] Moreover, in the Copyright Act of 1976, Congress recognized the continuing vitality of state law "misappropriation claims" in scientific, business, and financial databases.[45]

The ability of exchanges and other market centers to *restrict* the provision of information, however, has been significantly limited by the Commission's rules under the national market system. SEC rules ostensibly centralize the administration of SRO rights in market information with a

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43. *See* CDN Inc. v. Kapes, 197 F.3d 1256 (9th Cir. 1999) (wholesale price guides for collectible coins copyrightable); CCC Info. Servs. Inc. v. MacLean Hunter Mkt. Reports, Inc. 44 F.3d 61 (2d Cir. 1994) (valuation of used vehicles copyrightable); Marshall & Swift v. BS & A Software, 871 F. Supp. 952 (W.D. Mich. 1994) (appraisal of residential property in assessor's manual copyrightable).

44. In *Nat'l Basketball Ass'n v. Motorola, Inc.*, 105 F.3d 841 (2d Cir. 1997), the Second Circuit defined the elements central to an INS "hot news" misappropriation claim post-*Feist* as follows:

> (i) a plaintiff generates or collects information at some cost or expense;
>
> (ii) the value of the information is highly time-sensitive;
>
> (iii) the defendant's use of the information constitutes free-riding on the plaintiff's costly efforts to generate or collect it;
>
> (iv) the defendant's use of the information is in direct competition with a product or service offered by the plaintiff; and
>
> (v) the ability of other parties to free-ride on the efforts of the plaintiff would so reduce the incentive to produce the product or service that its existence or quality would be substantially threatened.

*Id.* at 845; *see also* U.S. Golf Ass'n v. St. Andrews Sys., Data-Max, Inc., 749 F.2d 1028 (3d Cir. 1984); Ebay, Inc. v. Bidder's Edge, Inc., 100 F. Supp. 2d 1058 (N.D. Cal. 2000); Register.com, Inc. v. Verio, Inc., 126 F. Supp. 2d 238 (S.D.N.Y. 2000); NFL v. Governor of Del., 435 F. Supp. 1372 (D. Del. 1977); RESTATEMENT (THIRD) OF UNFAIR COMPETITION § 38 (1995).

45. H.R. Rep. No. 94-1476, at 132 (1976), *reprinted in* 1976 U.S.C.C.A.N. 5659, 5748 (asserting that "misappropriation" claims were not preempted for business, financial, and scientific databases).

view to ensuring that any associated revenues are applied to self-regulatory activities.[46] Thus, markets facilitating trading in covered securities must pool their market maker and specialist quotations into a "national best bid and offer" (NBBO), which may then be accessed through the facilities of an exchange or through interexchange mechanisms.[47]

The SEC has also mandated public display, consolidation in the NBBO, dissemination, and access to certain priced customer orders held by any "market center."[48] Unlike quotations (which are continuously posted by specialists and market makers designated by a market center to create a reasonable expectation of liquidity therein), customer orders represent voluntary disclosure of price information by customers to a market center in the expectation of receiving an execution at such price or better. Currently, the SEC only requires disclosure of customer orders held by a market center when they improve the NBBO, although the SEC has periodically considered

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46. Regulation of Market Information Fees and Revenues, Exchange Act Release No. 42,208, 64 Fed. Reg. 70,613 (Dec. 17, 1999) [hereinafter Market Data Concept Release]. Although the Commission has recognized the right to charge for the sale of such information, *see, e.g.*, 17 C.F.R. § 242.601(c) (2006), the Commission has maintained that the proceeds from such "sale" are intended to subsidize self-regulatory functions. *See* 64 Fed. Reg. at 70,624-25.

47. The SEC regulates quotation display and access not only to provide execution opportunities for retail brokers but also to facilitate "derivative pricing" off of the NBBO. *See* Notice of Filing of Proposed Rule Change by the New York Stock Exchange, Inc. to Rescind Exchange Rule 390, Exchange Act Release No. 42,450, 65 Fed. Reg. 10,577, at 10,577-81 (Feb. 23, 2000) [hereinafter Market Fragmentation Concept Release]. For example, part of the Commission's strategy for encouraging the competitiveness of market-makers and regional exchanges throughout the 1960s and 1970s was to make it easier for them to compete more effectively with NYSE specialist quotes. *See generally* SELIGMAN, *supra* note 22, at 486-534. The opportunity to access such quotations, even if unexercised, effectively requires competing market makers and specialists to match the NBBO for retail orders or expose the routing broker to a violation of its best execution obligation.

48. 17 C.F.R. §§ 242.301(b)(3), 242.602 (2006). The term "market center" includes, in addition to any national securities exchange or SRO, "any exchange market maker, OTC market maker, and alternative trading system." Regulation NMS Rule 600(b)(38), 17 C.F.R. § 242.600(b)(38) (2006). Thus, individual specialists, market makers, alternative trading systems, and electronic communications systems may be deemed "market centers" independent of the exchange(s) with which they may be affiliated.

whether to mandate disclosure of all "depth-of-book" information.[49]

Exchanges and other market centers have accordingly pursued different strategies to maximize the value of the property rights within the framework created by SEC rules. Several SROs rebate fees collected from the sale of market data to their members to encourage aggressive quotation, while others have sought to increase the volume of information generated artificially in an effort to generate more fee revenue.[50] Yet others have sought to create branded information products that do not fall easily within the scope of SEC disclosure rules, with a view to marketing them under the protection of trademark and misappropriation law.[51] Others have suppressed display of all trading activity and perform merely crossing functions—becoming, in effect, "dark liquidity pools"—to avoid triggering public display requirements.[52] On the political front, exchanges have also sought protection of broader categories of market information through database protection legislation.[53]

For debt securities, the SEC has pursued more modest transparency initiatives, consistent with the greater illiquidity of such markets and pressure to suppress

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49. Regulation NMS, Exchange Act Release No. 49,325, 69 Fed. Reg. 11,126, at 11,136 (Mar. 9, 2004) [hereinafter Regulation NMS Proposing Release].

50. The Commission has recently modified intermarket plan formulae to favor aggressive quotation and eliminate the benefits under current formulae from abusive trade reporting practices. *See infra* note 285.

51. Order Approving a Proposed Rule Change Relating to the Dissemination of Liquidity Quotations, Exchange Act Release No. 47,614, 68 Fed. Reg. 17,140 (Apr. 8, 2003); Order Approving Proposed Rule Changes Relating to the Establishment of the Nasdaq Order Display and Collector Facilities, Exchange Act Release No. 43,863, 66 Fed. Reg. 8,020 (Jan. 26, 2001) (approving Nasdaq's proposed TotalView and PowerView data products); Order Approving Proposed Rule Change Relating to Fees for NYSE OpenBook, Exchange Act Release No. 45,138, 66 Fed. Reg. 66,491 (Dec. 26, 2001).

52. *See* Nina Mehta, *Who's Afraid of the Dark?*, TRADERS MAG. (June 08, 2006), http://www.tradersmagazine.com/column.cfm?id=271&year=2006; Junius W. Peake, *Entropy and the National Market System*, 1 BROOKLYN J. CORP., FIN. & COM. L. (forthcoming 2007).

53. *See* RUBEN LEE, WHAT IS AN EXCHANGE? 147-49 (1998); Amy C. Sullivan, *When the Creative is the Enemy of the True: Database Protection in the U.S. and Abroad*, 29 AIPLA Q.J. 317 (2001) (survey of U.S. and international database protection legislation).

disclosure of proprietary trading information.[54] For publicly traded corporate debt, rules of the National Association of Securities Dealers (NASD) require reporting of transaction prices but not quotation information.[55] With respect to municipal securities, the SEC has relied on cooperative efforts among the Municipal Securities Rulemaking Board and the municipal securities industry to make market information available to investors.[56]

### C. *Derivatives and Market Indices*

The ascendance of options, futures, and other derivatives on financial instruments over the past three decades[57] has given rise to two intellectual property issues. First, since a derivative contract is necessarily "derived" from another instrument, to what extent must the issuer of the derivative contract obtain the permission of the "owner" of rights in the underlying instrument? Second, because the value of the derivative contract is likewise "derived" directly or indirectly from the reported value of the underlying instrument, to what extent must information about the reported value of the underlying security or securities be licensed from the primary market or markets?[58]

The latter question—licensing of prices in the spot market for products underlying derivatives—has not raised

54. *Cf. Proposal for More Bond Data Is Dropped*, N.Y. TIMES, Nov. 22, 2006, at C10 (describing withdrawal of European Commission proposal to require dissemination of corporate and government debt transaction information).

55. Nat'l Ass'n of Sec. Dealers, NASD Manual: Rule 6230 (CCH 2006), *available at* http://nasd.complinet.com/nasd/display/display.html?rbid=1189&element_id=11 59000841.

56. *See Municipal Bonds: Real-Time Data Dissemination Debuts, Next-Day Info Now Available in 15 Minutes*, SEC. L. DAILY (BNA), Feb. 1, 2005 (describing the MSRB & The Bond Market Association's Real-Time Transaction Reporting System).

57. For a history of stock index futures and other index derivatives, see JOHN MILLERS, STOCK INDEX OPTIONS AND FUTURES 5 (1992).

58. For a cash-settled contract, the actual settlement of the contract will take place at a closing price derived from the market center(s) trading the underlying instrument. For a physically-settled contract, settlement will take place through physical delivery. In the latter case, it may be argued that market center need not obtain permission to use the closing price of another exchange insofar as the closing price is irrelevant. In practice, of course, most contracts are netted out prior to the settlement date.

significant issues.[59] For derivatives settled by "physical delivery" of the underlying instrument, an exchange listing a derivative may make no official use of prices disseminated by a competing market center. For derivatives settled in cash, the closing price at which settlement takes place may well be in the public domain under SEC regulations if market information about the underlying security (such as an equity security) is required to be disclosed to the public. Moreover, since trading in derivatives naturally increases the demand for market information regarding the underlying instruments, exchanges trading the underlying equity securities would likely make considerable effort to provide such data to the derivatives exchange on reasonable terms.[60]

The former question—licensing of trademarks and "nominative" rights in instruments underlying derivatives—has generated significant litigation, particularly on the part of current and potential creators of stock indices (which constitute the underlying instrument for many modern financial products).[61] Once a marketing tool for financial publishers and exchanges, indices have come into great demand with the emergence of portfolio

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59. Although there are various models correlating the performance of spot and futures prices in indices, there is considerable inquiry into whether index futures "lead" stock prices in incorporating new information or "lag" behind them. *See, e.g.*, Alex Frino, Terry Walter & Andrew West, *The Lead-Lag Relationship Between Equities and Stock Index Futures Markets Around Information Releases*, 20 J. FUTURES MKTS. 467 (2000) (suggesting spot markets may lead in the incorporation of firm-specific information, while futures markets may lead in the incorporation of macroeconomic information). Economists hypothesize that traders will choose to trade in the market that offers the least transaction and leverage costs, all other things being equal. *See, e.g.*, Minho Kim, Andrew C. Szakmary & Thomas V. Schwarz, *Trading Costs and Price Discovery Across Stock Index Futures and Cash Markets*, 19 J. FUTURES MKTS. 475 (1999).

60. *See* Concept Release Concerning Self-Regulation, Exchange Act Release No. 50,700, 69 Fed. Reg. 71,256, at 71,271 (Dec. 8, 2004); Market Data Concept Release, 64 Fed. Reg. 70,613 (Dec. 17, 1999); *see also, e.g.*, Gaston F. Ceron, *Nasdaq Will Unveil Next Week System for Better Opening Quotes*, WALL ST. J., Sept. 21, 2004, at C3. Nasdaq upgraded its opening and closing cross procedures in order to provide a definitive opening and closing price, among other reasons, to encourage Standard & Poor's and Dow Jones to use its prices when computing index values for Nasdaq-listed stocks rather than AMEX prices. *Id.*

61. An index consists of a list of component stocks, commodities or other inputs, and an algorithm for computing an index value based on the observed values of the underlying components. *See* MILLERS, *supra* note 57, at 6.

theory and the importance of benchmarking.[62] Many index providers have entered into exclusive licensing arrangements with derivatives exchanges and (as discussed below) other financial product providers.[63]

Accordingly, index providers have sought to protect the essence of their work product—the list of securities and indexing methodology[64]—through a variety of intellectual property regimes.[65] Some index providers have sought to copyright the list of securities composing an index to deter rivals from publishing competing indices that closely track its components.[66] While the "idea" of a particular indexing methodology may not be copyrightable, the selection of index components may be protected under copyright law if it carries the *Feist*-ian "quantum of originality."[67]

The principal cause of action advanced in litigation, however, has been misappropriation of trademark rights.[68]

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62. *See* LARRY HARRIS, TRADING & EXCHANGES 484-93 (2002).

63. *See, e.g.*, Affidavit of Paul R. Aaronson in Support of Plaintiff's Motion for a Temporary Restraining Order and for a Preliminary Injunction, McGraw-Hill Co., Inc. v. ISE, No. 1:05-cv-112, 2005 WL 2100518 (S.D.N.Y. Sept. 1, 2005) (on file with Buffalo Law Review).

64. *See* HARRIS, *supra* note 62, at 484-86 (describing various weighting methodologies commonly used for computing index values).

65. *See generally* Douglas G. Baird, *Common Law Intellectual Property and the Legacy of* International News Service v. Associated Press, 50 U. CHI. L. REV. 411 (1983) (discussing intellectual property protection for indices).

66. Recently, the Philadelphia Stock Exchange (PHLX) brought suit against the International Stock Exchange (ISE) seeking damages for copyright infringement because the ISE's HVY gold index allegedly mimicked "almost exactly" the PHLX's XAU gold/silver index. PHLX v. ISE, No. 1:05-cv-5390, 2005 WL 2923519, (S.D.N.Y. Nov. 2, 2005). The case was dismissed voluntarily after the court refused to grant preliminary injunctive relief against the launch of ISE's index. *See Court Refuses to Stop Launch of ISE Option at Request of Phlx*, SEC. L. DAILY (BNA), June 10, 2005.

67. *See, e.g.*, Kregos v. Associated Press, 937 F.2d 700, 707 (2d Cir. 1991) (selection of nine statistical categories for use on pitching form found sufficiently original); Eckes v. Card Prices Update, 736 F.2d 859 (2d Cir. 1984) (designation of baseball cards as "premium" or "nonpremium" sufficiently original to warrant copyright protection).

68. *See, e.g.*, Lorillard Tobacco Co. v. Amouri's Grand Foods, Inc., 453 F.3d 377, 380-81 (6th Cir. 2006) (eight elements demonstrate trademark confusion: "(1) strength of the mark, (2) relatedness of the goods, (3) similarity of the marks, (4) evidence of actual confusion, (5) marketing channels used, (6) likely degree of purchaser care and sophistication, (7) defendant's intent in selecting

With respect to derivatives on common stock,[69] no such misappropriation has been held to exist. In *Golden Nugget v. American Stock Exchange*,[70] an issuer of common stock had argued that the trading of options on its stock without prior consent constituted a misappropriation of property, infringement of trademark, and unfair competition. After dispensing with AMEX's argument that federal regulation of the options markets preempted state law,[71] the court held that the issuer had no "property or other protectable interest in [its] common stock owned by its shareholders" that would "allow it to control the manner or means of resale of its shares."[72] The court further held that the mere nondeceptive use of a trade name to identify a product when resold in the secondary market (via a listed option) did not violate a manufacturer's trademark, and that there was no deception or appropriation of the issuer's property to warrant a finding of unfair competition.[73]

For stock indices, courts have reached technically distinguishable, if substantively discordant conclusions.[74] In *Board of Trade v. Dow Jones & Co.*,[75] the Board of Trade of the City of Chicago (CBOT) had sought to offer a

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its mark and (8) likelihood of expansion of the product lines using the marks"). *See generally* LANDES & POSNER, *supra* note 11.

69. Prior to the Commodity Futures Modernization Act, Pub. L. No. 106-554, 114 Stat. 2763, Part I (2000) (CFMA), the only exchange-traded derivatives permitted on individual equity securities were equity options traded on an SEC-registered exchange. The CFMA permitted trading in "security futures" subject to joint regulation by the SEC and the CFTC. *Id.*

70. 828 F.2d 586, 588 (9th Cir. 1987). The SEC permitted listing of the options without issuer consent. Release Discussing Exchanges' and NASD's Proposed Rule Change, Exchange Act Release No. 22,026, 50 Fed. Reg. 20,310, at 20,313-14 (May 8, 1985).

71. *See infra* Part III.A.

72. *Golden Nugget*, 828 F.2d at 590.

73. Stock may trade in the over-the-counter market—or pursuant to unlisted trading privileges on any stock exchange—without the permission of the issuer. Ludlow Corp. v. SEC, 604 F.2d 704 (D.C. Cir. 1979) (no exclusive right as to where stock is traded).

74. The International Stock Exchange has recently filed a complaint in the U.S. District Court for the Southern District of New York seeking to end the exclusive listing of DJIA and S&P 500 index options on the Chicago Board Options Exchange. Int'l Secs. Exch., LLC v. Dow Jones & Co., No. 1:06-cv-12878 (S.D.N.Y. Nov. 2, 2006).

75. 98 Ill. 2d 109 (1983).

commodity futures contract on the Dow Jones Industrial Average (DJIA); unlike the Golden Nugget options, the Dow Jones futures would be settled in cash, based on changes in the value of the DJIA index. CBOT sought a declaratory judgment that use of the DJIA in this manner would not constitute a "commercial misappropriation 'of the Dow Jones index and averages'" since CBOT's use of the DJIA would not compete with Dow Jones' news service (in the context of which the DJIA was developed).[76] The Supreme Court of Illinois found in favor of Dow Jones, primarily on the ground that the recognition of a proprietary interest in a single stock index would have the effect of encouraging development of new indices.[77]

A similar result was obtained in *Standard & Poor's Corp. v. Commodity Exchange, Inc.*,[78] in which Standard & Poor's (now owned by The McGraw-Hill Companies, Inc.) asked the Second Circuit to affirm an injunction against Comex's trading in futures contracts modeled on the Standard & Poor's 500 index (the "S&P 500"). In *Comex,* S&P had entered into a licensing agreement with the Chicago Mercantile Exchange to list an S&P 500 contract, but refused to license use of the index to Comex. Comex thereafter developed a futures contract on the "Comex 500 Stock Index," which according to Comex's filings with the CFTC "essentially duplicated" the S&P 500 index.[79] The district court had based its decision in part on a Lanham Act claim that the juxtaposition of the words "500" and "stock index," together with the use of the S&P 500 index as reference price, demonstrated a "likelihood of confusion" as to the source or sponsorship of the Comex product.[80]

Although the Second Circuit acknowledged that appropriate disclaimers might eliminate source confusion, the court upheld the district court's injunction on the

76. *Id.* at 115.

77. *Id.* at 127.

78. 683 F.2d 704 (2d Cir. 1982).

79. In its listing application to the CFTC, Comex indicated that the settlement price of the Comex 500 contract would be the "then current Standard & Poor's 500 Index value," which "made clear that a separately calculated Comex 500 Stock Index never existed." *Id.* at 706.

80. Standard & Poor's Corp. v. Commodity Exch., Inc., 538 F. Supp. 1063, 1065-67 (S.D.N.Y. 1982).

grounds that defendants misappropriated a "salable product" that required significant "money, labor and expertise" to calculate in a reliable and accurate manner.[81] Two members of the panel nevertheless drew the distinction between S&P's business of publishing an index value and Comex's business of marketing futures contracts that settle based on the published index value. In particular, the court stressed the "different, novel, and close" issue whether S&P's interest in the index was "the type of interest . . . that is capable of being protected . . . against the unlicensed use by Comex in marketing a futures contract using the [S&P]'s index as a settlement price."[82]

Despite frequent requests by various market participants for intervention, the Commission to date has refrained from regulating rights in market indices. In approving the listing of index-based options in 1982, the Commission indicated a "regulatory interest" in reviewing indices' composition, calculation, and adjustment procedures, as well as the widespread dissemination of index prices.[83] Nevertheless, while the Commission permitted multiple trading of such options in that release, it acknowledged that such permission entailed no "'legal determination by the Commission with respect to the validity of any copyright, trademark, service market or related claims' with respect to the index" since the issue had not been raised at the time.[84] In subsequent releases,

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81. 683 F.2d at 710. The court noted that Comex's product directly competed with CME's S&P contract, in which S&P had a financial interest by virtue of the licensing agreement.

82. *Id.* at 712 (Newman, J., concurring); *see also id.* (Knapp, J., concurring).

83. *See* Order Approving Proposed Rule Change, Exchange Act Release No. 19,264, 47 Fed. Reg. 53,981 (Nov. 30, 1982). The Commission had also sought to prohibit futures trading in indices that were not broad-based and therefore had the potential to be used to engage in manipulation or insider trading with respect to individual component securities. Such "narrow-based indices" are now jointly defined by the SEC and the CFTC pursuant to section 3(a)(55)(B) of the Exchange Act, 15 U.S.C. § 78c(a)(55)(B) (2000). *See, e.g.*, 17 C.F.R. §§ 240.3a55-1 to .3a55-3 (2006); Method for Determining Market Capitalization and Dollar Value of Average Daily Trading Volume, Exchange Act Release No. 44,288, 66 Fed. Reg. 27,560 (May 17, 2001) (codified at 17 C.F.R. pts 41, 240).

84. Statement of Commission Views on Side-by-Side Market Making, Exchange Act Release No. 22439, 50 Fed. Reg. 39,191 (Sept. 20, 1985) (quoting

the Commission has refused to resolve "intellectual property right claims" in deference to the "elaborate statutory framework" for intellectual property rights under federal law and the availability of state law claims.[85]

### D. *Financial Contract and Product Design*

Exchanges and investment banks have sought to assert proprietary rights with respect to the design and marketing of financial products. The availability of statutory or regulatory protection, while perhaps not necessary for the progress of financial innovation, has nevertheless been thought to affect the frequency of new listings as well as the profitability of individual products to their sponsors and listing markets. In particular, the design of "synthetic" or "derivative" products tailored to meet investor demand, liquidity requirements, and even regulatory interests[86] is frequently claimed to require significant research and development for which "first mover" status alone cannot compensate.[87]

Protection for financial product design under formal intellectual property regimes may be available. Despite the longstanding judicial created "business methods" exception to patentable subject matter, recent cases have upheld

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NASD's request for clarification of the effect of the Commission's order on the intellectual property rights of index providers).

85. *See* Order Approving Proposed Rule Changes Relating to the Listing and Trading of Warrants on the Deutscher Aktienindex ("DAX Index"), Exchange Act Release No. 36,070, 60 Fed. Reg. 42,405 (Aug. 15, 1995) (refusing to delay approval despite challenge to unlicensed use of underlying index); Order Approving Proposed Rule Change Relating to the Listing and Trading of a Broad Based Index Option Contract Based on the Japan Index, Exchange Act Release No. 28,475, 55 Fed. Reg. 40,492 (Oct. 3, 1990) (same).

86. The SEC strongly encouraged the listing of "cash" market equivalents to index-based derivatives—such as "basket" trading, index participations, and eventually ETFs—to reduce volatility in cash markets resulting from futures trading. *See, e.g.*, Nicholas deB. Katzenbach, An Overview of Program Trading and Its Impact on Current Market Practices (Dec. 21, 1987) (study commissioned by the NYSE), *excerpted in* Richard P. Bernard, *Trading Baskets*, 621 PLI/CORP. 549 (1988); *see also* Lawrence Harris, *Economics of Cash Index Alternatives*, 10 J. FUTURES MKTS. 179-94 (1990) (arguing for the creation of such products). The CFTC likewise made efforts to obtain authority to list "futures" on individual equity securities, culminating in the authorization of "security futures" in the CFMA. *See supra* note 69.

87. *See, e.g.*, Int'l News Serv. v. Associated Press, 248 U.S. 215, 259 (1918).

patent protection for certain financial products when their operation relies on a "practical application" of an algorithm, such as through a particular computer system or network that effects the instantaneous calculations and transactions necessary to achieve the product's objectives.[88] Similarly, copyright protection may also extend to proprietary software used to manage complicated investment strategies, if not to the product itself.[89]

In many cases, however, new financial products do not conceptually differ from "prior art" to the degree necessary to obtain patent protection.[90] For example, exchange-traded funds (ETFs), unlike traditional index funds,[91] allow the creation of additional shares without limiting the ability of the shares to trade on a secondary market.[92] Because ETF shares may be traded without the participation of the ETF

88. *See, e.g.*, State St. Bank & Trust Co. v. Signature Fin. Group, 149 F.3d 1368 (D.C. Cir. 1998) (upholding patent for "data processing system" for implementing an investment structure developed for use as an administrator and accounting agent for mutual funds); Paine, Webber, Jackson & Curtis, Inc. v. Merrill Lynch, Pierce, Fenner & Smith, 564 F. Supp. 1358 (D. Del. 1983) (upholding patent for "data processing methodology for cash management account"). *See generally* Douglas L. Price, Comment, *Assessing the Patentability of Financial Services and Products*, 3 J. HIGH TECH. L. 141 (2003).

89. *See, e.g.*, Am. Stock Exch., LLC v. Towergate Consultants Ltd., No. 1:03-cv-856, 2003 WL 21692814 (S.D.N.Y. July 21, 2003).

90. Many new "products," for example, may simply represent the securitization of computerized trading strategies used by arbitrageurs or traders that may not qualify for patent protection. In other cases, similar products may already exist. In a challenge to AMEX's listing of ETFs, for example, a patent claim on ETF design was held invalid as being part of the prior art, since AMEX had previously published a proposed rule change by filing it with the SEC. *See, e.g.*, Am. Stock Exch., LLC v. Mopex, Inc., 250 F. Supp. 2d 323 (S.D.N.Y. 2003).

91. Because ETFs do not fit neatly into any of the categories of regulated investment companies under the Investment Company Act of 1940, ETF sponsors have routinely sought exemptive relief from the Commission. *See* Actively Managed Exchange-Traded Funds, Release No. IC-25,258, 66 Fed. Reg. 57,614, at 57,614-15 (Nov. 15, 2001) (describing the development of index-based ETFs).

92. Unlike traditional index funds, ETF shares can be created only upon delivery of (or redeemed only in exchange for) a basket of securities that reflects the composition of the index. The limited creation/redemption feature permits ETF shares to be traded on an exchange or in the over-the-counter market like closed-end funds, but without trading at a discount to net asset value. *See id.* at 57,616-17; *see also* SEC Website, http://www.sec.gov/answers/etf.htm (last visited Aug. 19, 2006).

sponsor or listing market, competing exchanges have sought to trade ETFs and related derivatives. If no protection exists, such products may be poached or dually listed following their introduction with little recourse for the product designer.[93] In such cases, issuers may build in contractual features to protect against free riding. If a liquid secondary market is necessary, products may be designed to prohibit or discourage resales without the intermediation of the sponsor or to incorporate unique design features that limit fungibility. Such devices would come at a significant cost, since sponsors would also have to guarantee the availability of additional liquidity enhancing services for their branded products as an inducement to investors concerned about fungibility.[94]

The extent of protection for such products under state intellectual property theories may depend on their design. Merely branding an innovative product may not be an adequate deterrent to the creation of competing products by rival issuers.[95] Sponsors may therefore seek to bootstrap trademark protection by entering into exclusive licensing agreements with owners of a component of the product, such as an index, that has clear protection under

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93. *See* Gaston F. Ceron & Jen Ryan, *Barclays ETFs Defect From Amex*, WALL ST. J., July 21, 2005, at C11 (describing Barclays Global Investors' decision to move the listing for many of its ETFs to the NYSE following NYSE's merger with Archipelago); *Big Board to Trade Amex-Listed Funds*, N.Y. TIMES, Apr. 6, 2001, at C5 (NYSE's application to trade index-based ETFs pursuant to unlisted trading privileges); *see also* Beatrice Boehmer & Ekkehart Boehmer, *Trading Your Neighbor's ETFs: Competition or Fragmentation?*, 27 J. BANKING & FIN. 1667 (2003) (describing the NYSE's dual listing of index-based ETFs and the impact on inter-exchange competition).

94. *See* Commission Guidance on the Application of Certain Provisions of the Securities Act of 1933, the Securities Exchange Act of 1934 to Trading in Security Futures Products, Exchange Act Release Nos. 8,107, 46,101, 67 Fed. Reg. 43,234, at 43,241 (Jun. 27, 2002) (codified at 17 C.F.R. pts. 231, 241).

95. For example, before the U.S. Treasury developed the STRIPS program for individually trading principal payments and interest coupons on Treasury securities, a number of investment banks offered the same service through programs with feline acronyms—e.g., Salomon Brothers' Certificates of Accrual on Treasury Securities (CATS), Merrill Lynch's Treasury Income Growth Receipts (TIGRs), and Lehman Brothers' Lehman Investment Opportunity Notes (LIONs). *See* David J. Gilberg, *Regulation of New Financial Instruments Under the Federal Securities and Commodities Laws*, 39 VAND. L. REV. 1599, 1667 (1986). It is not clear whether such "copycat" nomenclature could give rise to an action for trademark infringement. *See supra* note 66.

intellectual property law.[96] This strategy failed in three recent cases involving index-based ETFs: *Nasdaq Stock Market v. Archipelago Holdings LLC*,[97] and the consolidated cases *McGraw-Hill Companies v. International Securities Exchange*,[98] and *Dow Jones & Co. v. International Securities Exchange* (the "*ISE Cases*").[99]

In *Archipelago*, Nasdaq sought to enjoin ArcaEx (at the time, a trading facility of the Pacific Exchange) from unlicensed trading of the "QQQ," an exchange-traded fund sponsored by Nasdaq Financial Products Services (a Nasdaq subsidiary) based on the Nasdaq-100 stock index. Nasdaq's claims were based on false advertising and trademark infringement under the Lanham Act, as well as various state law theories of misappropriation and unfair competition.[100] Archipelago countered that Nasdaq's claims were preempted under the national market system provisions of the Exchange Act.[101] In the *ISE Cases*, the owners of the S&P 500 Index and the Dow Jones Industrial Average sought to prevent the International Securities Exchange from listing options on various index-based ETFs—including SPDR shares (based on the S&P 500) and DIAMONDS shares (based on the DJIA). ISE argued that an index creator has no protectable property interest with respect to the listing or trading of an option on an ETF share, to the extent that such options may be settled by

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96. In *McGraw-Hill Cos. v. Vanguard Index Trust*, McGraw Hill sought to prevent Vanguard from sponsoring the Vanguard Index Participation Equity Receipts, or "VIPERS"—an ETF based on the S&P 500 index. 139 F. Supp. 2d 544 (S.D.N.Y.), *aff'd*, 27 Fed. Appx. 23 (2d Cir. 2001). Vanguard sought to issue VIPERs under the terms of its existing license to use the Standard & Poor's trademark in connection with existing Vanguard open-end mutual funds based on S&P indices.

97. Nasdaq Stock Mkt. v. Archipelago Holdings LLC, 336 F. Supp. 2d 294 (S.D.N.Y. 2004).

98. McGraw-Hill Cos. v. Int'l Sec. Exch., Inc., 451 F.3d 295 (2d Cir. 2006).

99. Dow Jones & Co. v. Int'l Sec. Exch., Inc., 451 F.3d 295 (2d Cir. 2006) [together with *McGraw-Hill Cos. v. Int'l Sec. Exch., Inc.*, hereinafter referred to as the *ISE Cases*].

100. *Archipelago*, 336 F. Supp. 2d at 296-97.

101. *See id.*; *see also infra* Part III.A. The SEC, in its amicus brief, opined that the Unlisted Trading Privileges Act and other provisions of the Exchange Act did not preempt claims relating to the marketing of securities under federal trademark law or state unfair competition law. *See Archipelago*, 336 F. Supp. 2d at 297, 303.

delivery of the underlying ETF—rather than settled in cash based on the value of the respective index on the settlement date.[102]

In all three cases, the index provider's state law claims against trademark infringement under the *Dow Jones* and *Comex* cases were rejected in favor of the reasoning in *Golden Nugget*. In *Archipelago*, the district court rejected Nasdaq's state law claims on the ground that Nasdaq had no protectable interest with respect to the resale of QQQ shares on another exchange. The court sought to distinguish *Dow Jones* and *Comex* on the grounds that the QQQ shares are not "linked to the Index," in the way that futures contracts refer to the value of an index when determining the settlement price of the contract at expiration. In addressing Nasdaq's argument that the secondary market value of the QQQ shares "cannot be set without reference to the Index," the court observed that investors—and not ArcaEx—would set the secondary market price based on public information disseminated by Nasdaq.[103]

In the *ISE Cases*, the Second Circuit similarly concluded that there was no "wrongful use or misappropriation" of an "intellectual property interest" of the respective index providers because the index providers relinquished control over the resale and public trading of those shares. Because the index providers "intentionally disseminate their index values to inform the public," the use of those values by investors in the marketplace did not constitute misappropriation.[104] Moreover, the court observed that the nominative use of a trademark does not

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102. *See* Peter N. Hall, *Bucking the Trend: The Unsupportability of Index Providers' Imposition of Licensing Fees for Unlisted Trading of Exchange Traded Funds*, 57 VAND. L. REV. 1125 (2004) (arguing that the Unlisted Trading Privileges Act of 1994 evinces a Congressional intent to prevent the exclusive listing of ETFs). However, many scholars have advocated exclusive listing agreements for securities to achieve competing regulatory objectives. *See infra* notes 183-85.

103. The court denied Archipelago's motion to dismiss the Lanham Act claims since, albeit weak, they survived federal pleading requirements. Those claims related primarily to statements made in ArcaEx's advertising and promotional campaign that sought to compare the volume and quality of trading in QQQ shares on Nasdaq and ArcaEx. *See Archipelago*, 336 F. Supp. 2d at 303-04.

104. *ISE Cases*, 451 F.3d at 303.

result in trademark confusion "as long as the trader does not create confusion by implying an affiliation with the owner of the product." The court similarly declined to consider the outcome that would result when "a proprietary index is employed in the creation of the financial instrument."[105]

Sponsors of new financial products have also sought ad hoc protection from regulators, with varying degrees of success.[106] The Commission has recognized that a market center's commitment of "significant resources" to the creation of new products "on the basis of an exclusive franchise" might justify exclusive listing rights, as might reliance upon revenues from such trading as a "vital source of income."[107] Nevertheless, the Commission and antitrust authorities have periodically expressed concern over exclusive listing arrangements for financial products. For example, in 1989, the Commission rescinded exchange rules that "prohibit[ed,] condition[ed,] or otherwise limit[ed], directly or indirectly, the ability of [any such] exchange to list any stock options class because that options class is listed on another options exchange."[108] More recently, the ISE has petitioned the Commission to extend this rule to index-based options products even as it commenced litigation in federal court to enjoin such exclusive licensing.[109]

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105. *Id.* at 308. As discussed above, *supra* note 74, ISE has recently sought to end exclusive listing of S&P 500 and DJIA index options.

106. For example, in a letter to the Commission seeking no-action relief for the design of its C Index Participation product, PHLX sought assurances from the SEC that it would not approve rule filings submitted by competing exchanges to list comparable products. Letter from Nicholas A. Giordano, President, PHLX, to SEC (June 29, 1988), *reprinted in* Bernard, *supra* note 88, at app. E (asking whether it would further the development of new products "to permit another marketplace, without incurring or sharing in development costs, to copy and initiate simultaneous trading of an instrument or new securities product developed at considerable cost by another marketplace that seeks to recover those costs in successful trading of that instrument").

107. Order Approving Proposed Rule Change, Exchange Act Release No. 19,264, 47 Fed. Reg. 53,981, at 53,983 (Nov. 30, 1982).

108. 17 C.F.R. § 240.19c-5 (1989), *adopted in* Multiple Trading of Standardized Options, Exchange Act Release No. 26,870, 54 Fed. Reg. 23,976 (June 5, 1989).

109. Letter from ISE to the Commission, Request for Rulemaking to Amend Rule 19c-5 Regarding Certain Options Exchange Licensing Arrangements (Nov.

E. *Standards and Protocols*

The ownership of the standards and protocols that govern securities market disclosures and transactions has received significant scholarly attention in recent years.[110] Given the highly technical nature of standard-setting, it has historically been the province of industry consortia or self-regulatory bodies with the relevant incentives and expertise. Because of the significant positive and negative externalities associated with standards, there is considerable pressure on regulators to control, or at least tightly oversee, their stewardship—particularly when regulatory policy mandates exclusivity of standards.

Standard-setting in securities markets has proceeded in a number of ways over the history of securities regulation.[111] Some are legislated, such as the mandatory terms of the Trust Indenture Act.[112] Some are established by the Commission—for example, the rules and regulations governing the preparation and formatting of non-financial disclosure. These might include, for example, the Commission's initiative to develop an extensible business reporting language (XBRL) for electronic submission of § 13 reports and other Exchange Act filings. In such cases, the licensing and modification of standards are fused with the agency's responsibility to comply with appropriate process requirements under the federal securities laws and administrative procedure.

Some standards are established by SROs. "Generally accepted auditing standards," formerly promulgated by the American Institute for Certified Public Accountants (AICPA) and overseen by the now-defunct Public Oversight Board (POB), became the exclusive domain of the Public

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1, 2002), *available at* http://www.sec.gov/rules/petitions/petn4-469.htm (requesting that the Commission promulgate a rule to "prohibit an options exchange from being a party to exclusive or preferential licensing arrangements with respect to index option products and options overlying other instruments, including options on securities whose value is based on an index").

110. *See, e.g.*, Lawrence A. Cunningham, *Private Standards in Public Law: Copyright, Lawmaking and the Case of Accounting*, 104 MICH. L. REV. 291 (2005).

111. *See generally* David Friedman, *Standards as Intellectual Property: An Economic Approach*, 19 DAYTON L. REV. 1109 (1994).

112. 15 U.S.C. §§ 77aaa-77bbbb (2000).

Company Accounting Oversight Board as a result of the Sarbanes-Oxley Act of 2002.[113] Exchange listing standards, member rules, order and transaction reporting formats, and other self-regulatory recordkeeping and reporting requirements are also examples. To the extent that self-regulatory organizations establish standards through formal rules, § 19 of the Exchange Act establishes a "mini-APA" to ensure an opportunity for public notice and comment in the standard-setting process.[114]

Other standards are privately owned yet can have the effect of public law. The Financial Accounting Standards Board has been delegated authority to establish "generally accepted accounting principles" for the preparation of financial statements.[115] Law firms, investment banks, and their respective industry associations largely control the "boilerplate" provisions that govern indentures for publicly traded debt.[116] McGraw-Hill, acting on behalf of the American Bankers' Association, administers the CUSIP system for the assignment of unique identification codes for financial instruments. Various trade associations maintain standard documentation for common industry transactions.[117]

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113. Sarbanes-Oxley Act of 2002, Pub. L. No. 107-204, §§ 101-103, 116 Stat. 745, 755 (codified at 15 U.S.C. §§ 7211-7213). For a discussion of PCAOB's anomalous status as a self-regulatory organization, see generally Donna M. Nagy, *Playing Peekaboo with Constitutional Law: The PCAOB and Its Public/Private Status*, 80 NOTRE DAME L. REV. 975 (2005).

114. 15 U.S.C. § 78s (2000). For a description of the "mini-APA" provisions of Exchange Act § 19, see 6 LOUIS LOSS & JOEL SELIGMAN, SECURITIES REGULATION 2701-32 (3d ed. 1989).

115. *See* Cunningham, *supra* note 110, at 312.

116. *See generally* Marcel Kahan & Michael Klausner, *Standardization and Innovation in Corporate Contracting (or "The Economics of Boilerplate")*, 83 VA. L. REV. 713 (1997); Symposium, *"Boilerplate": Foundations of Market Contracts*, 104 MICH. L. REV. 821 (2006).

117. For example, the International Swaps and Derivatives Association maintains documentation for over-the-counter derivative transactions; the Securities Industry Association and The Bond Market Association (which have merged to become the Securities Industry and Financial Markets Association) maintain documentation for common securities financing transactions; and the Financial Market Lawyers Group (sponsored by the Federal Reserve Bank of New York), maintains documentation for currency exchange agreements. *See* Kahan & Klausner, *supra* note 116, at 763.

The "value" of standards, once established, is determined largely by organizational structure. Congress, for example, has enacted special levies on reporting companies to pay for the maintenance and development of accounting and auditing standards.[118] Part of the fees charged by self-regulatory organizations may be expected to be dedicated to the maintenance of its intellectual property; to the extent that membership in such organizations is mandatory for broker-dealers or other professionals, such standards may be indirectly subsidized by industry groups.[119] Private entities, by contrast, must rely on sales and licensing fees (where permissible) or voluntary membership dues. In the latter two settings, larger members (or payers of significant licensing fees) could have undue influence over modifications of such standards.[120]

Courts have debated what level of protection to afford property rights—such as copyright or trademark rights—in standards owned by private or quasi-governmental entities, when legislators or regulators require adherence to such standards either de jure or de facto.[121] For example, commentators have drawn parallels to cases in which industry associations have sought to exercise exclusive publication rights with respect to "codes" or other materials that are later enacted wholesale into law or regulation.[122]

118. Sarbanes-Oxley Act of 2002 § 109, Pub. L. No. 107-204, 116 Stat. 745, 769-70 (codified at 15 U.S.C. § 7219).

119. 15 U.S.C. § 15(b)(8).

120. Cunningham, *supra* note 110, at 330-31.

121. For example, to formalize the Commission's authority over the Financial Accounting Standards Board, the Commission was formally given the authority under § 19(b) of the Securities Act of 1933 (as amended by the Sarbanes-Oxley Act of 2002) to "recognize, as 'generally accepted' for purposes of the securities laws, any accounting principles established by a standard setting body" that met certain organizational requirements. 15 U.S.C. § 77s(b) (2000 & Supp. 2005). In addition, the Sarbanes-Oxley Act provided for FASB's funding by a levy on reporting companies. § 109, Pub. L. No. 107-204, 116 Stat. 745, 769-70 (codified at 15 U.S.C. § 7219).

122. Professor Cunningham has identified a number of U.S. circuit court cases considering the availability of copyright protection to codes adopted formally or informally as "law": Bldg. Officials & Code Admin. v. Code Tech., 628 F.2d 730 (1st Cir. 1980) (denying preliminary injunction to copyright holder for failure to establish substantial likelihood of success on the merits); CCC Info. Serv. v. MacLean Hunter Mkt. Reports, 44 F.3d 61 (2d Cir. 1994) (reference to copyrighted work as a legal standard by legislature does not result

In such cases, commentators have recognized the risk that private owners' ability to control the duplication or dissemination of standards may hinder, if not prevent, equal access to law.[123] More importantly, groups petitioning for a modification of standards to address new or unforeseen situations might find themselves shut out of the standard-setting process, particularly if competing standards are not permitted.

## II. JUSTIFICATIONS FOR REGULATORY INTERVENTION

Regulation of intellectual property rights in securities markets is largely motivated by the traditional concern of inadequate, incomplete or inaccurate disclosure with respect to specific issuers or securities. Organized exchanges, to a certain degree, developed mechanisms for securities disclosure and market information at the turn of the last century, and market-based approaches to information regulation emerged even before the scope of proprietary rights was settled under securities law or other applicable federal or state law. Congress has nevertheless rejected the "all-or-none" proprietary rights paradigm in favor of an approach that balances the competing economic and noneconomic objectives in intellectual property and information law in a variety of specific industries and with respect to specific technologies.[124] In the federal securities

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in loss of copyright); Practice Mgmt. Info. Corp. v. Am. Med. Ass'n, 121 F.3d 516 (9th Cir. 1997), *amended by* 133 F.3d 1140 (9th Cir. 1998) (contract between Heath Care Financing Administration and AMA to use AMA coding system did not invalidate AMA's copyright); Veeck v. S. Bldg. Code Cong. Int'l, 293 F.3d 791 (5th Cir. 2002) (en banc); *see also* Cunningham, *supra* note 110, at 300-07.

123. *See* Cunningham, *supra* note 110, at 300-07.

124. *See* Joseph P. Liu, *Regulatory Copyright*, 83 N.C. L. REV. 87 (2004) (describing this shift and attributing it in part to policymakers' belief that liability rules are able to mitigate market failures); *see also* Jay P. Kesan & Rajiv C. Shah, *Shaping Code*, 18 HARV. J.L. & TECH. 319 (2005); Reza Dibadj, *Saving Antitrust*, 75 U. COLO. L. REV. 745 (2004).

Commentators have noted the preference of policymakers to rely on detailed "liability" rules for regulating interests in information products rather than the traditionally broader "proprietary" claims that characterized turn-of-the-century intellectual property protection. Cass R. Sunstein, *Informational Regulation and Informational Standing:* Akins *and Beyond*, 147 U. PA. L. REV. 613 (1999), *citing* DAVID OSBORNE & TED GAEBLER, REINVENTING GOVERNMENT: HOW THE ENTREPRENEURIAL SPIRIT IS TRANSFORMING THE PUBLIC SECTOR 15-16 (1992).

arena, this is evident in both the increasing regulatory authority over such common law rights that Congress has conferred on the Commission[125] and the Commission's highly detailed regulations—often characterized as "micromanagerial" or "command-and-control" by its critics.[126]

Intellectual property policy also plays a significant role in how markets are structured, how market supervision is financed, and how closely the Commission is able to supervise the evolution of market standards.[127] To the extent that the offering and trading of securities requires coordination among market participants, Congress has impliedly provided limited exemptions from the federal antitrust laws while conferring limited authority upon the Commission to supervise and, when necessary intervene, on an ongoing basis in those arrangements. Because the Commission lacks the powers of other economic regulators, the ability to modify intellectual property rights in various types of securities information can provide a useful tool for managing competition.

Such intervention is of course susceptible to numerous pitfalls. Lack of Commission expertise or resources, regulatory capture by stock exchanges, SROs, and major

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125. *See, e.g.*, Securities Acts Amendments of 1975 § 11A(a)(1), Pub. L. No. 94-29, 89 Stat. 97, 111 (codified at 15 U.S.C. § 78k-1) (market information and securities information processors); Securities Act of 1934 § 15(g), 15 U.S.C. § 78o(g) (2000) (amended by Penny Stock Reform Act of 1990 § 505, Pub. L. No. 101-429, 104 Stat. 931, 953-54) (requirements for transactions in penny stocks); Sarbanes-Oxley Act of 2002 § 103, Pub. L. No. 107-204, 116 Stat. 745, 755-56 (codified at 15 U.S.C. § 7213) (auditing standards); Sarbanes-Oxley Act of 2002 § 108, Pub. L. No. 107-204, 116 Stat. 745, 768-69 (codified at 15 U.S.C. § 7218) (accounting standards).

126. The number of former commissioners who have criticized the Commission's regulatory approach, if nothing more, illustrates the difficulties faced by the Commission in using its statutory authority to regulate market macrostructure. *See, e.g.*, Harvey L. Pitt, Op-Ed., *Over-Lawyered at the SEC*, WALL ST. J., July 26, 2006, at A15; Steven M. H. Wallman, *Competition, Innovation, and Regulation in the Securities Markets*, 53 BUS. LAW. 341 (1998); Richard Hill, *Glassman Says Court Decisions an Affirmation of "Economists" Approach*, SEC. L. DAILY (BNA), July 7, 2006 (reporting former commissioner's remarks regarding recent D.C. Circuit decisions vacating SEC rulemaking from which she had dissented).

127. *See, e.g.*, Zohar Gosher & Gideon Parchomovsky, *The Essential Role of Securities Regulation*, 55 DUKE L.J. 711, 713 (2006) (arguing that the ultimate goal of securities regulation is not investor protection, but "to attain efficient markets and thereby improve the allocation of resources in the economy").

investment banks, deference to industry representatives in the absence of organized investor advocacy, and bureaucratic process and unresponsiveness have all been cited as harbingers of potentially damaging regulatory failures.[128] The lack of clear legislative guidance complicates the agency's perspective:[129] Securities regulation is generally advanced under the rubric of "investor confidence" or "investor protection," as is the SEC's statutory mandate.[130] The goals of economic efficiency and capital formation, where they appear in the federal securities laws, serve as decidedly secondary considerations.[131] Moreover, the implementation of investor

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128. *See, e.g.*, STEPHEN BREYER, REGULATION AND ITS REFORM 15-35 (1982) (addressing arguments for and against regulation generally); George W. Schwert, *Public Regulation of National Securities Exchanges: A Test of the Capture Hypothesis*, 8 BELL J. ECON. 128 (1977).

129. Section 11A of the Securities Act of 1934, 15 U.S.C. § 78k-1(a)(1)(C)(i)-(v) (2000), often cited by the Commission as creating clear legislative guidance for its market information regulatory activities, contains a number of general goals—economically efficient execution of securities transactions; fair competition, availability of quotation and transaction information, the practicability of executing investors' orders in the best market; and an opportunity, "consistent with" the foregoing provisions, for unintermediated execution of orders—without significant discussion of how to reconcile competing objectives. *Id.*

130. *See* 15 U.S.C. § 78k-1 (2000) (national market system for securities; securities information processors); 15 U.S.C. § 78o (2000) (registration and regulation of brokers and dealers); 15 U.S.C. § 78q-1 (2000) (national system for clearance and settlement of securities transactions); 15 U.S.C. § 78q-2 (2000) (automated quotation systems for penny stocks); 15 U.S.C. § 78s (2000) (registration, responsibilities, and oversight of self-regulatory organizations); *see also* Donald C. Langevoort, *The SEC as a Lawmaker: Choices About Investor Protection in the Face of Uncertainty* (Georgetown Law & Economics Research Paper No. 947510, 2006), *available at* http://ssrn.com/abstract=947510 (discussing the SEC's behavior in its exercise of discretion under the guise of "investor protection").

The Commission is not the only agency that is charged with balancing subjective goals of investor protection against the goals of efficiency and competition. *See, e.g.*, Timothy J. Muris, *More Than Law Enforcement: The FTC's Many Tools—A Conversation with Tim Muris and Bob Pitofsky*, 72 ANTITRUST L.J. 773, 800-01 (2005) (discussing the relationship between the Federal Trade Commission's objectives of enhancing "consumer protection" and preventing "unfairness" against the objectives of promoting efficient markets).

131. *See* Securities Exchange Act of 1934 § 3(f), 15 U.S.C. § 78c(f) (2000) (requiring the Commission to consider whether regulatory action "will promote efficiency, competition, and capital formation"). Although Executive Order 12,866, 58 Fed. Reg. 51,735 (Oct. 4, 1993), which requires agencies to assess the

protection goals may appear inconsistent across unrelated rulemaking exercises.

### A. *Countering Underproduction*

Perhaps the most pervasive justification for infringing upon the informational rights of securities market participants is the possibility of underproduction.[132] Ownership implies the right to exclude, and absent special circumstances, the refusal to license intellectual property is not considered misuse of one's property rights.[133] Absent regulatory restrictions, the owner may arbitrarily refuse to license its protected intellectual property or information to any person or class of persons, or to charge certain persons or classes of persons a greater or lesser price for the use of the same product.

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costs and benefits of proposed regulatory actions, does not apply to independent agencies such as the Commission, the Commission has traditionally published a cost/benefit analysis in connection with its rulemaking activities. In the recent case *Chamber of Commerce v. SEC*, the D.C. Circuit twice chided the Commission for its failure to consider the economic costs of, and alternatives to, a proposed regulatory action. 443 F.3d 890, 894-96 (D.C. Cir. 2006); Chamber of Commerce v. SEC, 412 F.3d 133 (D.C. Cir. 2005) (remanding rule requiring an independent chairman and minimum number of "independent" directors for the boards of registered investment companies).

132. *See* Coffee, *supra* note 20; Mahoney, *supra* note 20; Edward B. Rock, *Securities Regulation as Lobster Trap: A Credible Commitment Theory of Mandatory Disclosure*, 23 CARDOZO L. REV. 675 (2002). Underproduction may be viewed as a subset of the "selective disclosure" problem discussed in Part II.B. Most business or market information is routinely shared with officers, directors, employees, agents, business partners, exchange members, customers, and other parties. Apart from the additional costs of compiling, formatting, and ensuring the accuracy of such information, this information is already produced to a degree. The question then becomes when and on what terms publication or production to investors is required. In the current environment, the costs of compiling and formatting will likely decrease as the SEC expands the use of web-based collection and publication techniques and firms increasingly automate compliance. *See* Langevoort, *supra* note 20. Whether such declining costs will compensate for the perceived increase in accuracy-enhancing rules, such as the Sarbanes-Oxley Act's internal control requirements, is the subject of debate. *See, e.g.*, William J. Carney, *The Costs of Being Public After Sarbanes-Oxley: The Irony on "Going Private,"* 55 EMORY L.J. 141 (2006); Cory L. Braddock, *Penny Wise, Pound Foolish: Why Investors Would Be Foolish to Pay a Penny or a Pound For the Protections Provided by Sarbanes-Oxley*, 2006 BYU L. REV. 175 (2006).

133. *See supra* notes 12-14.

Owners of information often invoke the right to withhold information to protect against free-riding by competitors.[134] If the costs of contracting for confidentiality are excessive or enforcement mechanisms are limited or unreliable, underproduction may be a firm's optimal strategy for preserving the value of its information. Likewise, if it is difficult to weigh the value to the owner of keeping such information confidential (apart from the cost of compilation and production) against the social value of sharing information with the marketplace,[135] owners may prefer to underproduce by default.[136] The degree to which underproduction is a viable strategy depends, among other criteria, on the speed with which the information may be reproduced without the creator's consent, the shelf-life of the information once disclosed, the circle of individuals who require access to the information, and the ability of the creator directly or indirectly to limit its competitors' access to its protected works.[137]

For some kinds of information, such as index components, index values, rules, standards, and financial contract design, underproduction is not a viable strategy. For example, an index has no commercial value unless its component securities are publicly known; otherwise, there

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134. *See supra* text accompanying notes 18-19, 35. Other incentives to underproduce may exist as well, such as agency costs resulting from the misalignment of managerial incentives in the context of public company disclosure, and of the incentives of specialists and dealers who make markets in securities in the context of market information. The existence of disclosure requirements may be insufficient to compel accurate or complete disclosures in these circumstances, as evidenced by the breakdown of internal and external controls at firms such as Enron, WorldCom, and others. *See, e.g.*, Lawrence A. Cunningham, *The Sarbanes-Oxley Yawn: Heavy Rhetoric, Light Reform (And it Might Just Work)*, 35 CONN. L. REV. 915 (2003).

135. Such costs may take the form of overinvestment by investors in negotiating for or replicating the information management has in its possession, or underinvestment by management in collecting information of material interest to investors. *See* Coffee, *supra* note 20, at 725-35.

136. *Id.* at 722 (noting the negative externality resulting from the collective action problems associated with investor bargaining for company disclosures).

137. For example, some market centers (particularly those without high agency costs or dominant market share) freely disseminate depth-of-book quotation information. Quotation information is sufficiently ephemeral that active display of live quotations may induce investors to trade through these systems. *See, e.g.*, *ISE Announces Introduction of Fully Displayed Stock Market*, SEC. L. DAILY (BNA), Nov. 28, 2006.

is no way to gauge the adequacy of the index as a benchmark, to track the performance of the index, or to hedge effectively against the index or subsets thereof. The index's weighting system and treatment of routine events affecting index value must likewise be predictable. Moreover, once in the public domain, the list of component securities or weighting methodology is not expected to change for significant periods of time.[138] Accordingly, to be widely adopted, they must be made available to the public, and are accordingly either licensed or distributed free of charge (at least until they attain the status of a dominant benchmark).[139]

In advancing the underproduction thesis, regulators must justify how to establish the minimum amount of information that should be required to be disclosed. In theory, the optimal amount of information would be the amount that institutional and other professional investors or market participants might bargain for, if they were able to act collectively.[140] In a "property rights"-oriented system, owners and consumers of information would devise collective mechanisms to negotiate an appropriate level of disclosure through intermediaries, such as exchanges,[141]

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138. *See, e.g.*, STANDARD & POOR'S, S&P U.S. INDICES: INDEX METHODOLOGY 5-6 (2007), *available at* http://www2.standardandpoors.com/spf/pdf/index/SP_US_Indices_Methodology_Web.pdf ("Standard & Poor's believes turnover in index membership should be avoided when possible."). In addition to actions that may affect the composition of an index, numerous adjustments are made to indices on a regular basis to reflect corporate actions that may affect continuity of the index's reported value. *See, e.g.*, Standard & Poor's Data Services: Index Alert (US), http://www2.standardandpoors.com/portal/site/sp/en/us/page.product/dataservices_iaus/2,9,5,0,0,0,0,0,0,0,0,0,0,0,0,0.html (last visited Apr. 5, 2007).

139. Owners of such information may nevertheless require potential users or redisseminators to enter into licensing agreements, even if they do not intend to charge for such use or redissemination, to preserve other proprietary rights in such data. Mark A. Lemley & David McGowan, *Legal Implications of Network Economic Effects*, 86 CAL. L. REV. 479, 537-39 (1998) (describing licensing practices); *see, e.g.*, Affidavit of Paul R. Aaronson in Support of Plaintiff's Motion for a Temporary Restraining Order and for a Preliminary Injunction at Exhibit A, McGraw-Hill Co., Inc. v. ISE, No. 1:05-cv-112, 2005 WL 2100518 (S.D.N.Y. Sept. 1, 2005) (License Agreement dated May 21, 2002 between S&P and ISE, requiring ISE to acknowledge S&P's "proprietary rights" in the S&P Indexes) (on file with the Buffalo Law Review).

140. *See* Easterbrook & Fischel, *supra* note 20, at 687-92.

141. *See generally* Paul G. Mahoney, *The Exchange as Regulator*, 83 VA. L. REV. 1453 (1997).

state corporate codes,[142] rating agencies, independent investment banks or other investment services firms, or other bodies that have the expertise and personnel to ensure that a firm has provided what it has contracted to provide.[143] While significant differences among disclosure standards may make it more difficult to compare information across firms,[144] the Commission could, in theory, mandate interoperability of disclosure "standards" (as discussed below) to minimize the burden on investors without mandating minimum content. The Commission, in such a world, could also stand ready to enforce breaches of disclosure commitments under federal antifraud rules.

In the context of company information, however, Congress has instead required companies with publicly held securities[145] to disclose periodically certain financial and nonfinancial information determined by the Commission.[146] The SEC has, through incremental rulemaking, attempted to define both what information is relevant to capital formation and how the "materiality" of such information may be assessed (whether quantitatively or qualitatively[147]) for purposes of determining the extent of disclosure. Scholars and other commentators have routinely debated the merits of this mandatory disclosure system: on the one hand, some maintain that such a system entails both loss of the competitive value of keeping such information confidential and an unreasonably high cost of publishing

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142. *See generally* ROBERTA ROMANO, THE ADVANTAGE OF COMPETITIVE FEDERALISM FOR SECURITIES REGULATION (2002).

143. *See* Palmiter, *supra* note 29, at 111-16.

144. *See* Coffee, *supra* note 20, at 744-45.

145. *See* 15 U.S.C. § 78*l* (2000); 17 C.F.R. 240.12g-1 (2006) (requiring filing of § 13 reports by issuers of securities that are listed on an exchange, or that are held by 500 or more U.S. shareholders if the issuer has ten million dollars or more in assets); 15 U.S.C. § 78o(d) (2000) (requiring issuers of securities that are the subject of a registered offering under the Securities Act of 1933 to submit an undertaking to file § 13 reports).

146. *See* Securities Exchange Act of 1934 § 13, 15 U.S.C. § 78 (2000); Regulations S-K and S-X, 17 C.F.R. §§ 210, 229 (2006).

147. *See, e.g.*, Staff Accounting Bulletin No. 99, 64 Fed. Reg. 45,150 (Aug. 19, 1999) (codified at 17 C.F.R. pt. 211). Often, additional disclosures are motivated by contemporary scandals or crises, leading some scholars to deride incremental disclosure obligations as political window dressing. *See, e.g.*, Romano, *supra* note 25, at 1591-94; Larry E. Ribstein, *Bubble Laws*, 40 HOUS. L. REV. 77 (2003).

information and employing internal and external controls to ensure its accuracy.[148] Others have defended the current levels of disclosure public firms provide as being largely similar to what is required in private capital-raising transactions, in which disclosure standards are largely shaped by the institutional investment community.[149]

In the context of market information, the SEC's disclosure agenda appears largely motivated by broader economic considerations discussed below in Part II.D, although the underproduction argument is frequently invoked as well. In addition to reports of completed transactions (which arguably are unprotected "facts"), exchanges, market makers, and alternative trading systems are required to publish the best-priced orders and/or quotes on the "bid" and "ask" side of the market for every "national market system" security they trade.[150] The SEC has also considered whether further information—such as "depth of book" quotations and customer orders—should be subject to mandatory display.[151] Unlike public company information, however, market information is sold, not freely distributed in many cases.

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148. *See* Stephen J. Choi & Adam C. Pritchard, *Behavioral Economics and the SEC*, 56 STAN. L. REV. 1 (2003); Mahoney, *supra* note 141, at 1455 (stating that regulatory competition among the securities exchanges is most effective); Roberta Romano, *Empowering Investors: A Market Approach to Securities Regulation*, 107 YALE L.J. 2359 (1998). *But see* Coffee, *supra* note 20, at 750-52 (arguing that a mandatory disclosure system would enhance market efficiency); Donald Langevoort, *Taming the Animal Spirits of the Stock Markets: A Behavioral Approach to Securities Regulation*, 97 NW. U. L. REV. 135, 136 (2002) ("The ones with the explaining to do are the believers in market efficiency, especially those whose faith is so strong in its miraculous healing powers that they think legally mandated disclosure has little role to play in investor protection.").

149. *See* Michael D. Guttentag, *An Argument for Imposing Disclosure Requirements on Public Companies*, 32 FLA. ST. U. L. REV. 123 (2004).

150. Regulation NMS Rule 602(b), 17 C.F.R. § 242.602(b) (2006); Regulation ATS, Rule 301(b)(3), 17 C.F.R. § 242.301(b)(3); *see also* Regulation NMS, Exchange Act Release No. 51,808, 70 Fed. Reg. 37,496 (June 2, 2005) (adopting release) (describing the Commission's revised Quote and Order Handling Rules) [hereinafter Regulation NMS Adopting Release].

151. Regulation NMS Adopting Release, 70 Fed. Reg. at 37,567-68.

B. *Leveling the Playing Field*

When advancing selective disclosure and price discrimination as regulatory concerns, ironically, regulators have invoked ownership rights in information (for example, by "shareholders" of a public company or other sources of misappropriated information) as a means of justifying prosecution of persons who selectively use or disclose information. Here, regulators must determine when differential disclosures to investors by the same owner should be permissible (on a negotiated basis or otherwise[152]), or whether all investors should be entitled to "fair disclosure" of all information (or at least some minimum degree of information) revealed to one or more investors.

In the context of company information, for example, prohibitions against selective disclosure (or use) have been incorporated into Exchange Act Rule 10b-5 relying, in part, on the state law tort of misappropriation of confidential information.[153] Classical insider trading cases typically focused on the conduct of officers, directors, employees, and agents (vis-à-vis their firms), while later cases have recognized the derivative duties of individuals receiving endogenous, material non-public information to the "source" of such information.[154] Because of the limitations of Rule 10b-5, the SEC has sought to prevent issuers from selectively disclosing material nonpublic information, even in the absence of a purchase or sale of its securities, under Regulation FD.[155]

Despite these various proscriptions, the Commission has recognized that selective disclosure may be necessary to

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152. For example, private placements of securities are exempt from the public offering restrictions under § 4(2) of the Securities Act of 1933, 15 U.S.C. § 77d(2) (2000), as long as all offerees have sufficient access to or disclosure of such information about the issuer and possess the necessary sophistication to "fend for themselves" when contemplating an investment. Doran v. Petroleum Mgmt. Corp., 545 F.2d. 893, 900 (5th Cir. 1977) (quoting SEC v. Ralston Purina Co., 346 U.S. 119, 124 (1953)).

153. 17 C.F.R. § 240.10b-5 (2006).

154. *See* United States v. O'Hagan, 521 U.S. 642 (1997); 17 C.F.R. §§ 240.10b5-1-.10b5-2 (2006).

155. 17 C.F.R. pt. 243 (2006).

permit effective capital-raising.[156] Institutional investors participating in a private placement of debt or equity securities may require more current or detailed information about a firm than other investors receive through federally mandated securities disclosure.[157] The growing importance of private investment in public equity (PIPEs)[158]—as well as the staggering volume of privately placed debt securities[159]—demonstrates that issuers must retain some flexibility under federal securities law to attract capital through selective disclosure (which themselves are protected by contract or state misappropriation law).

For market information, the Commission routinely, if cautiously, permits price discrimination, if not selective disclosure. Different exchanges and market makers offer multi-leveled quotations and quotation montages, limit order books, and other specialty information at different price levels.[160] In part, this is feasible because the shelf life

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156. In its release adopting Regulation FD, the Commission noted that reporting companies that proposed to engage in unregistered offerings (such as a private placement) would not be exempt from Regulation FD's prohibition against selective disclosure, but noted that "[i]ssuers who undertake private unregistered offerings generally disclose the information to the investors on a confidential basis" and could therefore rely upon the exclusion in clause (ii) of paragraph (a)(2) to avoid a violation of the Rule. Selective Disclosure and Insider Trading, Exchange Act Release Nos. 7,881, 43,154, 65 Fed. Reg. 51,716, at 51,724 (Aug. 24, 2000).

157. *See, e.g.*, 15 U.S.C. § 78*l*(a)-(b), (g).

158. *See* Joseph A. Grundfest, *The Ambiguous Boundaries Between Public and Private Securities Markets*, 51 CASE W. RES. L. REV. 483 (2001); Leib M. Lerner, *Disclosing Toxic PIPEs: Why the SEC Can and Should Expand the Reporting Requirements Surrounding Private Investments in Public Equities*, 58 BUS. LAW. 655 (2003). The Interim Report of the Committee on Capital Markets Regulation has suggested that "[t]he growing private equity market is increasingly substituting for the public market," and that private equity firms are "increasingly existing investments through negotiated private sales . . . rather than the traditional public IPO." INTERIM REPORT, *supra* note 25, at 36. The report notes that, by one estimate, secondary buyouts accounted for "around 16 percent of global private equity deals" in 2005, and echoed the question whether the "'secondary market' in private equity is 'the new stock market.'" (citing News Analysis, *Secondary Buyouts: The New Stock Market?*, EUR. VENTURE CAP. & PRIVATE EQUITY J., July-Aug. 2005, at 7).

159. *See* Susan Chaplinsky & Latha Ramchand, *The Impact of SEC Rule 144A on Corporate Debt Issuance by International Firms*, 77 J. BUS. 1073 (2004).

160. *See, e.g.*, NASDAQ Data Products, http://www.nasdaqtrader.com/trader/mds/nasdaqfeeds/feeds.stm (last visited Mar. 4, 2007); NYSE Group,

of quotation information is extremely limited, and such additional information is relevant only to investment and market professionals who have the resources and expertise to profit from it—e.g., through arbitrage transactions. By contrast, even in comparatively efficient markets, it is not clear how quickly selectively disclosed information about individual firms would be incorporated into market prices,[161] particularly given that the value of material information is ostensibly measured by its likely influence over average investors.[162]

C. *Assuring Quality, Integrity, and Accuracy*

In addition to the quantity of information available to various market participants, the Commission has focused efforts on improving the quality, integrity, and accuracy of various types of information product. Intellectual property law is generally content-neutral with respect to the quality, integrity, and accuracy of information: errors in information are not actionable (except in cases of libel or fraud) and in any event, easily disclaimed.[163] Users or licensors may bargain for greater quality, for third-party assurances, or other forms of verification, and owners of information may have an incentive to internalize such costs as a means of distinguishing themselves from "lemons" in the

Inc. Information for Market Professionals, http://www.nyse.com/audience/marketprofessionals.html (last visited Mar. 4, 2007).

161. The requirement that material information unintentionally disclosed under Regulation FD be publicly disclosed "in no event after the later of 24 hours or the commencement of the next day's trading on the New York Stock Exchange" suggests that the Commission does not believe such information will be dissipated immediately. *See* Regulation FD, 17 C.F.R. § 243.101(d) (definition of the term "promptly").

162. *See, e.g.*, Basic, Inc. v. Levinson, 485 U.S. 224, 231-32 (1988) (test for materiality under Rule 10b-5 is whether there is "'a substantial likelihood that the disclosure of the omitted fact would have been viewed by the reasonable investor as having significantly altered the 'total mix' of information made available'" (quoting TSC Indus., Inc. v. Northway, Inc., 426 U.S. 438, 449 (1976))).

163. *See* NIMMER, *supra* note 3, §§ 10:63-:64, at 10-25 to -29. As Nimmer notes, the transformation of the information industry has nevertheless placed information intermediaries in the position of vouching for the quality and integrity of information, even as their role in capital allocation diminishes. *See id.* § 1:7, 1-10 to -12.

marketplace.[164] Such efforts are most likely to be worthwhile when the marginal benefits of more accurate or higher-quality information outweigh the marginal cost of providing such verification.[165]

When minimum standards of quality assurance are set by the SEC, the parties' traditional cost/benefit analysis is supplanted. Recent controversies over the Sarbanes-Oxley Act's section 404 disclosure control reporting requirements illustrate the difficulties inherent in determining the cost-effectiveness of disclosure when the information generated has no tangible commercial value and cannot be subjected to a ready cost/benefit analysis.[166] This is particularly problematic when strict liability standards apply, as in the context of securities offerings under the Securities Act.[167] Yet there are few models to suggest how investors might purchase accuracy-enhancing information without violating federal selective disclosure prohibitions.[168]

The same problem recurs for other types of information where the detail of information may outweigh its usefulness. For example, when the SEC requires that trade information be reported with greater granularity (e.g., penny increments, instead of sixteenths or nickels), not only are markets obligated to produce such data, but brokers and institutional investors are effectively required to purchase it to comply with regulatory and fiduciary requirements.[169] In addition to the fixed and marginal costs of bandwidth that such greater precision entails,[170] even the

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164. *See supra* note 21; George Akerloff, *The Market for "Lemons": Quality Uncertainty and the Market Mechanism*, 89 Q.J. ECON. 488 (1970).

165. *See* note 25 *supra and accompanying text.*

166. *See* Romano, *supra* note 25.

167. *See* Securities Act of 1933 § 11, 15 U.S.C. § 77k (2000) (no due diligence defense for issuer of securities subject to a § 5 registered offering).

168. *See supra* Part II.B.

169. The SEC's Vendor Display Rule bars, for example, the sale by brokers and vendors of individual quotation data without consolidated market information. 17 C.F.R. 242.602.

170. In options markets, where over a hundred series of options may trade simultaneously on a single issue, the Options Price Reporting Authority and data vendors have struggled to comply with decimal price reporting. *See* Press Release, SEC Chairman Cox Urges Options Exchanges to Start Limited Penny Quoting (June 7, 2006), *available at* http://www.sec.gov/news/ press/2006/2006-91.htm.

SEC does not appear to believe that more precise information will always lead to better execution opportunities.[171]

The unpredictable breadth of the federal securities antifraud regime creates additional costs. One of the reasons for conferring property rights, as discussed above, is to require prospective owners to internalize potential loss resulting from use of the asset, such as the erroneous reporting of quotations or the erroneous computation of an index price, either by disclaiming or assuming such liability by negotiation.[172] Attempts to disclaim such exposure are ubiquitous: Exchanges require them as a condition of disseminating market data, while index providers require them as a condition of using index values in connection with trading in index-based products. The implication in such cases is that the value of greater certainty is not worth the price.

Given the difficulty of verifying the accuracy of any disclosed information, the liability regime for fraudulent information under federal securities law has historically been construed as extremely far reaching.[173] For example, to the extent that investors in stock listed on an exchange or included in indices suffer losses, courts might permit antifraud claims to proceed against the exchange or index

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171. *See* Order Granting a De Minimis Exception From the Trade-Through Provisions, Exchange Act Release No. 46,428, 67 Fed. Reg. 56,607 (August 28, 2002) (order exempting transactions in certain ETFs executed at a price that is no more than three cents lower than the highest bid displayed in CQS and no more than three cents higher than the lowest offer displayed in CQS from the trade-through prohibitions of the Intermarket Trading System Plan). In some cases, greater precision may impair execution opportunities for public customers, if market professionals may "trade ahead" of their orders on the pretext of offering negligibly better prices. Request for Comment on the Effects of Decimal Trading in Subpennies, Exchange Act Release No. 44,568, 66 Fed. Reg. 38,390 (July 24, 2001).

172. Dow Jones refused to allow licensing of the DJIA until 1997, despite repeated requests from various futures markets and the CBOT's lawsuit to use the index without Dow Jones' permission. *See* MILLERS, *supra* note 57, at 4.

173. In addition to the specific strict liability regime for public offerings under the Securities Act and the broad sweep of Rule 10b-5 and related antifraud rules, there are the significant criminal penalties associated with willful violations of federal law and the possibility of private enforcement in all aspects of securities trading. *See generally* John C. Coffee, Jr., *Does "Unlawful" Mean "Criminal"?: Reflections on the Disappearing Tort/Crime Distinction in American Law*, 71 B.U. L. REV. 193 (1991).

provider if investors can allege a profit motive and aggressive advertising.[174] Such fraud might also arise with respect to an index, for example, if individuals have advanced knowledge of a reweighting or change in composition of the components of the index tainted by conflicts of interest. Because fraud claims resulting from the computation of index values could be based on the total amount of securities or other investment products traded on the basis of the index, such potential liability could significantly impact the licensing of indices for use by financial product sponsors. Relative informational advantages might also impliedly impose broader duties on securities market intermediaries.[175]

It is not clear how effective contractual disclaimers would be in the face of federal antifraud rules. Broad disclaimers of antifraud liability on securities transaction confirmations may not only be ineffective, but such disclaimers themselves may be potentially fraudulent to the extent that they suggest otherwise. Recent attempts at carving out categories of information have focused on larger institutions, who are presumed to have the capacity to waive the application of antifraud rules in light of their perceived competence to negotiate at arm's length with market intermediaries. Congress has nevertheless been reluctant to exempt transactions with even the most sophisticated investors from securities fraud rules.[176]

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174. *See, e.g.*, Weissman v. Nat'l Ass'n Sec. Dealers, Inc., 468 F.3d 1306, (11th Cir. 2006), *vacated, reh'g en banc granted by* No. 04-13575, 2006 WL 4286869 (11th Cir. Feb. 16, 2007). In *Weissman*, the Eleventh Circuit refused to grant absolute immunity to the NASDAQ Stock Market, as a facility of a self-regulatory organization, against plaintiff's losses in WorldCom stock because, "[a]s a private corporation, NASDAQ places advertisements that are patently intended to increase trading volume and, as a result, company profits. . . . These advertisements were in the service of NASDAQ's own business, not the government's, and such distinctly non-governmental conduct is unprotected by absolute immunity." *Id.* at 1312. Increased benchmarking to various index funds has effectively made index providers the principal "stock pickers" for many investors, such that public announcements of changes in index competition might conceivably give rise to similar liability. *See* Daniel Gross, *The New Industry Standard: Why You Soon May Own Google*, SLATE, Aug. 23, 2005, http://www.slate.com/id/2124895/.

175. *See, e.g.*, Roberta S. Karmel, *Is the Shingle Theory Dead?*, 52 WASH. & LEE L. REV. 1271, 1275 (1995).

176. *See, e.g.*, Securities Exchange Act of 1934 § 3A, 15 U.S.C. § 78c-1 (2000) (not exempting security-based swap agreements from the definition of "security"

### D. *Balancing Competition and Consolidation in Market Structure*

The ability to regulate the use of intellectual property rights in financial markets has served as an important tool in influencing market structure.[177] If a particular market has the exclusive right to trade a particular product (whether as a contractual concession from an issuer or by regulation), trading is de facto consolidated in a monopoly market. If neither an issuer nor the market can require a listed product to trade through the market's facilities, the potential for competing markets or brokers emerges. In these cases, the dominance of any one market or firm will depend, among other things, on the volume of trades it facilitates, the efficiency of its price discovery process, the quality of its information and products, and—for our purposes—the ability to control their use.[178] The right to exclude others from using proprietary market information and products may confer a significant advantage in market share if financial market centers incur a high initial cost of entry (e.g., to develop intellectual property rights or superior information creating mechanisms)—such that there are likely to be few similarly priced substitutes available[179]—and incur minimal marginal costs per license or per trade thereafter.[180]

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and prohibiting only prophylactic measures, and not enforcement action, against fraud, manipulation, and insider trading with respect thereto).

177. Craig Pirrong, *Securities Market Macrostructure: Property Rights and the Efficiency of Securities Trading*, 18 J.L. ECON. & ORG. 385 (2002) (advocating a system of regulated property rights for addressing market fragmentation).

178. *See, e.g.*, Mulherin, Netter & Overdahl, *supra* note 12. *See generally* Market Fragmentation Concept Release, 65 Fed. Reg. 10,577 (Feb. 23, 2000); Regulation NMS Adopting Release, 70 Fed. Reg. 37,496 (June 2, 2005).

179. *See, e.g.*, RICHARD A. POSNER, ECONOMIC ANALYSIS OF LAW 343-49 (6th ed. 2002); BREYER, *supra* note 128, at 15.

180. Intellectual property rights and securities markets have historically, if misleadingly, been characterized as monopolies because of the increasing positive externalities conferred with each additional user. *See, e.g.*, Frank H. Easterbrook, *Intellectual Property Is Still Property*, 13 HARV. J.L. & PUB. POL'Y 108 (1990) (refuting the characterization of intellectual property as a monopoly); Simone A. Rose, *Patent "Monopolyphobia": A Means of Extinguishing the Fountainhead?*, 49 CASE W. RES. L. REV. 509 (1999) (arguing that patents should be viewed as property rights because they do not confer power over price and thus are not inherently monopolistic). In *Illinois Tool Works v. Independent Ink*,

Although regulators can in theory weaken or strengthen information or other intellectual property rights in order to promote competition or consolidation, respectively, there is little academic consensus on whether the creation of dominant or exclusive markets should be encouraged or discouraged. Proponents of consolidated markets point to the difficulties of obtaining execution at the best available price when customer orders are distributed among multiple markets,[181] the free-riding of market makers on primary exchange quotations,[182] the redundancy of regulation, and potential gaps in audit trails and surveillance resulting from allowing multiple trading.[183] Proponents of "fragmented" markets cite the empirically insignificant negative impact on market liquidity (at least for actively traded products) and the positive discipline new entrants can exercise on execution quality.[184]

Many different financial market structures coexist today, each reflecting in part the legal regime in which they operate. Commodity exchanges are often described as monopoly markets: Each commodity market retains a near exclusive right to trade its listed instruments due to the CFTC's policy of discouraging listing of comparable products on competing exchanges, and the limited

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547 U.S. 28, 126 S. Ct. 1281 (2006), the Supreme Court reversed a longstanding presumption that patents confer a monopoly per se for purposes of antitrust analysis. *Id.* at 1284. The Department of Justice has also addressed the antitrust consequences of patent scope. *See* U.S. DEP'T OF JUSTICE & FTC, ANTITRUST GUIDELINES FOR THE LICENSING OF INTELLECTUAL PROPERTY 4 (1995), http://www.usdoj.gov/atr/public/guidelines/0558.pdf.

181. *See, e.g.*, Jonathan R. Macey & Maureen O'Hara, *The Law and Economics of Best Execution*, 6 J. FIN. INTERMEDIATION 188, 189 (1997) [hereinafter Macey & O'Hara, *Best Execution*]; Jonathan Macey & Maureen O'Hara, *From Orders to Markets*, 28 REG. 62 (2005); Yakov Amihud & Haim Mendelson, *A New Approach to the Regulation of Securities Trading Across Markets*, 71 N.Y.U. L. REV. 1411, 1414 (1996).

182. *See supra* text accompanying notes 36-50.

183. *See* U.S. GEN. ACCOUNTING OFFICE, SECURITIES MARKETS: COMPETITION AND MULTIPLE REGULATORS HEIGHTEN CONCERNS ABOUT SELF-REGULATION, GAO-02-362 (2002), *available at* http://www.gao.gov/new.items/d02362.pdf; *see also* Lawrence E. Mitchell, *Structure as an Independent Variable in Assessing Stock Market Failures*, 72 GEO. WASH. L. REV. 547 (2003).

184. Boehmer & Boehmer, *supra* note 93, at 1685; Mark Klock, *The SEC's New Regulation ATS: Placing the Myth of Market Fragmentation Ahead of Economic Theory and Evidence*, 51 FLA. L. REV. 753, 760-61 (1999).

opportunities for off-board trading[185] or settlement of products listed on a competing contract market.[186] This regime is reinforced by allocation of financial products among exchanges and exclusive licensing of underlying indices.

One claimed benefit of the de facto consolidation in commodity markets is the strong incentive to share data and to invest in developing new products.[187] Consolidation strengthens each exchange's property rights by rendering each market's data the definitive source for information in a particular product, but does not eliminate competition among exchanges for comparable products. Because the availability of quotes and prices for a product is considered necessary to encourage trading, commodity exchanges have an incentive to make data available to the public. Thus, while CFTC regulations require reporting of certain end-of-day information,[188] commodity exchanges have little reason not to make more real-time information available to the public.[189]

In the market for publicly traded equity securities, fragmented markets predominate, with exchanges exhibiting varying degrees of market dominance over their listed products. In part, the natural fungibility of securities renders consolidation impracticable; unlike futures and options, which may require centralized collateral delivery systems to permit netting of transactions among multiple counterparties, stocks and other securities are freely

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185. 1 PHILIP MCBRIDE JOHNSON & THOMAS LEE HAZEN, DERIVATIVES REGULATION § 2.02, 355-59 (2004). *But see infra* note 193 (describing certain over-the-counter derivative transactions in excluded and exempted commodities).

186. *See* Ann E. Berg, *Does the Futures Industry Need Revamping?*, 32 FUTURES 62, 64 (2003). Of course, markets may compete with respect to the design of contracts on similar commodities, though as discussed in the next section, regulators may be concerned about proliferation of substantially similar products. 1 JOHNSON & HAZEN, *supra* note 185, at § 2.03[7], 394-95.

187. Sharon Brown-Hruska & Jerry Ellig, *Financial Markets As Information Monopolies?*, REG., Summer 2000, at 29.

188. 17 C.F.R. § 1.32 (2006).

189. Of course, were they "monopoly" markets, the price at which they make such information available to the market would likely depend on the marginal impact of higher data fees on revenues from trading, and not the marginal cost of producing the information. BREYER, *supra* note 128, at 15-16.

negotiable in "over-the-counter" transactions.[190] Despite frequent arguments made in favor of consolidating trading in securities in designated markets, the Securities Act Amendments of 1975[191] and the Unlisted Trading Privileges Act of 1994,[192] among other legislation, evince a determination not only to permit, but further to encourage, multiple listing and trading as well as "over-the-counter" trading.

Other markets exhibit even greater fragmentation. "Over-the-counter" derivatives are individually negotiated bilateral instruments between "eligible contract participants" that do not require organized trading platforms.[193] Eligible contract participants and others may thus enter into unregulated swap transactions based on underlying individual equity securities, indices, currencies, interest rates, and other financial instruments.[194] Moreover, it appears that such derivatives traders enjoy a free ride on the use of such underlying instruments or the use of price information generated by securities or commodity markets since there is no mechanism by which to police their use.

In debt markets, the varying terms and relative illiquidity of debt issues similarly complicate efforts to organize trading. While trading platforms for debt instruments bear some of the attributes of exchanges, they continue to serve primarily as consolidated displays of

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190. Exchange rules prohibiting off-board trading of listed stocks (such as NYSE Rule 390) were routinely evaded by effecting transactions overseas after market hours. *See, e.g.*, New York Stock Exchange Group, Rule 410B, *available at* http://rules.nyse.com/NYSE/ (separately requiring reporting of such trades for self-regulatory purposes).

191. Securities Acts Amendments of 1975, Pub. L. No. 94-29, 89 Stat. 97 (1975) (codified as amended in scattered sections of 15 U.S.C.).

192. 15 U.S.C. § 78a (2000).

193. *See* Gramm-Leach-Bliley Act §§ 206(b), 206A(a), 15 U.S.C. § 6701 (2000 & Supp. 2005), *amended by* the Commodity Futures Modernization Act of 2000 (CFMA) § 301, Pub. L. No. 106-554, 114 Stat. 2763-A365, 2763-A449 to A450. The CFMA effectively permitted qualifying professional investors to opt out of trading on designated contract markets when entering into individually negotiated bilateral "swap agreements" or transactions in certain excluded or exempted commodities by granting such transactions "legal certainty" that off-board trading restrictions would not apply. *See* Gramm-Leach-Bliley Act §§ 206(b), 206A(a).

194. Gramm-Leach-Bliley Act § 206A(a).

inventory by individual dealers, rather than repositories of active bids and offers.[195] Where trading takes place may turn largely on which dealer or broker carries a particular security in inventory, rather than the associated trading costs. In such markets, the lack of organized markets thus creates the opportunity for rent-seeking, through higher markups or markdowns. In recent years, the SEC has sought to require greater reporting of completed municipal and corporate debt transactions,[196] but the lack of a primary debt trading market is likely to preclude further efforts to consolidate quotations or other market data.

The SEC has used its regulatory authority over intellectual property rights in market information to promote competition with dominant markets rather than pursue consolidation of trading in primary markets.[197] Most notable among the SEC's market information rules are those mandating the collection and dissemination of last sale reports from exchanges and other market centers into a consolidated tape.[198] In addition to last sale data, the SEC has required registered specialists and market makers as well as over-the-counter dealers holding themselves out as

195. *See, e.g.*, Website of Thomson Tradeweb LLC, http://www.tradeweb.com/page.aspx?file=trade_ex&*id*=10®ion=us (last visited Apr. 8, 2007).

196. *See* NASD Rule 6200 Series, http://nasd.complinet.com/nasd/display/display.html?rbid=1189&element_id=1159000635 (last visited Apr. 2, 2007); Municipal Securities Rulemaking Board (MSRB) Rule G-14, http://www.msrb.org/msrb1/ rules/ruleg14.htm (last visited Apr. 2, 2007).

197. The adoption of such limitations of exchanges' intellectual property rights in market data and market products has proceeded in tandem with the erosion of other restrictive rules adopted by exchanges to leverage dominant market share. For example, exchange rules that sought to deter trading away from primary exchanges have been rescinded under pressure from the SEC. *See* NYSE Rule 390 (CCH 1999) (repealed 2000); *see also* Market Fragmentation Concept Release, 65 Fed. Reg. 10,577 (Feb. 23, 2000). Formal and informal attempts to "allocate" securities products, such as options on individual stocks, among exchanges have been challenged by the Antitrust Division of the Department of Justice and the SEC. United States v. Am. Stock Exch., No. 1:00-cv-02174-EGS (D.D.C. Dec. 6, 2000) (entry of final judgment prohibiting such allocation) (on file with Buffalo Law Review). *See NASD Says 2 Exchanges Face Antitrust Injunction*, N.Y. TIMES, Aug. 25, 2004, at C3. Joint ventures to pool inventory exclusively in new trading platforms have run afoul of SEC rules and antitrust law. *See* SEC Regulation ATS Rule 300, 17 C.F.R. § 242.300 (2006); *see also* Steven Vames, *SEC's BrokerTec Probe Puts Model to the Test*, WALL ST. J., May 22, 2002, at C15.

198. 17 C.F.R. §§ 242.601-.602 (2006).

market makers to ensure that their quotations are available and accessible by retail brokers, which are then consolidated with data from other market centers. To minimize free-riding on such quotes, the Commission has considered various approaches to limiting the ability of market-makers to match the national best bid and offer without routing orders to the quoting exchange, such as by disclosure of execution quality and order routing practices,[199] efforts at price protection for publicly quoted limit orders,[200] and a proposal to require internalized order to improve upon quoted prices.[201]

More recently, the Commission has been confronted with attempts by exchanges to impose licensing terms that are designed literally to shove their competition off the screen. Exchange rules have been proposed that would prohibit commingling of a given market center's data with the data gathered from other market centers or would require special attribution of a particular market center (thus limiting screen space for other market centers on a quotation montage).[202] In such situations, the Commission has relied on its authority to approve or disapprove of rules of self-regulatory organizations to determine when licensing terms are fair and reasonable. Where such authority does not exist, such as in the case of private trading systems, the Commission has been more aggressive in articulating principles of "fair access" up front.[203]

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199. 17 C.F.R. §§ 242.605-.606 (2006).

200. 17 C.F.R. § 242.611 (2006).

201. Market Fragmentation Concept Release, 65 Fed. Reg. 10,577.

202. Order Approving NYSE Rule Changes Relating to Real-Time OpenBook Service, Exchange Act Release No. 53,585, 2006 WL 2794627 (Mar. 31, 2006) (approving proposed modifications to vendor display contract terms for OpenBook that "allow market data vendors to provide their subscribers with useful data without imposing unnecessary restrictions . . . ."); Order Approving NYSE Rule Change Relating to Fees for OpenBook, Exchange Act Release No. 45,138, 66 Fed. Reg. 64,895 (Dec. 14, 2001) (approving NYSE's proposed OpenBook data product).

203. Regulation of Exchanges and Alternative Trading Systems, Exchange Act Release No. 40,760, 63 Fed. Reg. 70,844, at 70,915 (Dec. 22, 1998) (codified at 17 C.F.R. pts. 202, 240, 242, and 249) [hereinafter Regulation ATS Adopting Release] (discussing fair access requirements).

E. *Managing Proliferation of Products*

Despite the potential benefits of competition in market structure, regulators may use intellectual property rights to discourage the proliferation of financial instruments, markets, products, and standards when they reduce liquidity and facilitate price manipulation. Even while espousing competition, regulators may nevertheless feel more secure in their oversight over order flow, quotations, and trade reports are funneled through a few tightly regulated exchanges, rather than a large number of more loosely regulated brokerage houses. Regulators may similarly prefer to concentrate trading in a few, highly liquid instruments, rather than disperse scant "liquidity" among multiple markets and products that may have limited, long-term appeal.[204] Broad competition in the development of credit ratings, order audit trails, index weighting methodologies, order types, and other innovations present myriad unforeseen regulatory problems that could give regulators pause.[205]

Because it is difficult for regulators to implement such restrictions formally in administrative law without erecting untenable obstacles for new entrants, intellectual property rights provide a convenient foil for publicly advocating competition while facilitating consolidation of trading in a handful of markets or a few dominant instruments. Much of the commentary favoring strong property right protections in financial markets assumes both that the field of invention is unlimited and that unlimited innovation is beneficial to investors.[206] For example, the Seventh Circuit

204. *See, e.g.*, Diya Gullapalli, *Growth of Hot Investment Tool Slowed by Bureaucratic Backlog*, WALL ST. J., June 17, 2006, at A1 (suggesting that the backlog of applications for ETFs to be reviewed by the SEC's Division of Investment Management may, in part, limit the rapid expansion and contraction of a "fad" product).

205. For example, the Credit Rating Agency Reform Act of 2006, Pub. L. No. 109-291, 120 Stat. 1327, requires the Commission to act within a specified time period on applications by credit rating agencies for registration as a "nationally recognized statistical rating organization," in contrast to the Commission's current process of making such determinations through the no-action process. Definition of Nationally Recognized Statistical Rating Organization, Exchange Act Release No. 8,570, 70 Fed. Reg. 21,306 (Apr. 25, 2005).

206. *See, e.g.*, William L. Silber, *Innovation, Competition, and New Contract Design in Futures Markets*, 1 J. FUTURES MARKETS 123 (1981). Thus, for

justified protection of property rights in market indices as necessary not to discourage the (significant) effort required to "stimulate creation of new indices."[207] The CFTC, for example, has never expressly prohibited the listing of competing contracts, although it has on occasion required changes in terms to reduce the level of direct competition.[208] The SEC has also repeatedly endorsed competition among options exchanges and options in individual stocks and stock indices.[209]

The scope of recognized rights in established products, however, affects the degree of proliferation possible. The broader the level of abstraction at which the right is defined, the greater the power of the owner to preempt the introduction of competing products.[210] It could be argued, for example, that strong intellectual property protection for indices has helped contain competition among commodity and options exchanges. From a legal perspective, indices must be broad-based to make futures contracts tradable on CFTC-regulated markets,[211] and only a handful of indexing

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example, the Seventh Circuit, in *Board of Trade of Chicago v. Dow Jones & Co.*, asserted that protecting Dow Jones' right to exclude others from trading derivatives on the Dow Jones Industrial Average without its consent did not harm the investing public because an "infinite number of stock market indexes" may be created by its competitors. 456 N.E.2d 84, 90 (Ill. 1983).

207. *Board of Trade of Chicago*, 456 N.E.2d at 89; *see also* Harris, *supra* note 86, at 190-92; Mulherin, Netter & Overdahl, *supra* note 12, at 638; Richard L. Sandor, *Innovations by an Exchange: A Case Study of the Development of the Plywood Futures Contract*, 16 J.L. & ECON. 119 (1973); Silber, *supra* note 206, at 125-45.

208. 1 JOHNSON & HAZEN, *supra* note 185, § 2.03[7] at 394-95.

209. *See* Competitive Developments in the Options Market, 69 Fed. Reg. 6,124, at 6,124-26 (Feb. 9, 2004) (codified at 17 C.F.R. pt. 240) [hereinafter Options Concept Release].

210. *See, e.g.*, Lunney *supra* note 11, at 495, 513; Reichman, *supra* note 9, at 2452. For intellectual property protected by copyright, the breadth of the right hinges upon the level of abstraction at which potential infringers appropriate merely the "idea," and not the "expression," of the protected work. For those protected by trademark rights, misappropriation hinges upon the potential for confusion or deception.

211. Prior to the CFMA, a stock index had to be representative of a "substantial segment" of the market for the associated index future to be listed on a commodity exchange. *See* Board of Trade of Chicago v. SEC, 187 F.3d 713 (7th Cir. 1999) (concluding, over the SEC's objection, that futures contracts could be listed on the Dow Jones Utilities and Transportation Averages, because they reflected the market performance of industries that themselves

methodologies are commonly used for products where active arbitrage among cash, options, and futures markets is expected.[212] Practically, index providers must balance the index's representativeness of the market against the ease with which traders can track or replicate the index using the individual components. To the extent that indices are often used because of the perceived benefits of diversification, successful indices should be representative of a broader "market portfolio."[213] The cost of replicating (or hedging) an index, by contrast, may turn on the number and liquidity of component securities that need to be maintained in an equivalent cash portfolio.[214] Many index-tracking funds may contain only the component stocks with the highest capitalization to avoid trading and liquidity costs for smaller-cap securities.[215]

The increased role of index benchmarking, moreover, has established a handful of indices as the market standard for quality of return. The rise of portfolio theory and basic financial models of expected risk premia rely on the expected return of an optimal market portfolio, which in turn are frequently estimated based on the top three indices—the S&P 500, the DJIA, and the Nasdaq-100.[216]

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represented a substantial segment of the market). Today, futures contracts on indices with an insufficient number of component securities may be designated as "security futures products" subject to joint SEC-CFTC oversight. *See supra* note 195.

212. *See supra* note 86. Indexing methods incorporate rules for substitution of stocks, adjustments for dividends and other extraordinary events, and other rules designed to keep the index current while ensuring price continuity.

213. HARRIS, *supra* note 62, at 442.

214. *See* Ajay Shah & Susan Thomas, *Market Microstructure Considerations in Index Construction* (1998) (unpublished working paper), *available at* http://ssrn.com/abstract=79708; *see also* Kim, Szakmary & Schwartz, *supra* note 59, at 495-97 (finding that the Major Market Index "consistently leads the S&P 500 and NYSE" Composite Indices in the cash market, but that the S&P 500 leads the NYSE Composite and MMI in the futures markets, and attributing the former to the lower transaction costs of the MMI in cash markets due to the lower transaction costs in the large-capitalization stocks in the MMI).

215. *See generally* Robert Neal, *Is Program Trading Destabilizing?*, 1 J. DERIVATIVES 64 (1993).

216. Other commonly used indices include the Russell 2000 and the Wilshire 5000 for U.S. equity securities, the Lehman Bros. Bond Index, and various Financial Times indices. *See, e.g.*, Nasdaq Website, Index Descriptions, http://www.nasdaq.com/reference/IndexDescriptions.stm (last visited Mar. 4, 2007).

Accordingly, these three indices tend to dominate trading in index-based products, and securities included in these indices have been alleged to experience a reputational benefit, if not demonstrable appreciation in share price.[217] Successful new indices can emerge, such as the Nasdaq-100 in 1985, that tap into new markets. Index funds that merely seek to tinker with component counts (e.g., "500"), sector allocations, or substantial components of an index, might however, be viewed as infringing upon the providers' proprietary rights.[218]

Protection of derivative works may give dominant index providers further control over complementary sector indices. Many established indices have introduced sector-specific or capitalization-specific indices drawing from the components of the flagship index. These indices may then crowd out other, more representative sector or capitalization indices. For industry sectors with a smaller set of publicly traded companies, there will often be little difference among the principal components of the index: in these situations, as discussed above, owners of existing sector indices have attempted to sue owners of newer indices because of the substantial overlap in their index products.[219]

F. *Controlling Payment Flows*

The Commission has tinkered with information rights not only in circumstances where regulatory action is thought necessary to address such market failures, but also to address a variety of additional objectives, such as to ensure funding of self-regulatory operations and improve marketwide execution quality. As discussed above, the Commission has granted SROs the power and obligation to collect, process, and disseminate the top tier of market information, subject to certain minimum public display and access requirements described above and with revenues

217. *See* Chris Brooks, Konstantina Kappou & Charles Ward, *Gambling on the S&P 500's Gold Seal: New Evidence on the Index Effect* 27 (2004) (unpublished working paper), *available at* http://ssrn.com/abstract=496682.

218. *See, e.g.*, Standard & Poor's Corp. v. Comex, 683 F.2d 704, 706-07 (2d Cir. 1982).

219. *See id.*

largely allocated to compensate for their self-regulatory oversight.[220] Consistent with this formula, the Commission has limited the ability of market centers other than SROs to exploit a proprietary interest in their market information.[221] Fees for depth-of-book information, by contrast, are subject only to review for reasonableness, in the case of SROs, and are largely outside the Commission's jurisdiction for other trading venues.[222]

In addition to affirmative licensing arrangements, however, many revenue sharing arrangements exist that reflect, to a degree, transactions in various forms of market information. For example, while market quotes and prices have historically deemed to belong to the exchange, a number of parties contribute to price formation, including retail investors and institutional investors who generate priced and unpriced orders, whether on an informed or uninformed basis; brokers who collect and route such orders to the "best" market for execution; and market makers and specialists who set prices based on the aggregate trading information they collect. All of these parties, moreover, are consumers to varying degrees of the information generated through the price formation cycle.

As a result, exchanges and other market centers who "own" the data have sought to share data revenues with the various parties in the chain of production. Alternative trading systems have offered "liquidity rebates" to investors and traders who submit priced orders that create liquidity within their systems.[223] Exchanges and the NASD have shared tape revenue with their members based on the volume of transactions they reported through their

220. *See* Market Data Concept Release, 64 Fed. Reg. 70,613, at 70,619-20. As discussed below in Part III.B, the Commission has not definitively addressed the manner in which such data should be priced, which has led to the charge that exchanges charge excessive rents relative to the cost of producing such information. *See infra* note 278 and accompanying text.

221. *See* Market Data Concept Release, 64 Fed. Reg. 70,613. At one point, the SEC sought comment as to the feasibility of developing a cost-plus formula for valuing exchange data. *See id.*

222. *See infra* Part III.B.

223. *See* Regulation NMS Proposing Release, 69 Fed. Reg. 11,126, at 11,156 (Mar. 9, 2004).

facilities.[224] Market makers have paid retail brokers for the aggregate market sentiment expressed in their retail customers' "order flow."[225]

Likewise, the SEC has questioned the appropriateness of "payment for order flow" arrangements with third-party market makers when retail brokers do not pass along the economic benefits of such contracts to the retail investor in the form of lower commission rates. Concerns about payment for order flow are generally based on the possibility that the broker routes orders to a market center that pays for order flow knowing that its customer will receive a poorer execution than in a market center with potentially better execution opportunities.[226] The informational advantage such market centers receive, however, is a distinct benefit for which compensation may be plausibly appropriate, just as "integrated" firms with both retail and market making operations may profit from "internalization" of retail orders;[227] indeed, the Commission has "blessed" certain payment for order flow rules adopted by exchanges for similar purposes.[228]

The Commission has also restricted revenue sharing arrangements that have the potential to interfere with the quotation display and access mechanisms for intermarket trading. Certain alternative trading systems have attempted to distinguish "liquidity providers" (customers who submit orders with a limit price that signals their reservation price) from "liquidity takers" (customers who

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224. The Commission used its authority under § 19(b)(3)(c) of the Act to abrogate several such rules pending negotiations over the new allocation formula for revenues from the sale of quotation information. *See* Order of Summary Abrogation, Exchange Act Release No. 46,159, 67 Fed. Reg. 45,775 (July 10, 2002); *infra* note 285.

225. Market Fragmentation Concept Release, 65 Fed. Reg. 10,577, at 10,577-80 (Feb. 23, 2000).

226. Even here, the SEC does not always take into account associated transaction costs of finding such markets. Macey & O'Hara, *Best Execution*, *supra* note 181, at 188.

227. *See* Francis J. Facciolo, *A Broker's Duty of Best Execution in the Nineteenth and Twentieth Centuries*, 26 PACE L. REV. 155, 170, 179 (2005); *see also* Fleckner, *supra* note 6; Aaron Lucchette, *Brokers Worry When Trading Fees are Just the Start*, WALL ST. J., Jan 16, 2006, at C1.

228. *See* Options Concept Release, 69 Fed. Reg. 6,124, at 6,128 (Feb. 9, 2004).

hit posted limit orders without revealing their reservation price) when setting fee schedules. In theory, compensating liquidity providers for the "free information" they provide the market would appear justified.[229] Nevertheless, the Commission has viewed such differential pricing as quotation distortion because other market participants may be required, in an automated marketplace, to route orders to such a market center,[230] even if their "all-in" cost (after including transaction costs) might exceed the price they would have obtained had they routed their order to a market center displaying an ostensibly inferior price.[231]

229. The Commission has recognized the value of this "free option." *See* Regulation NMS Proposing Release, 69 Fed. Reg. 11,126, at 11,136 (Mar. 9, 2004).

230. 17 C.F.R. § 242.301(b)(4) (permitting SROs to regulate such fees). These Commission interventions were meant to facilitate the interaction of orders displayed by alternative trading systems with market maker quotations in Nasdaq pursuant to the requirement that alternative trading systems publicly display and provide execution access to their best-priced customer orders through the facilities of an SRO. Regulation ATS Rule 301(b)(6), 17 C.F.R. § 242.301(b)(6) (2006). Prior to Nasdaq's separation from the NASD and operation as an independent national securities exchange, the NASD, pursuant to its authority under Rule 301(b)(6), capped the fees that alternative trading systems and other market centers could charge for such public access to their quotes through Nasdaq's order display and execution facilities at $0.003 per share. *See* NASD Rule 4623(b)(6) (CCH Jan. 2005). As a result of the completed spin-off of Nasdaq, the NASD permits alternative trading systems to satisfy the public display requirement through its Alternative Display Facility, provided, inter alia, that each system provide "a level and cost of access to its quotations in an NMS stock displayed in the ADF that is substantially equivalent to the level and cost of access to quotations displayed by SRO trading facilities in that NMS stock." Nat'l Ass'n of Sec. Dealers, NASD Manual: Rule 4300A(a)(3) (CCH 2006), *available at* http://nasd.complinet.com/nasd/display/display.html?rbid=1189&element_id=1159000759. Nasdaq, as an independent SRO, no longer permits alternative trading systems to satisfy their obligations under Regulation ATS Rule 301(b)(6) unless they accept automated executions (at no additional charge). Nasdaq Rule 4623(b), http://nasdaq.complinet.com/nasdaq/display/display.html?rbid=1705&element_id=1063 (last visited Apr. 14, 2007).

231. For example, execution of a non-subscriber's buy order at $10.05/share through an alternative trading system—though presumably the "best price" available in the market at a given time—may require the purchaser to pay $10.06/share if the alternative trading system charges the liquidity taker a penny per share for execution. Here, the potential distortion to published "top-of-book" quotes—and consequently, the perceived unfairness of requiring others to internalize orders by reference to such "top-of-book" quotes—is invoked to require all such fees to be incorporated into publicly quoted prices. The inability to charge different fees to different customers effectively precludes

By contrast, the Commission has not taken steps to foster or prohibit revenue sharing arrangements for other types of securities information despite the uncertainties created by state law property regimes and the potential disincentives to ensure the timely and accurate provision of such information. In the context of market indices, the SEC has taken little to no action to regulate the economic value of index values, even though they perform a function that bears some similarities to the role of exchanges in processing market information. While indices may be formally entitled to intellectual property protection because of the "selection" of component securities and weighting methodology, index providers have defended their property right in part on the substantial labor entailed in generating real-time index values from publicly available market prices.[232] In some respects, greater intervention may be warranted to the extent that the rulings in the *Archipelago* and the *ISE Cases* have impaired the right of index providers to control downstream resales of index-based products. Absent regulatory intervention, index licensing practices may be revised to require lump sum fees up front, in lieu of "metering" usage of index-related products to cover the costs of real-time calculation or dissemination systems.[233]

G. *Overseeing Modification and Governance*

The Commission has also played a significant role in the ongoing supervision of owners of market information and standards. Regulatory intervention in the ownership and control of standards has been the subject of extended

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potentially beneficial price discrimination among liquidity providers and takers. As the Commission demands greater granularity of information, even the smallest of volume-based fees can result in price distortion.

232. *See supra* note 189. While Congress has granted the Commission the authority to regulate "securities information processors" other than those affiliated with a self-regulatory organization, *see* 15 U.S.C. § 78k-1(b) (2000), the Commission has declined to use that authority beyond regulation of end-user displays. *See* Vendor Display Rule, 17 C.F.R. § 242.603 (2006).

233. *See supra* note 63; *cf.* Warren S. Grimes, *Antitrust Tie-In Analysis After Kodak: Understanding the Role of Market Imperfections*, 62 ANTITRUST L.J. 263, 286-289 (1994) (critiquing argument that tie-ins "can be a procompetitive form of price discrimination when the seller uses the sale of the tied product to impose a variable charge based upon the intensity of use of the tying product").

discussion in numerous industries, including telecommunications and software development. In each, regulators must weigh whether uniform standards are inevitable or desirable, and if so, to opine how uniform or competing standards should be structured. The desire to promote robust standards and to preserve a meaningful role for all industry participants through regulation must then be weighed against the traditional causes of regulatory failure.[234] As discussed above, the Commission has sought to work with trade associations, other non-governmental bodies,[235] advisory committees, or periodic roundtable gatherings[236] that own or administer standards to address this problem. In some instances, Congressional oversight has been thought to add a measure of protection,[237] although that oversight is subject to the same failings as regulation.[238] In others, the SEC is given formal authority to veto or modify standards, often as a bargaining tool to extract concessions.[239] In others, the SEC merely ratifies the use of particular standards by acknowledging their

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234. *See* Friedman, *supra* note 111, at 1123; *see also* Lao, *supra* note 16, at 1680-87; Lemley & McGowan, *supra* note 139, at 484, 544-49 (1998).

235. *See* Bureau of Nat'l Affairs, *COSO Section 404 Guidance Aligns Companies, Auditors on Internal Controls*, 38 SEC. REG. & L. REP. 1247 (BNA 2006) (describing how COSO's guidance will complement the SEC's guidance in helping public companies meet Section 404 requirements).

236. *See generally* Lawrence A. Cunningham, *Language, Deals, and Standards: The Future of XML Contracts*, 84 WASH. U. L. REV. 313, 359-61 (2006) (suggesting the creation of a KXML Board to manage the creation and maintenance of an extensible markup language (XML) protocol for financial and nonfinancial disclosures).

237. *See, e.g.*, Promoting Transparency in Financial Reporting Act of 2006, H.R. 5024, 109th Cong. (2006). This Act would enhance financial reporting transparency by requiring the SEC and FASB to provide testimony on their respective efforts to reduce the complexity of public companies' financial reporting documents.

238. *See* ARTHUR LEVITT WITH PAULA DWYER, TAKE ON THE STREET: WHAT WALL STREET AND CORPORATE AMERICA DON'T WANT YOU TO KNOW 106-09 (2002) (describing SEC Commissioner Arthur Levitt's attempts to require options expensing).

239. *See generally* Securities Act of 1933 § 19(a)-(b), 15 U.S.C. § 77s(a)-(b) (2000) (oversight of financial accounting); Securities Exchange Act of 1934 § 19(c), 15 U.S.C. § 78s(c) (2000) (oversight of SRO rules).

preeminence tacitly in its rulemaking and interpretive functions.[240]

The determination whether to "make-or-buy" standards, like any other good or service, is driven by factors such as cost, expertise, and the likely restrictions imposed by administrative process.[241] "Outsourcing" the standard-setting process could result in opportunistic behavior by private standard-setting bodies (e.g., favoring standards owned by the standard-setter or blocking competing standards), incompleteness of standards designed to decrease the enforcement risk of noncompliance, and the ability to "hold-up" the promulgation of new standards.[242]

In the context of public company disclosure, scores of academics and practitioners have criticized the Commission's mandatory disclosure system and have advocated the use of competing standards, on the theory that competition will produce optimal levels of disclosure.[243] While much is made of the benefits from the ease of understanding and use for investors of common standards,[244] some scholars have downplayed the

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240. For example, the CUSIP system is controlled by the CUSIP Board of Trustees, under the auspices of the American Bankers Association, which awarded Standard & Poors the contract to perform the CUSIP service functions. *See* CUSIP Service Bureau, http://www.cusip.com/static/html/CUSIPaccess/whats.html (last visited July 20, 2006). While neither Congress nor the SEC has exercised regulatory authority over either the CUSIP Board or Standard & Poor's in this capacity, they have "endorsed" the exclusive use of the CUSIP system throughout the federal securities laws. *See, e.g.*, 15 U.S.C. § 78m(f) (2000) (requiring certain reports by institutional investment managers to contain CUSIP numbers of securities); 17 C.F.R. § 240.17Ad-19(a)(5) (2004) (defining "CUSIP number" in written procedures for transfer agents); 17 C.F.R. § 240.15c3-3(b)(4)(iv) (2005) (records of hold-in-custody repurchase agreements to include CUSIP numbers); MSRB Rule G-34, http://www.msrb.org/msrb1/rules/ruleg34.htm (requiring municipal issuers to apply for a CUSIP number).

241. Sidney A. Shapiro, *Outsourcing Government Regulation*, 53 DUKE L.J. 389, 390 (2003).

242. *Id.* at 391-95.

243. *See generally* Stephen J. Choi & Andrew T. Guzman, *National Laws, International Money: Regulation in a Global Capital Market*, 65 FORDHAM L. REV. 1855 (1997); James D. Cox, *Regulatory Duopoly in U.S. Securities Markets*, 99 COLUM. L. REV. 1200 (1999); Mahoney, *supra* note 141.

244. Coffee, *supra* note 20, at 728-30.

significance of the positive externalities hypothesized in such "network effects" analyses, where no common technological network is necessary and network benefits accrue primarily in the form of "positive feedback" rather than ensuring that all market participants are wired to the same infrastructure.[245] The Commission has also conceded, to a degree, the adequacy of competing international disclosure standards in various contexts.[246]

The requirement of a single standard or limited number of standards may also be driven by policy goals unrelated to promoting uniformity or interoperability. Standards for quotation display and dissemination, for example, may have more to do with the SEC's interest in enforcing a strict interpretation of the "best execution" rule than in facilitating the efficient execution of securities transactions. This is most apparent when SEC rules mandate physical connectivity among markets or uniform protocols among market participants, despite the relative ease of arbitrage across markets by end users.[247] Such standards may impede, for example, the interoperability of new entrants with more advanced technologies.

If multiple private standards are permitted to co-exist, the agency's role becomes less substantive and more procedural—to guide the development of standards, the relationship among different standards, and the governance

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245. Lemley & McGowan, *supra* note 139, at 491-96. In the antitrust jurisprudence of "essential facilities," courts and commentators have struggled to limit the situations in which market dominant entities become subject to a "duty to deal" with competitors due to a perceived need to participate in an industry utility. *See, e.g.*, Phillip Areeda, *Essential Facilities: An Epithet in Need of Limiting Principles*, 58 ANTITRUST L.J. 841 (1990).

246. 17 C.F.R. § 240.12g3-2(b) (2006) (permitting home country reporting for foreign private issuers whose securities are not listed on a U.S. exchange); International Disclosure Standards, Exchange Act Release No. 7,745, 64 Fed. Reg. 53,900 (Oct. 5, 1999) (adopting international non-financial disclosure standards for foreign private issuers).

247. *See* Lemley & McGowan, *supra* note 139, at 497-98 (presence of intermediaries to facilitate transition between standards may mitigate the potential friction). While disparities in prices quoted across markets will occur, persisting differential spreads may well be the result of collusion (rather than the lack of hardwired linkages). *See* SEC, REPORT PURSUANT TO SECTION 21(a) OF THE SECURITIES EXCHANGE ACT OF 1934 REGARDING THE NASD AND THE NASDAQ MARKET, *available at* http://www.sec.gov/litigation/investreport/34-51163.htm (1996).

of standard-setting bodies. Even in such areas, the case for active regulatory involvement is not straightforward. For example, when standard-setting is driven by anticompetitive motives—e.g., locking participants into a particular standard by refusing to license the standard or make it interoperable with competing standards—there is a compelling case for intervention.[248]

In other cases, friction within or among standard-setting bodies may be resolved without government interference if standard-setters are able and willing to coordinate their efforts. For example, SRO member conduct rules suffer from significant redundancy and inconsistency, but through a combination of inter-SRO agreements and SEC encouragement, it is conceivable that those differences may be resolved without formal merger.[249] At the international level, the SEC has made modest strides toward embracing non-U.S. GAAP accounting standards (such as IAS).[250]

Oversight of the governance of standards is another area where regulatory involvement may yield beneficial

248. The U.S. Supreme Court has granted certiorari in *Credit Suisse First Boston v. Billing*, 426 F.3d 130 (2nd Cir. 2005), *cert. granted*, 127 U.S. 762, (2006), *cert. vacated and granted*, No. 05-1157, 2007 WL 789065, 75 USLW 3497 (U.S. Mar. 19, 2007), on the question "[w]hether, in a private damages action under the antitrust laws[,] . . . the standard for implying antitrust immunity is the potential for conflict with the securities laws or . . . a specific expression of congressional intent to immunize such conduct and a showing that the SEC has power to compel the specific practices at issue." Petition for Writ of Certiorari, Credit Suisse First Boston v. Billing, No. 05-1157, 2006 WL 616006 (filed Mar. 8, 2006). Depending on the outcome of this case, the SEC may find it advantageous to yield regulation of coordinated standard-setting activity to antitrust regulators in circumstances where it lacks the institutional competence to make appropriate determinations of the economic impact of certain market practices. *See infra* note 319-20 and accompanying text.

249. *See* Randall Smith & Kara Scannell, *NASD, NYSE Agree to Merge Some Oversight*, WALL. ST. J., Nov. 29, 2006, at C1; Christopher Cox, Chairman, SEC, Remarks to the Securities Industry and Financial Markets Association: More Efficient and Effective Regulation In the Era of Global Consolidation of Markets (Nov. 10, 2006), *available at* http://www.sec.gov/news/speech/2006/spch111006cc.htm (referring to and endorsing efforts to "fold the member regulation functions of both the NASD and the NYSE into one regulatory body").

250. International Disclosure Standards, International Series Release No. 1,205, Exchange Act Release Nos. 7,745, 41,936, 64 Fed. Reg. 53,900, at 53,900-01 (Oct. 5, 1999).

results. Private, unregulated development of standards may result in sub-optimal choice of provisions, if market participants latch onto an inchoate standard to minimize learning costs and then avoid migrating to avoid switching costs.[251] For example, underwriters and law firms may settle upon standard language for debt covenants, even before their utility has been tested in court, simply to avoid the time and effort of developing and then marketing alternative provisions.[252] Once interests become entrenched, efforts to revise or replace established standards run into significant industry opposition. Moreover, self-regulatory organizations and industry associations that own standards might omit or delay provisions in standards that would impair their members' profitability.[253]

## III. STRATEGIES FOR REGULATORY INTERVENTION

How the Commission implements its information rights policy is as important as its policy goals. With respect to corporate disclosures, the Commission's authority is fairly straightforward, given the express mandate of § 13 of the Exchange Act to require reporting companies to "file . . . such information and documents . . . as the Commission shall require."[254] Criticism is often inveighed against the desirability of such policy, or the attendant costs and benefits, but rarely the Commission's statutory authority.[255]

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251. *See* Kahan & Klausner, *supra* note 116, at 730; RAO, *supra* note 12, at 56-59. *See generally* Michael L. Katz & Carl Shapiro, *Technology Adoption in the Presence of Network Externalities*, 94 J. POL. ECON. 822 (1986); Michael L. Katz & Carl Shapiro, *Network Externalities, Competition, and Compatibility*, 75 AM. ECON. REV. 424 (1985).

252. *See* Kahan & Klausner, *supra* note 116, at 736.

253. *See, e.g.*, Notice to Members from NASD, Corporate Debt Securities 06-22, http://www.nasd.com/web/groups/rules_regs/documents/notice_to_members/nasdw_016573.pdf (May 2006) (proposing to add identifiers to transaction reports in corporate debt securities to distinguish inter-dealer transactions from dealer-customer transactions in order to highlight the markups charged to customers).

254. 15 U.S.C. § 78m(a) (2000).

255. This Article does not address the limited constitutional defenses in regulating commercial information. For example, despite arguments that forced disclosures are "compelled speech" prohibited by the First Amendment, courts have ruled that such commercial information may be regulated. *See* Blount v.

With respect to other types of information, more serious disputes have emerged. Exchanges, for example, sought to challenge the Commission's authority to require compulsory publication of trade reports,[256] before Congress gave the Commission authority under the national market system provisions of the Exchange Act to oversee the manner in which SROs and their members "collect, process, distribute [and] publish" market information.[257] As the Commission further elaborates its national market agenda, questions continue to arise as to whether the Commission has exceeded this statutory mandate.[258]

More generally, when Commission policy seeks to transcend mere issues of disclosure, and regulate the economics of transactions in securities information and other intellectual property, the Commission must often rely on more creative regulatory approaches to achieve its rulemaking objectives, such as the exercise of oversight over SRO fees or access, or the timing of regulatory approvals. Ironically, it may well be the lack of flexibility to regulate market participants' activity—for example, with respect to fees or terms of access—that leads the Commission to continue to adopt blunter approaches to regulation, such as implied preemption of state law rights or, conversely, noninterference in the licensing of indices.

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SEC, 61 F.3d 938, 949 (1995) (holding that "pay-to-play" rules, adopted by the MSRB and approved by the Commission, restricting contributions to state political campaigns and solicitations thereof by municipal securities professionals, did not violate First and Tenth Amendment); SEC v. Fin. News Assocs., No. 84-0878-A, 1985 WL 25023, at *14 (E.D. Va. Apr. 16, 1985) (upholding SEC's order under the Investment Advisers Act of 1940 enjoining defendant from publishing investment advisory material).

256. *See, e.g.*, SELIGMAN, *supra* note 22, at 504-08 (discussing the objections of the NYSE to SEC Rules 17a-14 and 17a-15 requiring the publication of quotations and dissemination of a consolidated tape for trade reports in reported securities, the predecessors to NMS Rules 601 and 602, 17 C.F.R. § 242.601-.602).

257. 15 U.S.C. § 78k-1(c) (2000).

258. *See* Norman S. Poser, *Restructuring the Stock Markets: A Critical Look at the SEC's National Market System*, 56 N.Y.U. L. REV. 883, 884-85 (1981). *See generally* Dale A. Oesterle, *Regulation NMS: Has the SEC Exceeded its Congressional Mandate to Facilitate a "National Market System" in Securities Trading?*, 1 N.Y.U. J.L. & BUS. 613 (2005).

A. *Implied Preemption*

In the absence of express authority to compel disclosure, an argument can often be made that state intellectual property rights are impliedly preempted by federal securities law. As discussed above, state law intellectual property rights have been preempted to a degree by federal intellectual property law. When Congress has "struck the balance" between private incentives and public access, states are not permitted to "second-guess" Congress' judgment by affording greater protection under state law.[259] Even when specific rights under state law would not be protectable under federal copyright or patent law, such as information or utilitarian design concepts, such rights may be preempted if they fall within the "broad scope" of protectable "subject matter."[260]

Federal securities law also contains extensive examples of express and implied preemption, largely motivated by the desire to allow the SEC to dictate the scope of limits of securities regulation and eliminate duplicative and potentially inconsistent state regulation. Amendments to the federal securities laws adopted in 1996 as part of the Capital Market Efficiency Act[261] preempt state rules and regulations governing public offerings and offering documents, even when such securities or securities are themselves exempt from federal registration.[262] Certain state law securities fraud class actions were also precluded

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259. *See* Bonito Boats v. Thunder Craft, 489 U.S. 141, 152 (1989) (patent law); Feist Publ'n, Inc. v. Rural Tel. Serv. Co., 499 U.S. 340 (1991) (copyright).

260. *See Bonito Boats*, 489 U.S. at 155 (citing Kewanee Oil Co. v. Bicron Corp., 416 U.S. 470 (1974)) (distinguishing state law protection of trade secrets from state law protection for unpatented items in the public domain); W.T. Rogers Co. v. Keene, 778 F.2d 334 (7th Cir. 1985) (protecting state law trade dress claims).

261. Capital Markets Efficiency Act of 1996, Pub. L. No. 104-290, 110 Stat. 3416 (1996) (codified in scattered sections of 15 U.S.C.).

262. 15 U.S.C. § 77r (2000) (preempting any state law, rule, regulation, order, or other administrative action with respect to "covered securities," the "registration or qualification of securities, or . . . securities transactions," the use of "any offering document, . . . proxy statement, report to shareholders, or other disclosure document" other than incorporation documents, or merit-based prohibitions, limitations or conditions on their offer or sale).

by the Securities Litigation Uniform Standards Act,[263] even when the underlying cause of action is not actionable under federal securities law.[264] The Exchange Act has also been read not only expressly to preempt antitrust law when Congress has instructed the Commission to adopt rules to address a particular practice,[265] but also impliedly to preempt antitrust enforcement if there exists the mere potential for SEC rulemaking in a particular sphere of securities regulation.[266]

The Commission has occasionally asserted such preemptive power with respect to state intellectual property. For example, the Commission has suggested that the power to require *consolidated* dissemination of market information impliedly preempts assertion of *individual* rights therein:

> This question presumes, however, that essentially state law concepts of ownership prevail in this area. In fact, market information, at least since 1975, has been subject to comprehensive regulation under the Exchange Act, particularly the national market system requirements of Section 11A. To implement the national market system, the Commission has required the SROs to act jointly pursuant to various national market system plans in disseminating consolidated market information.
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> The plans also govern two of the most important rights of ownership of the information—the fees that can be charged and

263. *See* Securities Litigation Uniform Standards Act of 1998, Pub. L. No. 105-353, § 101(b)(1)(B) (codified at 15 U.S.C. § 78bb(f)).

264. *See* Merrill Lynch, Pierce, Fenner & Smith v. Dabit, 547 U.S. 71, 126 S. Ct. 1503, 1506, 1515 (2006) (holding that a state securities fraud class action on behalf of long-term "holders" of a security was precluded by Securities Litigation Uniform Standards Act of 1998, even though the plaintiffs would not meet the "purchaser or seller" standing requirement for a Rule 10b-5 class action).

265. *See* United States v. Nat'l Ass'n Sec. Dealers, Inc., 422 U.S. 694 (1975); Gordon v. NYSE, 422 U.S. 659 (1975); Silver v. NYSE, 373 U.S. 341, 357 (1963); *In re* Stock Exchanges Options Trading Antitrust Litig., 317 F.3d 134 (2d Cir. 2003); Friedman v. Salomon/Smith Barney, 313 F.3d 796 (2d Cir. 2002); *see also* Herbert Hovenkamp, *Antitrust Violations in Securities Markets*, 28 J. CORP. L. 607 (2003).

266. *See, e.g.*, Billing v. Credit Suisse First Boston Ltd., 426 F.3d 130 (2d Cir. 2005), *cert. granted*, 127 U.S. 762, (2006), *cert. vacated and granted*, No. 05-1157, 2007 WL 789065, 75 USLW 3497 (U.S. Mar. 19, 2007).

> the distribution of revenues derived from those fees. As a consequence, no single market can be said to fully "own" the stream of consolidated information that is made available to the public. Although markets and others may assert a proprietary interest in the information that they contribute to this stream, the practical effect of comprehensive federal regulation of market information is that proprietary interests in this information are subordinated to the Exchange Act's objectives for a national market system.[267]

This argument would presumably be extended even to those market participants who do not share in consolidated market revenues. To a degree, this structure is motivated by the need to fund SROs.[268] On the other hand, the inability to regulate the fee structure of and access to non-SRO markets might have led the Commission to foreclose such markets from selling substantively similar market information until Regulation ATS extended similar requirements to other trading venues.

While preemption of state or federal intellectual property rights may be a useful strategy for achieving regulatory objectives, it "lacks nuance."[269] In *Nasdaq v. Archipelago*,[270] for example, the district court rejected the argument that the Exchange Act's national market system authority preempted Nasdaq's proprietary interest in the Nasdaq-100 index. In so doing, the Court relied heavily on the Commission's own amicus brief, which argued that no conflict of interest existed between protecting the

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267. Market Data Concept Release, 64 Fed. Reg. 70,613, at 70,615 (Dec. 17, 1999).

268. *See* Listing and Trading of Affiliated Securities by a Self-Regulatory Organization, Exchange Act Release No. 50699, 69 Fed. Reg. 71,126 (Dec. 8, 2004); *see also* Letter from Mark E. Lackritz, President, Securities Industry Association, to Jonathan G. Katz, Secretary, SEC, Mar. 9, 2005, *available at* http://www.sia.com/2005_comment_letters/5218.pdf (advocating the use of membership and regulatory fees to fund self-regulation rather than subsidies from the sale of market data).

269. *See* Mark A. Lemley, *Beyond Preemption: The Law and Policy of Intellectual Property Licensing*, 87 CAL. L. REV. 111, 136-37 (1999); *see also* Kathleen K. Olson, *Preserving the Copyright Balance: Statutory and Constitutional Preemption of Contract-Based Claims*, 11 COMM. L. & POL'Y 83, 132 (2006); Samuel M. Bayard, *Chihuahuas, Seventh Circuit Judges, and Movie Scripts, Oh My!: Copyright Preemption of Contracts to Protect Ideas*, 86 CORNELL L. REV. 603, 643 (2001).

270. 336 F. Supp. 2d 294, 301-03 (S.D.N.Y. 2006).

commercial value of indices by charging licensing fees for their use and the objectives of the Unlisted Trading Privileges Act in permitting unlisted trading of listed securities by competing exchanges.[271] Such "all-or-nothing" regulation of information rights might thus result in underregulation as well as overregulation.

### B. *Compulsory Licensing and Rate Regulation*

Another commonly advocated approach for balancing the competing objectives of intellectual property law is compulsory licensing. Widely used for regulating natural monopolies, compulsory licensing systems have been extended to the licensing of intellectual property. Thus, in the field of copyright, compulsory licensing is mandated for certain works, such as cable, sound recordings, public broadcasts, and satellite transmissions.[272] While historically license fees have been set by regulatory bodies, modern compulsory licensing schemes may rely on private negotiations among intellectual property owners (pursuant to an exemption from antitrust law), backstopped by arbitration or regulatory action.[273]

In the absence of a statutory scheme, various agencies have sought to create compulsory licensing systems through enforcement mechanisms, either by settlement decrees or by judicial order.[274] The SEC has, in the context of wholesale market data transactions, traditionally sought to establish some control over rate-setting on two footings. First, the SEC has the authority to disapprove rules that do

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271. *Id.* (referring to the amicus brief of SEC).

272. *See* 17 U.S.C. §§ 111, 114, 118, 119 (2000).

273. *See* Reichman, *supra* note 9, at 2523-24.

274. The Justice Department monitors the rates charged for licensing music pursuant to consent decrees negotiated with American Society of Composers, Authors, and Publishers and Broadcast Music, Inc. *See, e.g.*, United States v. Broadcast Music, Inc., 1996-1 Trade Cas. ¶ 71,378 (S.D.N.Y. 1994); United States v. Broadcast Music, Inc., 1966 Trade Cas. ¶ 71,941 (S.D.N.Y. 1966); United States v. ASCAP, 1950-51 Trade Cas. ¶ 62,595 (S.D.N.Y. 1950); United States v. ASCAP, 1940-43 Trade Cas. ¶ 56,104 (S.D.N.Y. 1941); United States v. Broadcast Music, Inc., 1940-43 Trade Cas. ¶ 56,096 (E.D. Wisc. 1941). The Federal Communications Commission has entered into consent decrees with common carriers regarding access to telecommunications networks. *See, e.g.*, Verizon v. FCC, 535 U.S. 467 (2002); Lemley & McGowan, *supra* note 139, at 541.

not comply with the Exchange Act's statutory requirement that exchanges provide for the "equitable allocation of reasonable dues, fees, and other charges among its members and issuers and other persons using its facilities."[275] The SEC also has authority to "to authorize or require self-regulatory organizations to act jointly with respect to matters as to which they share authority under this chapter in planning, developing, operating, or regulating a national market system."[276]

Because neither provision confers upon the Commission express authority to engage in ratemaking, Commission action has historically consisted of negotiation among SROs in the shadow of its plenary authority. Commission rules, for example, require self-regulatory organizations to collect top-of-book information, consolidate the information across markets through the use of an exclusive securities information processor, and disseminate the data to the public. Since SRO rates must be approved by the Commission, any increase in rates must be negotiated with the Commission. In disputes between SROs and non-SROs with respect to approved rules, however, the Commission can be no more than a passive intervenor in judicial proceedings.[277]

Perhaps the most significant issue in Commission ratesetting efforts is the lack of any statutory metric by which to determine what rates are appropriate and how rates should be allocated.[278] Ratemaking may proceed in a number of ways: cost-plus approaches seek to determine the cost of providing a service and then to add a reasonable rate

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275. 15 U.S.C. § 78f(b)(4) (2000); *see also* 15 U.S.C. § 78o-3(b)(5) (2000) (requiring the rules of a national securities association to "provide for the equitable allocation of reasonable dues, fees, and other charges among members and issuers and other persons using any facility or system which the association operates or controls").

276. 15 U.S.C. § 78k-1(a)(3)(B).

277. Nat'l Ass'n of Sec. Dealers v. SEC, 801 F.2d 1415 (D.C. Cir. 1986).

278. By contrast, Congress has expressly provided a cost-basis mechanism for the computation of the aggregate amount of fees to support the creation of accounting and auditing standards under Sarbanes-Oxley. *See* Sarbanes-Oxley Act of 2002 § 109, 116 Stat. 745 (2002) (codified at 15 U.S.C. § 7219 (2005)) (providing that each funded standard-setting board shall establish a budget, which shall be funded by the allocation of fees to public issuers based on their relative share of equity market capitalization).

of return to justify capital investment, while market-based approaches may seek to determine the "value" of a service by measuring the commercial value of comparable, unregulated services in the marketplace.[279] Data vendors have lamented the lack of such price analysis when approving SRO rate schedules, noting that the Commission merely compares the rates set by oligopolists against one another, rather than requiring an independent basis for approving such rates.[280]

The Commission has considered whether cost-plus licensing is feasible in the context of market information. While the Commission has stated that the price of market data should be reasonably related to the cost of production and has solicited comment on various approaches for allocating costs to the production of data by exclusive processors, it has not formally applied a cost-based standard to proposed fee schedules. First, cost-plus licensing would require greater transparency in the finances of self-regulatory organizations, and decisions as to which SRO services should be included in determining the cost of producing market information, as opposed to facilitating trades, supervising members, listing companies, and all of the other SRO services from which SROs draw income.[281] Second, cost-plus licensing requires the SEC to

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279. *See generally* Daniel F. Spulber & Christopher S. Yoo, *Access to Networks: Economic and Constitutional Connections*, 88 CORNELL L. REV. 885 (2003); Joseph D. Kearney & Thomas W. Merrill, *The Grand Transformation of Regulated Industries Law*, 98 COLUM. L. REV. 1323, 1340-46 (1998).

280. Petition for Commission Review of Exchange Act Release No. 54,597 (File No. SR-NYSEArca 2006-21), *available at* http://www.sec.gov/rules/other/2006/netcoalitionpetition111406.pdf (seeking full Commission review of NYSEArca rulemaking approved by delegated authority to the Division of Market Regulation). In the petition, a coalition of internet data providers sought reconsideration of a proposed fee schedule for NYSEArca limit order book quotations because the Division failed to apply a cost-based standard, but referred generally to the consistency of NYSEArca's classification of fees with that of other exclusive processors, such as Nasdaq, the Options Price Reporting Authority, the NYSE, and the CT and CQ Plans. Petitioner noted, inter alia, that Archipelago had provided this information for free prior to its merger with the NYSE.

281. *See, e.g.*, Reichman, *supra* note 9, at 2533-45. *See generally The SEC's Market Structure Proposal: Will It Enhance Competition?: Hearing Before the Subcomm. on Capital Mkts., Ins., and Gov't Sponsored Enters. of the H. Comm. on Fin. Servs.*, 109th Cong. (2005); Market Data Concept Release, 64 Fed. Reg. 70,613, at 70,629 (Dec. 17, 1999). The Commission has recently proposed rules

approve the stratification of different classes of investors for purposes of developing fee schedules.[282]

Value-based approaches are even more difficult to fathom. Rebates paid by exchanges and other market centers to individual members and customers may provide some evidence that market data fees are set too high. Nevertheless, it is difficult to separate out whether such rebates are designed to mitigate market data overcharges or whether such rebates are a form of ex-post payment for order flow.[283] The Commission has made attempts to determine the proportionate "value" of one SRO's quotation information versus another's based on the quality of such information.[284] Such approaches, however, entail consideration of a number of variables—such as the market capitalization and liquidity of the item being quoted or the volume of trades, or the amount of time the market is quoting at the inside quote—which a regulatory formula can only crudely approximate.[285] Once enshrined in

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to require greater separation between SROs' regulatory and operational functions and to require internal controls to ensure that regulatory monies do not subsidize operational activities. *See* Fair Administration and Governance of Self-Regulatory Organizations, Exchange Act Release No. 50,699, 69 Fed. Reg. 71,126 (Dec. 8, 2004) (proposed rules to be codified at 17 C.F.R. §§ 240.6a-5(n)(1), (4), 240.15Aa-3(n)(1), (4)).

282. *See, e.g.*, Petition for Rulemaking, submitted by Andrew C. Wells, Securities Industry Association, to Jonathan G. Katz, SEC (Apr. 14, 2005), *available at* http://www.sec.gov/rules/petitions/petn4-499.pdf (petitioning the Commission to review the inconsistent definitions of "professional" and "nonprofessional" investors for purposes of determining the terms on which such persons may purchase market information).

283. SELIGMAN, supra note 22, at 397-416 (describing "give-up" arrangements on stock exchanges as symptomatic of "higher-than-competitive-level transaction costs" before the abolition of fixed commission schedules in 1975).

284. *Cf.* Reichman, *supra* note 9, at 2533-45. The Commission's proposal was motivated, in part, by the gamesmanship involved in allocating revenues by traditional formulae based on the number or volume of transactions. Regulation NMS Proposing Release, 69 Fed. Reg. 11,126, at 11,179-80 (Mar. 9, 2004).

285. The formula for the allocation of market data revenues by SRO exclusive processors under NMS Plans essentially allocates income first to individual "eligible securities" reported under a Plan based on a relative measure of total transaction volume ("security income allocation"), and then distributes the security income allocation to individual Plan participants based on the proportionate dollar volume of transaction reports reported by the participant in such security (adjusted to minimize the impact of "qualified"

national market system plans, moreover, further amendments may be prolonged by dissenting parties who have little interest in accommodating their competitors.

Compulsory licensing has other limitations, including the difficulty of limiting the scope of information subject to a Commission-established licensing regime. For example, in the context of market information, the more pressure is placed to make visible top-of-book data accessible, the more incentive market centers have to render the top-of-book information as valueless as possible, while creating more content-laden, lesser-regulated categories of data.[286] Thus, attempts to regulate the cost of market data run the risk of eroding the value of the "core market data" that is subject to compulsory licensing. On the other hand, an attempt to regulate all market data would paralyze innovation in market data products, if only because the Commission would be called upon in each case to determine whether the fees charged for each stratum of data are reasonable.[287]

### C. *Nondiscriminatory Access*

The Commission has also experimented with the regulation of selective disclosure of information under the rubric of fair and reasonable or nondiscriminatory access. Recent scholarship has advocated the use of fair or nondiscriminatory access requirements for the licensing of intellectual property.[288] Under such approaches, regulators would not oversee the rate-setting process but would be entitled to intervene in any denial of licenses to individual market participants on the basis of unfairly discriminatory criteria. Thus, persons who have been discriminated

transactions over five thousand dollars) and the relative percentage of time the participant published an automated quote equal to the national best bid and offer (weighted by the dollar size of the quote) in such security. *See* Regulation NMS Adopting Release, 70 Fed. Reg. 37,496, at 37,610 (June 2, 2005).

286. *See supra* note 52 (description of branded depth-of-book information products).

287. Indeed, recent reform efforts have deregulated certain categories of market information. As part of its Regulation NMS, the Commission eliminated the prohibition against the display of an individual market center's last sale data without an accompanying consolidated feed. *See* 17 C.F.R. § 242.601 (2006).

288. *See generally* Spulber & Yoo, *supra* note 279; Kearney & Merrill, *supra* note 279.

against might either have the right to appeal a denial of access to a court or to the Commission, or would be able to raise discriminatory denial as a defense in a subsequent proceeding to enforce the owner's property right.

The virtue of such approaches is that they permit the intellectual property owner to license the requested intellectual property at a fee set by market forces, rather than regulatory fiat. Enforcement, moreover, does not require the same regulatory apparatus to determine cost of inputs, as long as there are sufficient purchasers of an owner's intellectual property to determine the appropriate "value" of each configuration of property licensed. Nondiscriminatory licensing requirements have, for example, figured prominently in iterations of recent database protection legislation.[289]

The federal securities laws contain various provisions conferring authority on the SEC to ensure fair access to market services provided by SROs. These provisions were designed to complement the requirement that all brokers and dealers be members of an exchange or national securities association. For example, denials of exchange membership, other than on the basis of one of several statutory criteria, are appealable to the Commission. The Exchange Act also confers upon the Commission broad, if little-used, authority to require the registration of "securities information processors" and to hear appeals for denial or limitation of services. Thus, the SEC's rules on the sale of market data by exchanges and national securities associations refer to "fair" and "nondiscriminatory" standards for licensing.[290]

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289. Initial drafts of the EU Database Directive required compulsory licensing of databases held by "sole source" owners in a fair and nondiscriminatory manner. *See, e.g.*, J. H. Reichman & Pamela Samuelson, *Intellectual Property Rights in Data*, 50 VAND. L. REV. 49 (1997). Such requirements were dropped in the final Directive. *See* Council Directive 1996/9, 1996 O.J. (L 77) (EC).

290. Under Commission rules, the distribution of market data must take place on terms that are "not unreasonably discriminatory." The wholesale distribution of market data in a national market system stock by the exclusive processor for one or more SROs (or by a broker who is the exclusive source of such information) to vendors and other SIPs, moreover, must be effected on terms that are "fair and reasonable." 17 C.F.R. § 242.603(a) (2006).

The SEC has attempted to extend the idea of "fair access" beyond the express provisions of its statutory authority. For example, the SEC requires high-volume "alternative trading systems" to establish written standards for granting access to trading and to provide access to its services by applying such standards in a fair and nondiscriminatory manner.[291] The asserted statutory basis for this rule was that, since such systems could be regulated as exchanges, the SEC's greater power to impose the full regulatory regime for exchange regulation includes the lesser power to mandate fair access.

Extending a fair access requirement to other areas, such other types of information or standards, would be within the Commission's authority if the Commission has greater authority to prohibit or limit the transactions or products at issue.[292] In areas where no such statutory authority exists, however, the Commission would have to pursue indirect rulemaking that would further attenuate its authority.[293] It could be argued, for example, that index providers are in effect securities information processors, since the ongoing function they provide is to compute the value of an index, and should be required to grant licenses for the use of such information in a nondiscriminatory manner. Alternatively, the Commission might attempt to use its authority under Exchange Act § 19(c) or the Unlisted Trading Privileges Act to prohibit any self-regulatory organization from listing an index-based product unless the index provider agrees to license use of its index to other markets on similar terms.[294]

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291. 17 C.F.R. § 242.301(b)(5) (2006); Regulation ATS Adopting Release, 63 Fed. Reg. 70,844, at 70,872-75 (Dec. 22, 1998).

292. 15 U.S.C. §§ 77z-3, 78mm (2000) (permitting the SEC to grant exemptive relief for any class or classes of persons, securities, or transactions, from the provisions of the Securities and Exchange Acts).

293. In Goldstein v. SEC, 451 F.3d 873 (D.C. Cir. 2006), the D.C. Circuit expressed doubt that, when a statutory term is "susceptible of several meanings, as many terms are," it follows that "Congress has authorized an agency to choose any one of those meanings" without reference to the context in which the term is used. *Id.* at 878. The D.C. Circuit's logic may call into question such selective reinterpretation of statutory terms in order to assert such authority selectively over new classes of market participant.

294. 15 U.S.C. § 78*l*(f)(1)(D)-(E) (2000) (requiring the Commission to consider, when extending unlisted trading privileges to any security, to take

In particular, as securities are increasingly cross-listed abroad, and hardwired linkages become concomitantly difficult to mandate by regulation, fair access requirements might serve as a better approach to data dissemination. For example, commentators have considered whether, in lieu of consolidating quotation and transaction information through the "exclusive processors" of one or more SROs,[295] individual market centers could be relied upon to provide fair access to competing data consolidators, who could then disseminate a consolidated best bid and offer or last sale data to end-users.[296] Some discrimination among end-users might be inevitable—for example, due to creditworthiness, prior contractual breaches, or other misbehavior—but these are recognized grounds for exclusion from existing fair access rules.[297] The presence of competition and threat of antitrust enforcement may, in any event, be more persuasive than the threat of reprimands or fines resulting from Commission enforcement.[298]

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into account "the desirability of removing impediments to and the progress that has been made toward the development of a national market system").

295. *See, e.g.*, 15 U.S.C. § 78f(e) (2000) (membership in national securities exchanges limited to registered broker-dealers); 15 U.S.C. § 78k-1(b) (2000) (imposing different registration requirements on "exclusive" and non-"exclusive" SIPs).

296. The Commission wishes investors to have a uniform "NBBO" representing all market centers to ensure that execution opportunities are simultaneously disclosed to professional market participants and investors. *See supra* note 47 and accompanying text. While individual data vendors or end-users can compile such resources by collecting information from different suppliers, the Commission has expressed concern that not all investors will have identical information if time lags, transmission errors, or unsynchronized clocks result in different computations of the NBBO or last sale data. *See generally* SEC, REPORT OF THE ADVISORY COMMITTEE ON MARKET INFORMATION: A BLUEPRINT FOR RESPONSIBLE CHANGE (2001), *available at* http://www.sec.gov/divisions/marketreg/marketinfo/finalreport.htm.

297. *See* Securities Exchange Act of 1934 § 6(b), 15 U.S.C. § 78f(b) (2000); *see also* Rule 301(b)(5) of Regulation ATS, 17 C.F.R. § 242.301(b)(5) (2006); Regulation ATS Adopting Release, 63 Fed. Reg. 70,844, at 70,872-75 (Dec. 22, 1998)..

298. Although the Commission has the power to suspend or revoke the registration of an SRO under § 19(h) of the Exchange Act, Commission sanctions against SROs for failure to enforce securities laws typically involve censure, fines, and injunctive relief. For example, see administrative proceedings against stock exchanges in 2005-2006: *In re* PHLX, Exchange Act Release No. 53,919 (June 1, 2006), *available at* http://www.sec.gov/litigation/admin/2006/34-53919.pdf; *In re* NYSE, Exchange Act Release No. 51,524 (Apr. 12,

If, on the other hand, intermediation is mandated for regulatory purposes, the Commission could ensure that mandatory intermediation does not lead to abuses of market power by eliminating conflicts of interest that might lead to discriminatory denials of access. For example, an exchange that both serves as primary market for a security and controls the primary information processor for its listed securities has significant power to set fees in ways that discourage competition by rival market centers or data providers.[299] Rival market centers may balk, for example, at providing their data to such an "exclusive processor" controlled by a competitor, even if its compensation is set by a Commission formula, to the extent that the exclusive processor may control the format and terms of the transmission. Similarly, rival data vendors may seek to purchase raw data from exclusive processors at wholesale prices, even as such exclusive processors have retail distribution networks of their own.[300] Restricting vertical integration of market centers, data consolidators, and wholesale and retail information vendors might allay these concerns.

D. *Timing of Regulatory Approvals*

Temporally limited monopolies are perhaps the key tool used to balance private incentives and public access in

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2005), *available at* http://www.sec.gov/litigation/admin/34-51524.pdf; *In re* Nat'l Stock Exch. et al., Exchange Act Release No. 51,714 (May 19, 2005), *available at* http://www.sec.gov/litigation/admin/34-51714.pdf; *In re* Nat'l Ass'n Sec. Dealers, Inc., Exchange Act Release No. 37,538 (Aug. 8, 1996), *available at* http://www.sec.gov/litigation/admin/3437538.txt (imposing remedial sanctions).

299. For example, the Commission required Nasdaq to open bidding for a new exclusive securities information processor for Nasdaq-listed securities to satisfy concerns of rival trading systems that were required to provide access to their quotes equivalent to access via Nasdaq or another SRO. *See* Order Approving Proposed Rule Changes by the Nat'l Ass'n of Sec. Dealers, Inc, Exchange Act Release No. 43,863, 66 Fed. Reg. 8,020, at 8,021-22 (Jan. 26, 2001).

300. *In re* Bunker Ramo Corp., Exchange Act Release No. 34-15,372, 1978 WL 171128 (Nov. 29, 1978); Nat'l Ass'n Sec. Dealers, Inc. v. SEC, 801 F.2d 1415 (D.C. Cir. 1986); Domestic Secs. v. Instinet Corp., 1998 WL 1178670 (Nat'l Ass'n Sec. Dealers Arbitration Award) (Sept. 9, 1998); *see also* LEE, *supra* note 53, at 171-77; Wendy J. Gordon, *Intellectual Property as Price Discrimination: Implications for Contract*, 73 CHI.-KENT L. REV. 1367 (1997) (describing the marginal cost problem and the merits of price discrimination).

intellectual property law. While information must be shared to be commercially valuable, often the lead time necessary to extract value from the information will be significantly less than the time necessary for the information to become widely available.[301] National market system plans, for example, release information about quotations and transactions to the public domain within fifteen to twenty minutes, which appears for most equity securities to be sufficient time for the trading value of such information to dissipate.[302] In such cases, intervention may be necessary to require disclosure more promptly if regulatory policy is to limit intellectual property rights.

By contrast, when the necessary lead time to recoup an investment is significantly longer than the time within which information is likely to become publicly available, regulatory intervention is necessary to preserve the value of proprietary rights. As with copyright and patent regimes, it has frequently been suggested that statutory periods of time be established for information products that fall short of existing intellectual property regimes, either to recover research and development costs or to establish dominant market share before they are appropriated by competitors.[303] For yet other types of information, such as indices and standards, ongoing protection might be necessary to justify continued effort to "maintain" the information product.

To a certain degree, regulated markets are at a significant disadvantage to other market participants when developing new information products. Any substantively new exchange rules, policies, facilities, or derivative products must undergo public notice and comment, which

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301. Reichman, *supra* note 9, at 2547.

302. *Cf.* 17 C.F.R. § 242.605 (Regulation NMS rule suggesting that the quality of a market center's price discovery may be determined, in part, by the average spread realized within five minutes of a transaction); *see also* Nat'l Ass'n of Sec. Dealers, NASD Manual: Rule 6230 (CCH 2006), *available at* http://nasd.complinet.com/nasd/display/display.html?rbid=1189&record_id=1159007287&element_id=1159006397&highlight=6230#r1159007287 (establishing 15-minute window for reporting transactions in registered corporate debt securities).

303. *See* Reichman, *supra* note 9, at 2438-42; Lunney, *supra* note 11, at 596-98 (discussing the underproduction of easily copied works).

gives competitors advance notice.[304] Even with expedited review for some products,[305] the lag time between announcement and implementation may be critical to a product's success. By contrast, when non-SRO market participants seek consultation with or approval from regulatory personnel with respect to new products, they often seek informal relief, which itself may often be kept confidential for a period of time to preserve the requesting party's competitive edge.[306]

Historically, one regulatory technique to preserve some value for intellectual property in the absence of express statutory authority has been to delay regulatory approvals for *rival* products that are substantially identical to a new product.[307] The CFTC, for example, has historically viewed such objectives as a necessary consideration in its oversight of futures markets.[308] By contrast, the SEC has taken the position that rival exchanges may copycat certain rule changes on an expedited basis. Even if rival developers of financial products may be required to seek Commission approval (for example, if the original no-action relief is confined to the description of the creator's product), some competitors may be willing to gamble that the agency will not take a contradictory position if relief is sought very shortly before rollout, if at all.

Commission inaction in the face of product allocation arrangements may likewise be viewed, more benignly, as an attempt to allow market participants to recoup the costs of product development through a temporary monopoly. The Commission's willingness to tolerate delays in the commencement of multiple trading despite orders

304. 15 U.S.C. § 19(b) (2000); 17 C.F.R. § 240.19b-4 (2006) (defining the term "proposed rule change").

305. *See* 17 C.F.R. §§ 240.19b-5, 240.19b-4(e) (2006) (fast-tracking of rule changes for derivative products for which adequate standards and surveillance agreements exist).

306. *See generally* Procedures Applicable to Requests for No-Action and Interpretive Letters, Exchange Act Release No. 6,269, 45 Fed. Reg. 81,917 (Dec. 12, 1980) (describing procedures for the submission of confidential requests for no-action and interpretive letters).

307. Ronald W. Anderson, *The Regulation of Futures Contract Innovations in the United States*, 4 J. FUT. MARKETS 297 (1984); Mulherin, Netter & Overdahl, *supra* note 12, at 595-625; *supra* note 106.

308. *See supra* note 208 and accompanying text.

permitting or requiring competitive trading of such products[309] may in some respects be explained as sympathy for such arrangements. Such relief, however, is problematic because of its unpredictability, and may be justified more by the Commission's relative appetite for taking enforcement action against certain market participants rather than an economic analysis of the costs of product development. In parallel circumstances, for example, the Commission has aggressively sought to squelch exclusivity arrangements among market participants even where no anticompetitive behavior may exist.[310]

## IV. A REGULATORY AGENDA

Critics of the SEC frequently lament the agency's failure to articulate principles for securities disclosure and regulation. To be fair, many of the alternative regulatory regimes favored by such commentators would require the Commission substantially to scale back its oversight of securities markets in a manner inconsistent with its legislative mandate to further "the protection of investors and the public interest." As such, the Commission's deregulatory efforts have been modest in ambition and incremental in scope, such as reforms of the public offering process and the dismantling of the more anticompetitive exchange rules held over from before the federal securities laws.

At the same time, the Commission is aware that greater deregulation will be necessary as a result of structural changes. The combined impact of demutualization and globalization of markets will require greater reliance on comity and less reliance on domestic rulemaking to achieve regulatory goals. As of 2006, the two largest U.S. stock exchanges by volume and number of listings—the NYSE and the Nasdaq Stock Market—have both become publicly held, for-profit corporations. Industry associations have raised concerns about the continuing vitality of a self-regulatory system in which broker-dealers

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309. *See* Competitive Developments in the Options Markets, Exchange Act Release No. 49,175, 69 Fed. Reg. 6,124, at 6,125 (Feb. 9, 2004).

310. *See* Steven Vames, *SEC's BrokerTec Probe Puts a Model to the Test,* WALL ST. J., May 22, 2002, at C15.

are regulated by potential competitors, and SROs themselves have conceded that the current system of securities market oversight is inadequate.[311]

Meanwhile, NYSE has merged with Euronext, N.V., and both NYSE-Euronext and Nasdaq are considering further mergers with other international exchange holding companies.[312] Regulators on both sides of the Atlantic have maintained that domestic securities regulation will not pose an obstacle to consummation of such mergers, even as the prospect of greater cross-listing, trading, and eventually clearance and settlement will further draw into focus disparities between the respective regulatory regimes.[313] While the SEC has acceded to, or at least considered the possibility of, recognizing the adequacy of foreign securities regulation,[314] the significant volume of trading in U.S. securities overseas[315] and anecdotal evidence respecting the reduction of cross-listings by foreign companies following

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311. *See* Comments on Exchange Act Release No. 50,700 (Concept Release Concerning Self-Regulation) (Nov. 18, 2004), *available at* http://www.sec.gov/rules/concept/s74004.shtml (last visited Feb. 18, 2007).

312. *See* Fleckner, *supra* note 6, at 2559 (describing the NYSE merger with Archipelago Holdings and Nasdaq's acquisition of Instinet); Roberta S. Karmel, *The Once and Future New York Stock Exchange: The Regulation of Global Exchanges*, 1 BROOK. J. CORP., FIN. & COM. L. (forthcoming 2007), *available at* http://www.ssrn.com/abstract=958260; Jenny Anderson & Heather Timmons, *NYSE Group Reaches Deal To Acquire Euronext*, N.Y. TIMES, June 2, 2006, at C3; James Kanter & Heather Timmons, *Nasdaq Raises Its Stake In London Stock Exchange*, N.Y. TIMES, May 4, 2006, at C6.

313. *See, e.g.*, Press Release, SEC, Fact Sheet on Potential Cross-Border Exchange Mergers (June 16, 2006), *available at* http://www.sec.gov/news/press/2006/2006-96.htm.

314. On March 1, 2007, Erik R. Sirri, Director of the SEC's Division of Market Regulation, revived discussion of proposals to exempt foreign exchanges from U.S. registration subject to conditions established by rule. Erik R. Sirri, Director, SEC Division of Market Regulation, Trading Foreign Shares, (March 1, 2007), *available at* http://www.sec.gov/news/speech/2007/spch030107ers.htm; *see also* Regulation of Exchanges, Exchange Act Release No. 38,672, 62 Fed. Reg. 30,485, pt. VII.B.1 (June 4, 1997) (soliciting comment on a proposal to rely on home-country regulation of non-U.S. securities exchanges).

315. Sec. Indus. & Fin. Markets Ass'n (SIFMA), *Securities Industry and Financial Markets Fact Book Global Addendum 2006*, SIFMA RES. REP., Nov. 2006, at 57-58, *available at* http://www.sia.com/research/pdf/RRVol1-2.pdf (reporting $4.495 trillion in gross purchases and $121.585 billion in net purchases of foreign equity securities by U.S. investors of foreign stocks).

Sarbanes-Oxley[316] suggest that such efforts have been insufficient to staunch investor demand.

These developments suggest that, where possible, the Commission should consider greater reliance upon private incentives (through proprietary rules), while using rulemaking judiciously to address situations in which traditional conflicts of interest or fraud come into place. With the erosion of formal distinctions among market centers—SRO and non-SRO—and market participants—dealers and institutional traders—the Commission will need to develop better approaches to encourage the development of robust corporate and market information, such as those inherent in the proprietary claims that exist under intellectual property law. It may also be easier to export rules grounded in universal norms of ownership and authorial integrity, rather than a set of regulations geared exclusively to a single set of market institutions.[317]

### A. *Acknowledge Proprietary Claims*

A preliminary step would be for the Commission to acknowledge that the rights of information owners under state law are not preempted except as expressly provided by statute or Commission regulations. The Commission's mixed signals as to the proprietary rights of creators have

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316. *See* Stephen Labaton, *Treasury Chief Urges 'Balance' in Regulation of U.S. Companies*, N.Y. TIMES, Nov. 21, 2006, at C1 (comments of Treasury Secretary Henry M. Paulson, Jr.).

317. *See, e.g.*, Jeffrey L. Dunoff & Joel P. Trachtman, *Economic Analysis of International Law*, 24 YALE J. INT'L L. 1, 25 (1999) (suggesting that property-type rules are dominant in international law because of the costs of developing an institutional apparatus to enforce liability-type rules); Lao, *supra* note 16, at 1676; *see also* Stephen J. Choi & Andrew T. Guzman, *Portable Reciprocity: Rethinking the International Reach of Securities Regulation*, 71 S. CAL. L. REV. 903 (1998); Amir N. Licht, *Regulatory Arbitrage for Real: International Securities Regulation in a World of Interacting Securities Markets*, 38 VA. J. INT'L. L. 563 (1998). *But see* Jeffrey E. Garten, *Self-Regulation in the Global Context*, 2000 COLUM. BUS. L. REV. 23 (arguing for centralization of self-regulatory powers to deal with regulatory problems posed by globalization). The increasingly transjurisdictional nature of regulatory enforcement requires greater emphasis on information sharing and reliance on the cooperation of complementary regulators in other jurisdictions. *Cf.* Joel Klein & Preeta Bansal, *International Antitrust Enforcement in the Computer Industry*, 41 VILL. L. REV. 173 (1996) (discussing the relative merits of information sharing, positive comity and unilateral enforcement of U.S. antitrust law).

led market participants to argue, as in *Archipelago*, that the preemptive scope of the federal securities laws reach further. Clarifying that Commission rules derogate from such common law rights, rather than supplant them, is a first step toward creating incentives for market participants to bargain for licenses.

Where proprietary claims under state law are in doubt—such as claims over the use of indices and the design of financial products—the Commission should consider using its regulatory authority to provide greater protection (or at a minimum, legal certainty). Listing of index-based products, for example, could be conditioned upon obtaining a license from the relevant index provider; such a requirement could be justified on investor protection concerns by a desire to ensure that index providers have the ability to exercise some control over the use of their work product.

### B. *Permit Greater Nondiscriminatory Selectivity in Disclosure or Licensing*

To the extent that some ability to exclude is required to preserve the value of information, absent independent judicial or regulatory valuation, Congress may wish to give the Commission greater authority to permit selective licensing or disclosure in appropriate circumstances. Permitting creators of information to provide selective access to various categories of information defined by safe harbors, subject to Commission review, may be one way to address this issue. Just as the Commission recognizes the importance of intermediaries in the context of market information and order execution, recognition might be given to the role of analysts and institutional shareholders in the dissemination of corporate information. While it may be inappropriate to discriminate within such categories, permitting selective disclosures to all similarly situated analysts or shareholders on a nondiscriminatory basis could encourage the flow of information to markets while mitigating harmful asymmetries of information.

Where certain categories of information contribute to the formation of "downstream" information (such as the contribution of company information to market prices or the contribution of market prices to index prices), the Commission should consider whether conflict-of-interest

rules, rather than rate regulation, might help to address issues of fair access. In the few, if any, situations in which access to a particular market center or data provider is considered "essential," it may make sense to adopt Commission rules that prohibit vertical integration of the "essential" information with downstream users (e.g., indices) or intermediaries (such as data vendors) in order to eliminate conflicts of interest that might result in the limitation of downstream uses. Otherwise, privately adopted limitations on information or other goods that are "inputs" for subsequent processes are best left to antitrust law.[318]

More generally, the Commission should reconsider the respective roles of securities and antitrust law in policing access. There are many areas of securities regulation where the Commission rightly believes regulatory oversight of restraints on trade is preferable to antitrust enforcement or litigation, such as the conduct of syndicated offerings and governance of traditional non-profit exchanges, where "coordinated" industry action is still practically necessary to achieve regulatory objectives. Where such coordination is no longer required due to erosion of market power, it is debatable whether ex ante Commission rulemaking or rule approvals are clearly superior to ex post antitrust enforcement. Antitrust regulators have considerable experience with pricing and intellectual property licensing agreements in multiple industries, while Commission personnel are, by definition, limited in focus to a single industry.[319] Moreover, the conflicts posed by vertical arrangements—which typically involve SROs or other dominant market centers—may well be more effectively policed under antitrust law, given the significant risk of regulatory capture.[320]

318. *See* Kieff & Paredes, *supra* note 13, at 190-93.

319. *Cf.* BREYER, *supra* note 128, at 156-83, 197-219 (discussing relative benefits of antitrust enforcement and regulatory supervision); Kieff & Paredes, *supra* note 13, at 199 (suggesting that "courts generally should enforce restrictive licenses involving [intellectual property] as long as they are enforceable under contract law and do not run afoul of the antitrust laws").

320. *See supra* note 133.

### C. *Reconsider Investor-Negotiated Disclosure for Certain Information*

The Commission should also endeavor to encourage licensing or disclosure of information though negotiated bargaining, and concomitantly to undo regulatory structures that misalign creative effort and revenues. Even in situations where it is difficult to identify the social value of information, it may be preferable to achieve the appropriate equilibrium through ongoing negotiation between producers and principal consumers, rather than to proceed by isolated multilateral rulemaking exercises which are reviewed sporadically, if at all. Standard setting organizations may also be used as a proxy for end-users when bargaining costs with principal consumers would be excessive. Bargaining may, as today, be backstopped by the Commission's enforcement power or by default rules, as discussed further below.

The licensing of market information, for example, is likely to take place among a relatively well-informed community of market participants and is therefore an ideal candidate for a bargaining framework. Unlike current national market system plans, which are limited to SROs by SEC rule,[321] mechanisms for the collection and sale of market information to wholesale data vendors could be adopted through a representative sampling of all reporting market centers. End-users should also be able to shop for data, paying more for higher-quality data and less for lower-quality data,[322] to force market centers to improve the quality (and not merely quantity) of price discovery that takes place through their systems—rather than pay a

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321. *See* Securities Exchange Act of 1934 § 11A(a)(3), 15 U.S.C. § 78k-1(a)(3) (2000).

322. Consider, for example, the NASD's proposal to require separate identifiers for "dealer-to-dealer" transactions and "dealer-to-customer" transactions in corporate debt securities reported through TRACE. NASD, Notice to Members 06-22 (May 2006), *available at* http://www.nasd.com/Rules Regulation/NoticestoMembers/2006NoticestoMembers/NASDW_016574. The former data may be considered significantly more valuable than the latter because of the active bargaining that is presumed to take place between market professionals. One could envision similar designations in equity markets distinguishing transactions among market makers, transactions resulting from the crossing of customer limit orders, and internalized transactions resulting from the execution of market orders.

uniform price that ostensibly funds self-regulation generally.

In the context of public company disclosure, devices that might formerly have been used to encourage negotiated disclosure between issuers and shareholders, such as listing agreements and corporate codes, have fallen by the wayside as competition for listings has intensified and securities offerings have taken place on a national (and international) scale.[323] In their place, however, have emerged private standard-setting organizations or rating agencies that perform similar functions.[324] To the extent that there are significant benefits to being included in a higher exchange tier or as an index component, changes in such eligibility determinations can often have a significant impact on corporate disclosure or accounting practices without regulatory action.[325] Greater reliance on such intermediaries to oversee certain aspects of financial reporting or corporate governance might ease the burden of mandatory rules.

It has also been frequently suggested that issuers be permitted to opt out of particular disclosure rules—conditioned on compliance with such standards—with the periodic approval of a majority of public shareholders for disclosure items where the cost of compliance is high and the cost-benefit ratio of disclosure is difficult to assess.[326] For example, issuers may ask disinterested shareholders to vote, on an annual basis, to opt out of particular auditing standards or internal financial and non-financial disclosure control requirements.[327] Alternatively, the Commission

323. *See* Palmiter, *supra* note 29, at 2-3.

324. *See* Cunningham, *supra* note 110, at 294.

325. *See, e.g.*, Cassell Bryan-Low, *S&P Sheds Light On Accounting For Pension Costs*, WALL ST. J., Oct. 24, 2002, at C1 (describing the impact of S&P's decision to use actual returns as opposed to expected returns in calculating pension costs); Howard Silverblatt, *Option Expensing: The Time Is at Hand*, BUS. WK. ONLINE, Nov. 22, 2005, http://www.businessweek.com/investor/content/nov2005/pi20051122_3318_pi015.htm (describing the impact of S&P's decision to expense options in earnings estimates).

326. *See, e.g.*, Romano, *supra* note 25, at 1595-97.

327. In other contexts, the Commission and SROs have entertained shareholder initiatives to change corporate governance practices—such as shareholder nominations or executive pay—as a means of encouraging shareholder participation in corporate governance. *See, e.g.*, Security Holder

could simply migrate to a "principles-based" system of disclosure and grant safe harbors for compliance with rules articulated by "recognized" national standard setters.

It might also be feasible to encourage providers of accuracy enhancing information—such as rating agencies or auditors—to enter into agreements for the sale of their work product to end-users of such information. To the extent that rating agencies and auditors rely exclusively on fees from issuers, they experience a conflict of interest in developing their initial assessments. Allowing them to sell their work product (on nondiscriminatory terms, as discussed below) or otherwise consult with shareholders or other end-users independent of management could not only reduce some of the financial conflicts, but also improve the flow of information to the marketplace.

### D. *Delineate Scope of Information Rights and Protected Uses*

Managing the scope of proprietary claims is one method by which the Commission could achieve its goal of balancing the right to compete against the threats of free-riding and proliferation. As discussed above, regulators may prefer that trading activity be concentrated in a few, super-regulated entities rather than spread across multiple market participants. And yet, due to its obligation to preserve competitive opportunities, the Commission must leave open the regulatory possibility—if not probability—of viable challengers.

One approach to addressing the issue would be to permit branding of more quotation information. For example, in the context of market information, market makers are not only able, but encouraged, to siphon order flow away from primary market centers by holding themselves out as willing to trade at the primary market center's quoted price.[328] To the extent that market data

Director Nominations, Exchange Act Release No. 48,626, 68 Fed. Reg. 60,784 (Oct. 23, 2003) (proposing Rule 14a-11); NYSE, Listed Company Manual, 303A.08, *available at* http://www.nyse.com/RegulationFrameset.html?nyseref=http%3A//www.nyse.com/audience/listedcompanies.html&displayPage=/about/listed/1022221393251.html (shareholder approval of equity compensation plans).

328. *See supra* text accompanying notes 199-201.

dissemination is controlled by licensing agreements that could, in theory, prohibit a pattern of "matching" of the owner's quotation, such restrictions could deter "unhealthy" competition from cream-skimming market makers.

To ensure that healthy competition to primary market centers—such as formulaic price improvement or independent price discovery—is not deterred, "derivation" of a quote from another market, but with minimum improvement, might be viewed as sufficiently "transformative" to avoid being perceived as infringement. Meanwhile, a trading system that in fact attracts a substantial number of customer orders would not be perceived as infringing upon another market's quote, even if their quotations occasionally matched. Of course, each market center would be free to license its quote for automatic execution—as many exchanges do today—on specified terms as necessary to promote liquidity.

A similar case could be made for market indices, or even financial products generally. The ability to assert rights beyond the limited protection conferred by trademark law could give index providers greater comfort that the fruits of their work product will not be siphoned off by competing providers absent a licensing agreement. In particular, to the extent that many index-based products today tinker with the weighting and stock-selection components of such indices,[329] the need to ensure that index providers have some control over the direct and derivative uses of their products—if only to monitor usage and require express disclaimers of liability—may be desirable.[330]

One way to implement this approach would be to require new indices or financial products either to demonstrate no substantial overlap with comparable instruments or to obtain a license from the prior index.[331]

329. *See, e.g.*, John C. Bogle & Burton G. Malkiel, *Turn on a Paradigm?*, WALL ST. J., June 27, 2006, at A14.

330. Tom Lauricella & Diya Gullapalli, *Not All Index ETFs Are What They Seem to Be*, WALL ST. J., July 21, 2006, at C1 (describing active management strategies—and the risks created thereby—used by some ostensibly index-based exchange traded funds).

331. The investor protection concerns justifying such a rule would be substantially similar to those justifying the requirement that the SEC approve the soundness of an index prior to listing a derivative product thereon. *See supra* note 83.

Exceptions might be made if the range of eligible component securities in a particular securities industry classification is small enough that the "idea" of a sector-index merges with its implementation.[332] A more restrictive approach might add a requirement that indices licensed for use in connection with listed financial products be subject to multiple licensing on nondiscriminatory terms, so that competing markets have less incentive to test the boundaries of comparability.

E. *Promote Creation of Competitive Information Goods*

If the Commission were to consider such mechanisms for broadening the rights of existing market participants, it would also have to ensure that there is a real opportunity for the development of substitute goods. Thus, regulations or regulatory policies that have the effect of inhibiting investor choice must be relaxed so that more information goods have an opportunity to find a niche in the marketplace. At a minimum, the Commission should consider revising rules that refer to specific information products to permit uses of all comparable products unless an exclusive standard is intended.[333] For example, trade-through rules may constrain the decisionmaking of broker-dealers routing orders by favoring primary exchanges at the expense of encouraging the development of competing markets. These might, as the Commission had alternatively considered, be replaced by rules that free broker choice but require post-trade reporting of execution quality on a trade-by-trade basis.

In the area of indices and product design, greater opportunities for substitute goods may be created by relaxing rules that require specific offsetting of products. The Commission has largely relaxed such requirements for broker-dealer net capital purposes, by permitting more favorable net capital treatment for offsetting long and short positions in different index options that fall into one of several portfolio types.[334] Similarly, the Commission, with

332. *See supra* note 68.

333. *See supra* note 240.

334. 17 C.F.R. § 240.15c3-1a(a)(6) to -1a(b)(1)(ii) (2006) (identifying index "product groups" including "high-capitalized diversified market index options,"

the encouragement of the Federal Reserve Board, has explored the possibility of permitting customers to reduce minimum margin requirements for their accounts based on the risk inherent in a "portfolio" of securities, rather than matching individual offsetting products or underlying indices.[335]

## CONCLUSION

The Commission's role in regulating information is one that has arguably been thrust upon it with little legislative guidance and buffeted with considerable political pressure over the past seven decades. Yet the Commission has dutifully explored ways to balance the interests of producers and consumers of information that will result in more efficient markets. A core statement of principles—such as those suggested herein—together with concrete efforts to experiment and to collaborate with emerging market participants, may go a long way toward clarifying expectations and encouraging the development of new information products.

"non-high-capitalization diversified market index options" and "narrow-based index options" for purposes of determining offsets among index options). Thus, for example, a broker-dealer might be permitted, under this rule, to use ninety percent of the gain on a long Wilshire 5000 index option to offset the loss on a short Russell 2000 index option. § 240.15c3-1a(b)(v)(B)(2)(i).

335. *See* 12 C.F.R. § 220.1(b)(3)(i) (2006).