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# IOSCO's Response to the Financial Crisis

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# IOSCO's Response to the Financial Crisis

Roberta S. Karmel*

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## I. INTRODUCTION

The International Organization of Securities Commissions (IOSCO) was transformed in 1983 from an inter-American regional association of securities regulators into an international body.[1] It is now an association of securities commissions and main financial regulators for more than 100 countries that regulate more than 90% of the world's securities markets. IOSCO's primary role is to promote high standards of securities regulation and to act as a forum for national regulators to cooperate with one another.[2]

Like other international financial bodies, IOSCO has responded to the financial crisis of 2008. Previously, in response to the Asian financial crisis of 1998, IOSCO developed its Objectives and Principles of Securities Regulation to establish a framework for the regulation of securities markets, intermediaries, securities issuers, and collective

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1. INT'L ORG. OF SEC. COMM'NS (IOSCO), http://www.iosco.org (last visited June 22, 2012).

2. *Id.*

investment schemes.[3] Ten years later, IOSCO determined that its objectives and principles were not designed to prevent systemic risk and were therefore insufficient.[4] IOSCO thus revised its objectives and principles and added eight new principles, including two that specifically focused on systemic risk.[5] IOSCO's ongoing efforts to support these new Principles are parallel to efforts by other financial regulators to deal with systemic risk. Yet, IOSCO's efforts focus on somewhat different issues in the capital markets than the issues of interest to bank regulators.

Systemic risk in the securities markets is not primarily about prudential regulation. Rather, it concerns activities by non-banking intermediaries, sometimes referred to as the shadow banking sector,[6] transparency and soundness in the capital markets, trading practices, and risks from market innovations. The risks posed by these intermediaries are in some ways more subtle and difficult to understand and control than the risks posed by too-big-to-fail banks. Further, in a number of the areas in which IOSCO is attempting to set standards, the United States and the European Union have taken some divergent regulatory paths, and Asian markets may be engaging in competitive regulatory strategies that pose a threat to established markets in the United States and Europe.

Part II of this Article will outline IOSCO's Objectives and Principles and explain how IOSCO revised them in response to the financial crisis of 2008.[7] Part III will discuss certain key initiatives where a lack of harmonization would be detrimental to effective regulation.[8] In particular, this Part will focus on the regulation of hedge funds, credit rating agencies, short selling, and technological innovations, including direct electronic access, dark pools, and high frequency trading.[9] These topics have been selected because they are not within the traditional purview of bank regulators and are securities regulatory concerns related to systemic risk in the capital markets. Part IV will discuss IOSCO'S role in the international harmonization process and whether IOSCO can successfully raise standards in these controversial areas in the face of political pressure from market players and competition between capital market centers.[10]

This Article concludes that IOSCO's harmonization efforts tend to be at a level of generality that may be an insufficient prod to regulatory reform. When national interests are at stake, securities regulators follow those interests rather than IOSCO directives. Since IOSCO has no enforcement mechanisms aside from peer pressure, and its members are so numerous and varied, it is unrealistic to expect rigorous and detailed harmonization

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3. *Mitigating Systemic Risk: A Role for Securities Regulators*, IOSCO 7 (Feb. 2011), http://www.iosco.org/library/pubdocs/pdf/IOSCOPD347.pdf [hereinafter *Mitigating Risk*]. For the original list of principles, see *Objectives and Principles of Securities Regulation*, IOSCO, at i–iv (Sept. 1998), http://www.iosco.org/library/pubdocs/pdf/IOSCOPD82.pdf.

4. *Id.*

5. *Id.*

6. There is little common understanding of what the shadow banking sector is. *See* ZOLTAN POZSAR ET AL., FED. RES. BANK OF N.Y., STAFF REPORT NO. 458, SHADOW BANKING 4–6 (2010), *available at* http://www.ny.frb.org/research/staff_reports/sr458.pdf (discussing the difficulty of defining shadow banking). Some believe it is all of the intermediaries and products that substitute for banking; others would limit the sector to the creation of credit outside of bank credit. The definitions can make a difference.

7. *See infra* Part II.

8. *See infra* Part III.

9. *Id.*

10. *See infra* Part IV.

of new standards of conduct or regulation. Nevertheless, IOSCO can play a useful role in highlighting critical emerging areas where securities regulation is in need of reform, and it has done so with regard to a number of systemic risk issues in the trading markets.

## II. IOSCO'S OBJECTIVES AND PRINCIPLES

The IOSCO principles report of June 2010 sets forth three objectives of securities regulation. These objectives include: protecting investors (including customers or other consumers of financial services); ensuring that markets are fair, efficient, and transparent; and reducing systemic risk.[11] It is worth noting at the outset that since the United States is the only country in the world that separates securities and financial futures regulation,[12] IOSCO's references to security markets include the derivatives markets.[13] The 38 IOSCO principles are grouped into nine categories: regulators; self-regulation; securities regulation enforcement; cooperation in regulation; issuers; auditors, credit rating agencies, and other information providers; collective investment schemes; market intermediaries; and secondary markets. The first four relate to the organization, powers, and functioning of regulatory agencies.[14]

When IOSCO revised its principles in an attempt to provide guidance on how to address the issues highlighted by the crisis, it adopted two of its eight new principles relating to the regulator that focus on risk.[15] Principle six addresses the securities regulator's role and conduct in identifying, assessing, and mitigating systemic risk, and Principle seven exhorts the regulator to regularly review the regulatory perimeter.[16] IOSCO is currently developing an appropriate methodology to support these new principles and has already incorporated the identification and mitigation of systemic risk in its strategic mission and goals for the next five years.[17] It also believes that it is well suited to lead responses to emerging regulatory issues.[18]

IOSCO's fifth category of principles relating to issuers touches on risk in that it states that there should be "full, accurate and timely disclosure of financial results, risk and other information which is material to investors' decisions."[19] Like the principles relating to issuers, the remaining principles relate to players in the capital markets, who are gatekeepers, members of the shadow banking system, or non-bank intermediaries.[20] Some of these principles now focus on risk.[21] Principle 27 relates to collective investment shares, which promotes regulation that ensures "a proper and disclosed basis for asset valuation and the pricing and redemption of units in a collective investment

11. *Objectives and Principles of Securities Regulation*, IOSCO 3 (June 2010), http://www.compliance-exchange.com/governance/library/ioscoprinciples2010.pdf [hereinafter *IOSCO Principles*].

12. *See* DEP'T OF THE TREASURY, THE DEPARTMENT OF THE TREASURY BLUEPRINT FOR A MODERNIZED FINANCIAL REGULATORY STRUCTURE 137–44 (2008).

13. *IOSCO Principles*, *supra* note 11, at 3 n.1.

14. *Id.* at 4–12.

15. *Id.* at 4.

16. *Id.*

17. *Mitigating Risk*, *supra* note 3, at 13.

18. *Id.* at 14.

19. *IOSCO Principles*, *supra* note 11, at 8.

20. *See id.* at 9–12.

21. *See id.*

scheme," and Principle 28, which calls for regulation to "ensure that hedge funds and/or hedge fund managers are subject to appropriate oversight."[22] Under the principles for market intermediaries, Principle 30 provides that there should be initial and ongoing capital and other prudential requirements for market intermediaries that reflect the risks they undertake, and Principle 32 provides that there should be procedures for dealing with the failure of a market intermediary to contain systemic risk.[23] Finally, under the principles for secondary markets, Principle 37 provides that regulation should aim to ensure the proper management of large exposures, default risk, and market disruption, and Principle 38 provides that securities settlement systems and central counterparties should be subject to regulation to reduce risk.[24]

The IOSCO objectives and principles are very general, so it is necessary to look to more specific papers to appreciate the strictures on regulating risk by securities commissions. IOSCO published one such paper, entitled *Mitigating Systemic Risk: A Role for Securities Regulators*, in February 2011.[25] IOSCO's Technical Committee prepared this paper; the committee is comprised of regulators from the major capital markets, and U.S. and European regulators often dominate it.[26] The paper points out that securities regulation has traditionally focused on disclosure and business conduct oversight instead of systemic risk, which was relegated by monetary authorities and financial regulators.[27] This traditional split in oversight proved insufficient in the 2008 crisis, particularly when risks arose from areas not within the traditional oversight of securities regulators.[28] Examples of factors that threatened financial stability and were not mitigated by business conduct oversight included: the role of the shadow banking system; "the interconnectedness of the global market place"; the lack of incentives that market participants had to curb inappropriate risks; the innovation and complexity of financial products that resulted in information asymmetries and inadequate disclosure; the increasingly more difficult and costly management of conflicts; "the cyclicality of financial markets"; and the inherent risks in over-the-counter (OTC) markets' "lack of transparency and robust infrastructure."[29]

The IOSCO paper analyzed the sources and transmission of systemic risks as coming from size, interconnectedness, lack of substitutes and concentration, lack of transparency, leverage, market participant behavior, and information asymmetry and moral hazard.[30] The Technical Committee urged regulators to be mindful of regulatory gaps and explained how these gaps can contribute to the build-up of systemic risk. Most

22. *Id.* at 10.

23. *Id.* at 11.

24. *IOSCO Principles*, *supra* note 11, at 12.

25. *See generally Mitigating Risk*, *supra* note 3 (discussing and revising the original list of principles).

26. *Members of the Technical Committee*, IOSCO, http://www.iosco.org/lists/display_committees.cfm?cmtid=3 (last visited June 22, 2012) (listing current members of the IOSCO Technical Committee). Ironically, the Securities and Exchange Commission has often used IOSCO to promote higher standards than U.S. regulators have been able to impose. *See* Roberta S. Karmel & Claire R. Kelly, *The Hardening of Soft Law in Securities Regulation*, 34 BROOK. J. INT'L L. 883, 907 (2009) (citing a historical example of the SEC advocating stronger measures than it adopted).

27. *Mitigating Risk*, *supra* note 3, at 8.

28. *Id.*

29. *Id.* at 8–9.

30. *Id.* at 16–29.

notably, exemptions for particular market elements from regulatory oversight and the policy considerations underlying these exemptions should be considered and evaluated on an ongoing basis. Similarly, regulators should address gaps that arise from activities that are currently lightly regulated, as well as new market activities for which there are not yet regulatory responses. To address regulatory gaps arising outside of its jurisdiction, a securities regulator should conduct regular reviews of the perimeter of its regulation, coordinate with other regulators who do have the supervisory authority, and cooperate with international regulators. This analysis might seem very general, but it pinpoints several of the causes of the financial meltdown: the failure to regulate swaps and credit derivatives; the failure to regulate mortgage brokers; the failure to regulate hedge funds or credit rating agencies; the inadequate regulation of securitized products; and U.S. Securities and Exchange Commission (SEC) exemptions for sophisticated investors.[31]

These failures were endemic to a deregulatory philosophy in the United States and elsewhere. It is difficult to blame securities regulators when, at least in the United States, Congress and the courts were also responsible for these regulatory failures. Where regulated industries have so much power and influence over lawmakers, there is a lack of political will to engage in vigorous regulation even when regulators perceive the dangers of insufficient market place standards.[32] Nevertheless, IOSCO is now starting to build a research capacity and to adopt a strategy emphasizing the need for securities regulators to identify, monitor, and manage systemic risks.[33]

The IOSCO paper on mitigating systemic risk explains the tools available to securities regulators that can reinforce the stability of the financial system. These tools are "transparency and disclosure; business conduct oversight; organizational, prudential and governance requirements; prevention of risk transmission" through rules regarding trading infrastructure; and "emergency powers."[34] In addition, IOSCO, as an international body of regulators, stressed "intra-jurisdictional communication and exchange of information among regulators about systemic risk . . . to help prevent the emergence of gaps in oversight and identify possible transfers of risk or cross-sectoral risks."[35] Regulators were asked to leverage the work of other regulators and call on self-regulatory organizations to help, when applicable.[36] On the international level, securities regulators were encouraged to continue their collaboration "through IOSCO to improve transparency and disclosure in various international securities markets" and "be active

31. *Id.* at 26–27.

32. Brooksley Born, chairman of the CFTC from 1996 to 1999, became aware of the speed at which the over-the-counter derivatives market was growing and repeatedly tried to regulate it. In May of 1998, the CFTC published a concept release and asked market participants and OTC derivative dealers for comments, but the report was met with a strong negative reaction from other financial regulators. Then-Federal Reserve Chairman Alan Greenspan and then-Treasury Secretary Robert Rubin were fiercely opposed to regulation and recommended that Congress permanently strip the CFTC of regulatory authority over derivatives. *See* Peter S. Goodman, *Taking Hard New Look at a Greenspan Legacy*, N.Y. TIMES, Oct. 8. 2008, http://www.nytimes.com/2008/10/09/business/economy/09greenspan.html?pagewanted=print (analyzing how Greenspan's decisions affected the financial markets).

33. *Mitigating Risk*, *supra* note 3, at 33.

34. *Id.* at 40.

35. *Id.* at 49.

36. *Id.*

participants in international supervisory colleges."[37] The paper also recommended that regulators promote confidence in markets through adequate communication about risk.[38]

Since its onset, the financial crisis' causes have been widely debated, but the consensus is that the main culprits are financial innovations creating leverage, such as collateralized debt obligations, credit default swaps, and other structured investment vehicles.[39] According to IOSCO:

> [A] new framework for financial innovation [should] therefore include greater consideration of the risks attached to innovations at the level of financial institutions and regulators; close collaboration between supervisors and regulators to consider the various potential impacts of innovations and transfers of risk; implication for the resources of regulators needed to maintain appropriate levels of surveillance and control; and consideration of the international dimension of financial innovation in order to prevent regulatory arbitrage.[40]

IOSCO also urges securities regulators to periodically review their regulatory coverage of financing activities to ensure that none escape appropriate regulation.[41]

> Regulators should do so by "regularly survey[ing] activity in the financial and securities markets to understand the development in those markets and [to] identify opportunities for cooperation and changes; set[ting] internal thresholds for intervening in new and expanding markets and activities; and set[ting] regulatory goals for intervention" [to] evaluate the appropriateness of and need for such measures.[42]

One of the key concerns of financial regulators in the wake of the crisis is the shadow banking sector. This is of special importance to securities regulators since shadow banking enterprises are not banks subject to supervision by others.[43] If such an enterprise is considered a systemically important financial institution in the United States by the Financial Stability Oversight Commission (FSOC), the enterprise will become subject to regulation by the Federal Reserve Board.[44] It is unclear whether large hedge funds, for example, will fall into this category. IOSCO has recommended that, together with prudential regulators, securities regulators should consider whether any action should be taken with respect to shadow banking entities and activities, and if so, how the

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37. *Id.*

38. *Mitigating Risk*, *supra* note 3, at 50.

39. *See id.* at 51. Collateralized debt obligations (CDOs) are investment-grade securities backed by a pool of bonds, loans, and other assets. Credit default swaps (CDSs) are bilateral contracts designed for credit hedging or speculative investment. Structured investment vehicles (SIVs) are operating finance companies set up to profit from credit spreads between short-term debt and long-term structured finance products. *Glossary*, UNIVERSITY OF IOWA CENTER FOR INTERNATIONAL FINANCE AND DEVELOPMENT, http://blogs.law.uiowa.edu/ebook/uicifd-ebook/glossary (last visited June 22, 2012).

40. *Mitigating Risk*, *supra* note 3, at 51–52.

41. *Id.* at 53.

42. *Id.*

43. *See* Martin Arnold et al., *Shadow Boxes*, FIN. TIMES, Feb. 3. 2011, at 9; Gillian Tett, *Road Map That Brings Shadow Banking out into the Open*, FIN. TIMES, Nov. 19, 2010, at 20.

44. 12 U.S.C.A. § 5464 (West 2010).

monitoring and regulation should be carried out.[45]

IOSCO's role is to provide guidance and develop policies and standards on when and how to use the tools available to securities regulators. Its first commitment to this effort is to build a research capacity that will initially focus on the research of systemic risk and put forth an annual report to identify the most important systemic risks for securities regulation at a global level.[46] IOSCO also intends to conduct risk analyses that focus on risks in specific products, market segments, or technologies.[47] Members are encouraged to enter into a bilateral or multilateral "Memoranda of Understanding" to address cooperation and collaboration on the global level, especially with regard to sharing data and coordinating action on risks.[48] IOSCO has also engaged member-SROs on specific risk topics since SROs are one step closer to the markets than their supervisory authorities.[49] The organization is also considering holding stakeholder consultation, where "IOSCO policy makers discuss their work program with representatives of major industry organizations" and "organizing an intensive dialogue with top-level industry groups to discuss important systemic risks."[50] "On certain topics, IOSCO recognizes that it needs to work closely with other global bodies, such as the G-20, FSB, BCBS, CPSS, IAIS, ESRB, IMF and World Bank and whe[n] appropriate, [certain] domestic bodies."[51] Finally, another "activity that could be within the realm of IOSCO's global work could be the improvement to transparency and disclosure through setting standards for the collection of data and standardizing documentation relevant to systemic risk."[52]

45. *Mitigating Risk*, *supra* note 3, at 54.

46. *Id.* at 57.

47. *Id.*

48. *Id.* at 58.

49. *Id.*

50. *Mitigating Risk*, *supra* note 3, at 54.

51. *Id.* The G-20 is made up of the finance ministers and central bank governors of 19 systemically important industrialized and developing countries and the European Union. *See generally* G-20, THE GROUP OF 20: A HISTORY (2007), *available at* www.g20.utoronto.ca/docs/g20history.pdf. The Financial Stability Board (FSB) was established in 2009 as an international body that monitors the global financial system and includes the G-20 economies, members of the Financial Stability Forum, and the European Union. *See generally* FIN. STABILITY BD. (Apr. 23, 2012), http://www.financialstabilityboard.org. The Basel Committee on Banking Supervision (BCBS) is a committee under the Bank of International Settlement (BIS) and comprises banking supervisory authorities. *See generally History of the Basel Committee and its Membership*, BASEL COMMITTEE ON BANKING SUPERVISION (Aug. 2009), http://www.bis.org/bcbs/history.pdf. The Committee on Payment and Settlement Systems (CPSS), also a BIS committee, sets standards for payment and securities settlement systems. *See generally About BIS*, BANK FOR INT'L SETTLEMENTS, http://www.bis.org/cpss/index.htm (last visited June 22, 2012). The International Association of Insurance Supervisors (IAIS) is a representative body for insurance regulators and supervisors in approximately 190 jurisdictions. *See About the IAIS*, INT'L ASS'N OF INS. SUPERVISORS, http://www.iaisweb.org/About-the-IAIS-28 (last visited June 22, 2012). The European Systemic Risk Board (ESRB) was established in 2010, in response to the financial crisis, by the European Commission to ensure the macro-prudential supervision of EU's financial system. FRANK DIERICK ET AL., MACRO-PRUDENTIAL COMMENTARIES, THE ESRB AT WORK—IT'S ROLE, ORGANISATION AND FUNCTIONING (2012), *available at* http://www.esrb.europa.eu/pub/pdf/commentaries/ESRB_commentary_1202.pdf.

52. *Mitigating Risk*, *supra* note 3, at 54.

## III. SYSTEMIC THREATS BY UNREGULATED ENTITIES AND VOLATILE MARKETS

### *A. Hedge Funds*

The role of hedge funds in the securities markets is controversial, as are questions as to how they were regulated in the past and how they should be regulated going forward. Indeed, there is not even a generally accepted definition of a "hedge fund." The term generally refers to pools of assets, usually securities, which are professionally managed using innovative investment strategies, but are not registered and regulated like traditional investment companies or undertakings.[53] Some market observers believe hedge funds are mechanisms for greater market efficiency and more effective corporate governance.[54] Others believe they are "conduits for fraud and market manipulation and sources of systemic risk."[55] According to the Joint Forum,[56] although debates continue over whether hedge funds may have contributed to the financial crisis, there is a general consensus that they may have a systemic impact.[57] Certainly, the threat to the capital markets that a hedge fund can pose has been apparent since the Long Term Capital Management (LTCM) collapse of the late 1990s.[58] LTCM was an investment vehicle for a number of hedge funds. Its portfolio was extraordinarily large and risky, and its off-balance sheet activities and its use of derivatives made its activities much more leveraged and risky. When Russia devalued the ruble and declared a debt moratorium on August 17, 1998, LTCM became highly vulnerable to the market conditions that ensued, and by September, it had lost almost 50 percent of its equity.[59] The Federal Reserve Board intervened because of the systemic threat the collapse of LTCM would have posed to the capital markets.[60] Although the Federal Reserve Board did not lend money to LTCM itself, it facilitated a private sector recapitalization of LTCM composed of fourteen banks and securities firms, which were LTCM's largest creditors.[61] Another more recent example of the systemic risk posed by hedge funds is the two in-house hedge funds Bear Stearns was obliged to rescue, which some say was the beginning of the financial crisis of

53. Eddy Wymeersch, *The Regulation of Private Equity, Hedge Funds and State Funds* 2 (Fin. Law Inst., Working Paper No. 2010-06, 2010).

54. Rene M. Stulz, *Hedge Funds: Past, Present, and Future*, 21 J. OF ECON. PERSP., 175, 180 (2007) (hedge funds contribute to pushing securities prices towards fundamentals); STEPHEN BAINBRIDGE, THE NEW CORPORATE GOVERNANCE IN THEORY AND PRACTICE 205 (2008) (hedge funds monitor corporate governance, so investors believe in their increasing value).

55. Dan Awrey, *The Limits of EU Hedge Fund Regulation*, 5 LAW & FIN. MARKETS REV. 119, 121–22 (2011).

56. The Joint Forum is comprised of the Basel Committee on Banking Supervision, IOSCO, and the International Association of Insurance Supervisors. *Joint Forum*, BANK FOR INT'L SETTLEMENTS, http://www.bis.org/bcbs/jointforum.htm (last visited June 22, 2012).

57. THE JOINT FORUM, REVIEW OF THE DIFFERENTIATED NATURE AND SCOPE OF FINANCIAL REGULATIONS—KEY ISSUES AND RECOMMENDATIONS 1 (2010), *available at* www.bis.org/publ/joint24.htm.

58. WILHELM HANKEL & ROBERT ISAAK, BRAVE NEW WORLD ECONOMY: GLOBAL FINANCE THREATENS OUR FUTURE 72 (2011) (explaining that LTCM's collapse could have unraveled confidence in the global financial system if the federal government had not coordinated the bailout of LTCM's bond hedge fund, and stating that the lesson is that without regulation, money managers will take infinite risks with another's capital); *see also* WILLIAM D. COHAN, HOUSE OF CARDS 244–53 (2009).

59. ROBERT E. WHALEY, DERIVATIVES: MARKETS, VALUATION, AND RISK MANAGEMENT 538 (2006).

60. HANKEL & ISAAK, *supra* note 58.

61. *Id.*

2008.[62]

Although there is a general perception that hedge funds were not previously regulated, this perception is not entirely valid. In the United Kingdom, hedge funds were required to be authorized as investment managers and advisers and were then subject to senior management arrangement, systems and controls, and conduct of business rules for dealers and managers.[63] Elsewhere in Europe, hedge funds are restricted to private offerings and subject to some regulation as to the conduct of their business.[64] Further, hedge funds in the European Union (EU) have been subject to certain directives such as the Markets in Financial Instruments Directive,[65] the Transparency Directive,[66] and the Market Abuse Directive.[67] Nevertheless, most hedge funds operating in Europe operate from offshore in order to limit the amount of regulation to which they are subject.[68]

Similarly, in the United States, hedge funds have been subject to laws generally applicable to traders in the securities markets, and they have generally been required to limit their investors to "accredited investors" or "qualified purchasers."[69] Nevertheless, prior to the financial crisis, hedge funds were not required to register with the SEC, and they were not subject to regulation as to their business operations, capitalization, or trading activities.[70] Although many hedge funds were nevertheless registered with the SEC as investment advisers, and others were registered with the Commodity Futures Trading Commission (CFTC) as commodity pool operators, an SEC initiative to compel hedge funds to become registered entities was challenged in the courts and was declared beyond the SEC's authority.[71]

In addition to concerns about hedge funds, regulators have also focused on two other alternative investment vehicles: private equity funds[72] and sovereign wealth funds.[73] Although there is no standard definition of a private equity fund, generally they are pools of capital, which finance non-public companies, either start-ups or former public companies, with a view toward managing the companies until they can be floated in the public securities markets.[74] Questions as to whether these funds should be regulated in

62. *See* COHAN, *supra* note 58, at 92–94, 344–49.

63. Awrey, *supra* note 55, at 4 n.10.

64. Wymeersch, *supra* note 53, at 5–8.

65. Council Directive 2004/39, 2004 O.J. (L 145) 1 (EC).

66. Council Directive 2004/109, 2004 O.J. (L 390) 38 (EC).

67. Council Directive 2003/6, 2003 O.J. (L 96) 16 (EC).

68. Awrey, *supra* note 55, at 10 n.55.

69. Hedge funds limit their investors to these two categories in order to avoid registering as an Investment Company under the Investment Company Act. *See* 15 U.S.C. §§ 80a-(3)(c)(1), (c)(7) (2006) (explaining exceptions to registration as an investment company).

70. *See generally* Troy A. Paredes, Comm'r, SEC, Remarks at the George Washington University Law School Symposium: Hedge Fund Regulation and Current Developments (June 8, 2011), *available at* http://www.sec.gov/news/speech/2011/spch060811tap.htm.

71. Goldstein v. SEC, 451 F.3d 873, 882–83 (9th Cir. 2006).

72. On June 22, 2011, the SEC adopted final rules to implement Title IV of the Dodd–Frank Act regarding investment advisers, notably including advisers to private funds, such as hedge funds and private equity funds. 76 Fed. Reg. 39,646 (July 6, 2011); 76 Fed. Reg. 37,983 (June 29, 2011).

73. *See generally* Ethiopis Tafara, Dir., Office of International Affairs, Testimony Before the Committee on Banking, Housing, and Urban Affairs, Apr. 24, 2008, *available at* http://www.sec.gov/news/testimony/2008/ts034240 8et.htm.

74. *See* Wymeersch, *supra* note 53, at 24 (explaining similar traits seen between private equity funds).

the future, either like hedge funds or separately, have been discussed since the financial crisis.[75] Sovereign wealth funds also are alternative investment vehicles, but regulatory concerns and prohibitions have generally not focused on their systemic threats, but rather on the political implications of their investment activities.[76]

In response to the financial crisis, the G-20 has favored regulatory oversight over hedge funds and hedge fund managers. However, in March 2009, the finance ministers of the G-20 were not in full agreement on how to regulate hedge funds.[77] Some European countries wanted the funds to be overseen like banks, while the United States and United Kingdom favored less intrusive regulation.[78] Europe later continued this debate with respect to the Directive on Alternative Investment Fund Managers, which is discussed below.[79] At the G-20 summits in Washington and London, the G-20 leaders "agreed that all hedge fund managers should be registered and authori[z]ed by their national regulators and that managers should report systemically relevant data to those regulators . . . ."[80]

In response to the G-20's policy decision, IOSCO issued a report on hedge fund oversight in June 2009.[81] IOSCO's definition of "hedge funds" refers to all investment schemes displaying a combination of enumerated characteristics: 1) high levels of leverage; 2) significant performance fees; 3) investors redeem their interests periodically; 4) significant investment by the manager; 5) speculation using derivatives and short selling; and 6) more diverse risks or complex underlying products.[82]

Based on its own research, comments from the public, and inputs from industry members, IOSCO recommended six high-level principles aimed at restoring investor confidence through improved investor protection and better detection and avoidance of the systemic and other regulatory risks posed by hedge funds.[83] As recognized by IOSCO, the approach to hedge fund regulation needs to be balanced and measured, and

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75. *See generally* Ethiopis Tafara Testimony, *supra* note 73.

76. *Id.* at 29–31. Because foreign governments manage these funds, and their activities often are secretive, they are viewed with suspicion, but they also have been looked upon as possible providers of financial and economic stability in the post-crisis world economy. *See* Press Release, Int'l Monetary Fund, New Book Discusses Role of Sovereign Wealth Funds in the Post-Crisis World (May 13, 2011), *available at* http://www.imf.org/external/np/sec/pr/2011/pr11178.htm (discussing the future role of sovereign wealth funds). Yet, these funds are volatile. *See* Andrew Ward, *Norway's Volatile Wealthy Fund Hits New Peak*, FIN. TIMES, Oct. 19, 2010, www.cnbc.com/id/39682463/print/1/displaymode/1098 (explaining the history of Norway's sovereign wealth fund); Saed Azhar & Dinesh Nair, *Analysis—Bulging Cash Balances, Sovereign Funds Set for Deals*, REUTERS, July 26, 2011, http://uk.reuters.com/article/2011/07/26/uk-sovereign-idUKTRE76P1AX 20110726 (identifying changes to sovereign wealth funds).

77. *See France Is Threatening G20 Walkout*, BBC, Mar. 31, 2009, http://news.bbc.co.uk/2/hi/business/ 7974190.stm (describing the different views of state leaders at the G-20 summit).

78. *Id.*; *see also* Damien Paletta & Jonathan Weisman, *Hedge-Fund Regulation Splits G-20 as Conference Begins*, WALL ST. J., Apr. 14, 2009, http://online.wsj.com/article/SB123699227525026981.html.

79. *See generally Alternative Investments*, EUR. COMM'N, http://ec.europa.eu/internal_market/investment/ alternative_investments_en.htm (last visited June 22, 2012).

80. Press Release, Alternative Inv. Mgmt. Ass'n, EU Should Not Diverge from G-20 Path on Hedge Fund Regulation (Apr. 22, 2010), *available at* http://www.aima.org/en/media/press-releases.cfm/id/BF9411D2-154B-40D8-8BEC1BA0F3496BDF.

81. IOSCO, HEDGE FUND OVERSIGHT: FINAL REPORT (2009) [hereinafter HEDGE FUND OVERSIGHT], *available at* http://www.iosco.org/library/pubdocs/pdf/IOSCOPD293.pdf (reporting on hedge fund oversight listing high-level principles and feedback on public comments).

82. *Id.* ¶ 5.

83. *Id.* ¶ 22.

the ultimate regulatory measures will require strong collective global action and application.[84] The six principles are described below.

The first principle is that "hedge funds and/or hedge fund managers should be subject to mandatory regulation."[85] According to IOSCO, industry structure should dictate whether funds or their advisers should be subject to this additional layer of regulation.[86] In any event, any regulatory oversight should be risk-based, proportional, and more focused on systemically important hedge fund managers.[87] With the information gathered through the registration process, regulators can gain adequate insight into the hedge fund business and therefore be able to identify, analyze, and mitigate possible systemic risks.[88] Prospective investors, on the other hand, can use the information to evaluate their investment options.[89]

The second principle is that hedge fund managers and/or advisers "required to register should also be subject to appropriate ongoing regulatory requirements relating to: organizational and operational standards; conflicts of interest and other conduct of business rules; disclosure to investors; and prudential regulation."[90] Organizational and operational standards should take into account a comprehensive risk management framework that considers risks from all facets of the fund managers' business (such as market, liquidity, credit, and operational risks).[91] Managers should regularly monitor these risks and make appropriate disclosure to investors.[92] There should be a strong and independent compliance function, robust valuation process, adequate segregation and protection of client monies and assets, and maintenance of funds' trading records. Managers' business accounts should also be audited on an annual basis.[93]

Managers need to provide full disclosure about any conflicts of interest and how they manage these conflicts.[94] Compensation structures should also be subject to strong governance mechanisms to counter short-term profit motives.[95] IOSCO recommends aligning standards for compensation structures to those developed by the Financial Stability Board (FSB).[96] With regard to disclosure to investors, managers should disclose information on risks, conditions and limits on redemption, existence of side letters and gating structures, fund strategy and performance, and audited financial statements.[97] Regulators, in turn, should have the power to inspect the funds as well as the managers and their records.[98] Finally, prudential requirements should be imposed on managers that

84. *Id.* ¶¶ 12, 18.

85. *Id.* ¶¶ 23–30.

86. HEDGE FUND OVERSIGHT, *supra* note 81, ¶ 25.

87. *Id.* ¶ 27.

88. *Id.* ¶ 30.

89. *Id.*

90. *Id.* ¶¶ 31–38 (discussing the ongoing regulatory requirements to which hedge fund managers and advisors should be subject).

91. HEDGE FUND OVERSIGHT, *supra* note 81, ¶ 31.

92. *Id.*

93. *Id.*

94. *Id.* ¶ 32.

95. *Id.* ¶ 33.

96. HEDGE FUND OVERSIGHT, *supra* note 81, ¶ 33; *see supra* note 51 (discussing various boards and committees).

97. HEDGE FUND OVERSIGHT, *supra* note 81, ¶ 35.

98. *Id.* ¶ 36.

reflect the risks they take.[99] However, since not all IOSCO members are prudential regulators, IOSCO recognizes that this principle needs to be further developed at a global level.[100]

Principle three, discussed in the IOSCO paper on hedge funds, is that "prime brokers and banks which provide funding to hedge funds should be subject to mandatory registration/regulation and supervision. They should have in place appropriate risk management systems and controls to monitor their counterparty credit risk exposures to hedge funds."[101] IOSCO recommends that prime brokers and banks, both already subject to conduct and prudential regulation, should have "strong risk management controls over their exposures to hedge funds and an ability to obtain information from the funds to engage in effective risk management."[102] Securities regulators, on the other hand, should be able to obtain non-public information on these entities' most systemically significant hedge fund counterparties.[103]

The fourth principle is that hedge fund managers, advisers, and prime brokers should provide to the relevant regulator information for systemic risk purposes. This should include the identification, analysis, and mitigation of systemic risk.[104] Regulators should attempt to collect information from these entities concerning the amount of credit exposure to hedge funds; the aggregate and largest current exposures; potential exposures; market or product concentrations on an individual or aggregate fund basis; hedge fund managers with significant portions of the daily liquidity/volume of important markets; prime brokers' and banks' aggregate margin requirements; cash loaned; the value of long and short positions; and net equity.[105]

Hedge fund managers and advisers should provide information on the funds they manage, such as background on management, assets under management, services, fees, strategies, and affiliates.[106] In addition, managers and advisers should also provide information on their prime brokers and custodians, information on the manager's larger funds, leverage and risk, counterparty risks, product exposure, and any type of concentration.[107] These information requirements should be imposed on managers for all the funds they manage, regardless of the location of the funds.[108] The goal is to provide regulators with enough information to identify sources of systemic risk that hedge funds may pose.

Principle five is that regulators should encourage and take account of the development, implementation, and convergence of industry good practices, where appropriate.[109] The Technical Committee stated that it was committed to working with the industry to develop a consolidated set of standards, and regulators should encourage

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99. *Id.* ¶ 37.
100. *Id.* ¶ 38.
101. *Id.* ¶ 3.
102. HEDGE FUND OVERSIGHT, *supra* note 81, ¶¶ 39–41.
103. *Id.* ¶ 42.
104. *See id.* ¶¶ 43–49 (explaining factors for identifying, analyzing, and mitigating systemic risks).
105. *Id.* ¶ 44.
106. *Id.* ¶ 45.
107. HEDGE FUND OVERSIGHT, *supra* note 81, ¶ 46.
108. *Id.* ¶ 49.
109. *See id.* ¶¶ 50–52 (discussing the need to develop a common set of industry standards).

hedge funds and their managers to adhere to such sets of standards.[110] Regulators should also consider and agree on how individual hedge funds and managers should assume and comply with the standards.[111]

Finally, the sixth principle is that regulators should have the authority to cooperate and share information with each other, when appropriate, in order to facilitate efficient and effective oversight of globally active managers, advisers, and/or funds, and to help identify systemic risks, market integrity, and other risks arising from the activities or exposures of hedge funds with a view to mitigating such risks across borders.[112] IOSCO expressed the view that securities regulators should have the authority to collect relevant information from hedge funds on behalf of a foreign regulator; exchange on a timely and on-going basis with relevant regulators on funds that may pose systemic risks; perform joint inspections; and enforce and assist in enforcement against violators.[113] With regard to exchanging information relevant to investigation and enforcement proceedings, IOSCO recommends using its principles on the Multilateral Memorandum of Understandings. As for the exchange of non-public supervisory information, the Technical Committee should consider developing appropriate frameworks and principles to assist regulators in doing so.[114]

Important legislative developments with regard to hedge fund regulation in the United States and the European Union followed the IOSCO report on hedge fund oversight. While operating in a largely unregulated environment for years, American hedge funds had grown and thrived in the absence of registration with the SEC and its oversight. "In the United States, the amount of assets under hedge fund management expanded from $100,000 in 1949 to $2 trillion in the summer of 2008; it subsequently declined to approximately $1.5 trillion in 2009.[115] Although hedge funds perform important market functions—price discovery and the provision of liquidity . . . "[116]—they lacked transparency. This made it difficult for investors, counterparties, and regulators to evaluate the risks they posed.[117] The U.S. Congress set out to shed light in this area when it enacted the Wall Street Reform and Consumer Protection Act of 2010 (Dodd–Frank),[118] which requires most hedge funds to register with the SEC and become subject to SEC examination and regulation. To keep it sufficiently encompassing, no bodies have defined the term "hedge fund," including IOSCO, the SEC, nor Congress in its enactment

110. *Id.* ¶ 52.

111. *Id.*

112. *See* HEDGE FUND OVERSIGHT, *supra* note 81, ¶¶ 53–57 (discussing the cooperation between national regulators to mitigate cross-border risk).

113. *Id.* ¶ 54.

114. *Id.* ¶ 55.

115. Orice M. Williams, Dir. of Fin. Mkts. & Cmty. Inv., Testimony Before the Subcommittee on Capital Markets, Insurance and Government Sponsored Enterprises, Gov't Accountability Office (2009), *available at* http://www.gao.gov/new.items/d09677t.pdf.

116. Roberta S. Karmel, *The New Landscape of Investment Adviser Custody*, 43 REV. SEC. & COMM. REG. 295, 295 (Dec. 15, 2010).

117. Louis Aguilar, Comm'r, SEC, Speech at the 2009 Hedgeworld Fund Services Conference: Hedge Fund Regulation on the Horizon—Don't Shoot the Messenger (June 18, 2009), *available at* http://www.sec.gov/news/speech/2009/spch061809laa.htm.

118. Wall Street Reform and Consumer Protection Act, 111 Pub. L. No. 111-203, 124 Stat. 1376 (2010) [hereinafter Dodd–Frank].

of Dodd–Frank.[119] For purposes of the U.S. securities laws, "[t]his term generally refers to investment vehicles that [] pool [] securities, and perhaps other assets, [and] whose interests are not sold in a registered public offering and that are not registered as investment companies under the Investment Company Act of 1940" (Investment Company Act).[120] Dodd–Frank uses the statutory term "private investment funds." Such a fund is "an issuer that would be an investment company, as defined in section 3 of the Investment Company Act of 1940 . . . but for section 3(c)(1) or 3(c)(7) of that Act."[121] This bit of legislative complexity refers to the exemptions from registration for funds with fewer than 100 investors or funds with investors who are all "qualified purchasers"—generally any natural person with assets of at least $5 million or any adviser who owns or invests on a discretionary basis at least $25 million.[122] The term "private investment funds" includes hedge funds, but it also encompasses private equity funds, venture capital funds, and some other vehicles.[123]

Section 403 of Dodd–Frank requires all "private funds" to register as investment advisers with the SEC one year after its enactment, except for any investment adviser that is registered as a commodity trading adviser with the CFTC and advises a private fund.[124] Nevertheless, if after the enactment of Dodd–Frank, the business of such a commodity trading adviser "should become predominantly the provision of securities-related advice," that adviser needs to register with the SEC.[125] The term "predominantly the provision of securities-related advice" is not defined in Dodd–Frank, but the term "predominantly engaged in financial activities" is defined as 85% of consolidated gross revenues and assets.[126] It therefore is likely the SEC will interpret the concept of predominantly engaged in securities-related advice similarly. Advisers to small business investment companies, venture capital funds, and family offices also are exempt from SEC registration and regulation.[127] The SEC passed rules with regard to the obligations of hedge funds to register, but it pushed off the registration requirement until March 30, 2012.[128]

Congress was determined to bring hedge funds within the ambit of SEC regulation in Dodd–Frank for two reasons. First, although the majority of investors in most hedge funds are sophisticated and fall within the definition of an "accredited investor," and many are "qualified purchasers," abuses and insolvencies by some hedge funds have

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119. SCOTT J. LEDERMAN, FINANCIAL PRODUCT FUNDAMENTALS § 11:2 (Practicing Law Institute 2011).

120. Karmel, *supra* note 116; *see* STAFF REPORT TO THE U.S. SEC, IMPLICATIONS OF THE GROWTH OF HEDGE FUNDS 1, 3 (Sept. 2003), *available at* www.sec.gov/news/studies/hedgefunds0903.pdf.

121. Dodd–Frank § 402.

122. GERALD T. LINS ET AL., HEDGE FUNDS AND OTHER PRIVATE FUNDS: REGULATION AND COMPLIANCE § 4:33 (2011).

123. *See generally* Andre J. Donohue, Dir., SEC Div. of Inv. Mgmt., Keynote Address at the 9th Annual International Conference on Private Investment Funds (Mar. 10, 2008).

124. Dodd–Frank § 403.

125. *Id.*

126. *Id.* § 102(a)(6).

127. *Id.* §§ 403, 407.

128. *See* Rules Implementing Amendments to the Investment Advisors Act of 1940, Inv. Advisers Act Rel. No. 3221, 76 Fed. Reg. 42,950, 42,976 n.378–79 (July 19. 2011) (to be codified at 17 C.F.R. pt. 275, 279); *see also* Press Release, SEC, SEC Adopts Dodd–Frank Act Amendments to Investment Advisers Act (June 22, 2011). In part, this was due to the technical complexities of the new registration requirements, coupled with the deregistration requirements for mid-sized hedge funds.

demonstrated that investor protection is an issue.[129] Second, hedge funds may pose a systemic risk as a result of either their size or trading methods.[130]

Once hedge funds register with the SEC, they will be subject to new obligations applicable to all registered advisers. They will be required to appoint a chief compliance officer, establish a code of ethics, and comply with custody and record keeping requirements.[131] Although the SEC is given rule making authority to specify what records need to be prepared and maintained,[132] certain records are specified in Dodd–Frank: the amount of assets under management and use of leverage, including off balance sheet items; counterparty risk exposure; trading and investment positions; valuation policies and practices of the fund; types of assets held; side arrangements or side letters; and such other information deemed necessary by the SEC and the FSOC.[133] Further, all registered funds will be subject to periodic and special examinations by the SEC.[134]

Dodd–Frank included a provision granting the SEC the right not to disclose records or information obtained through its risk assessment, surveillance, or other regulatory and oversight functions of each type of firm regulated under the securities laws.[135] The reason for this provision was that hedge funds will be a new financial institution that the SEC will oversee, and hedge funds have been concerned that their proprietary trading information could become available to competitors after they are compelled to disclose such information to the SEC. The purpose of the provision was to put the SEC on a par with bank regulators when conducting examinations.[136] This provision became controversial because Fox News and some members of Congress claimed that it would

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129. A variety of common fact patterns involving hedge funds (or putative hedge funds) have resulted in SEC enforcement actions. One type of case is the Ponzi scheme where a firm is purporting to be a hedge fund, but the firm or its promoter is instead pocketing the funds it raises. The most high profile of these cases was the Madoff case. SEC v. Madoff, 2009 Fed. Sec. L. Rep. (CCH) ¶ 95,070 (S.D.N.Y. Feb. 9, 2009) (summarizing the allegations against Madoff); *see also* SEC v. Stanford Int'l Bank., Lit. Rel. No. 20901 (Feb. 17, 2009) (referencing Madoff's "massive Ponzi scheme"). A closely related type of case is the misrepresentation of investment returns to investors in hedge funds based on inaccurate portfolio valuations. *E.g.*, SEC v. Nicholson, Lit. Rel. No. 20911 (Feb. 25, 2009) (outlining the SEC's allegations against the alleged perpetrators of such a scheme); Amanda Cantrell, *What Happened at Bayou*, CNNMONEY.COM, Sept. 29, 2009, http://money.cnn.com /2005/09/29/markets/bayou_investors/index.htm (describing another instance of such hedge fund fraud). Insider trading cases involving hedge funds have been both high profile and more routine. *E.g.*, United States v. Rajaratnam, 802 F. Supp. 2d 491 (S.D.N.Y. 2011). The SEC has also brought cases against hedge funds for short selling abuses. *See, e.g.*, Press Release, SEC, SEC Charges Dallas-Based Hedge Fund Adviser for Participating in Stock Offerings After Selling Short, No. 2010-172 (Sept. 23, 2010), *available at* http://www.sec.gov/news/press/2010/2010-172.htm (describing charges brought by the SEC against a hedge fund advisor for selling short). In the five-year period from 2004 to 2009, the SEC brought over 100 cases involving hedge funds. Elisse B. Walter, Comm'r, SEC, Testimony Before the United States House of Representatives Committee on Financial Services (Mar. 20, 2009).

130. For an example, see U.S. GENERAL ACCOUNTING OFFICE, GAO/GGD-00-3, LONG-TERM CAPITAL MANAGEMENT: REGULATORS NEED TO FOCUS GREATER ATTENTION ON SYSTEMIC RISK (Oct. 1999), *available at* http://www.gao.gov/assets/230/228446.pdf.

131. *See* 17 C.F.R. §§ 275.204-2, 204A-1, 206(4)-2, 206(4)-7 (2010).

132. Dodd–Frank § 404 (2010), *amending* Investment Advisers Act of 1940, 15 U.S.C.A. § 806-4 (2006).

133. *Id.*

134. Investment Advisers Act § 204(b)(6), *amended by* Dodd–Frank § 404.

135. Dodd–Frank § 929I.

136. Bruce Carton, *Does Dodd–Frank Exempt SEC From Most FOIA Requests?*, COMPLIANCE WEEK (July 28, 2010), http://www.complianceweek.com/does-dodd-frank-exempt-sec-from-most-foia-requests/ article/188332/.

allow the SEC to deny requests for information in order to shield itself from public criticism.[137] The Senate and House therefore passed bills repealing this Dodd–Frank provision and replacing it with an expanded exemption from the Freedom of Information Act disclosure to include hedge funds in the protection of the exemption for matters that are "contained in or related to examination, operating, or condition reports prepared by, on behalf of, or for the use of an agency responsible for the regulation or supervision of financial institutions."[138]

Once hedge funds are SEC registered advisers, they will be required to safeguard client assets over which the advisers have custody, including but not limited to verification of such assets by an independent public accountant.[139] This statutory provision is in response to the Madoff scandal and intends to reduce the dangers of Ponzi schemes and thefts.[140] It is in line with SEC rulemaking passed as a result of the Madoff scandal.[141]

In addition to investor protection, Dodd–Frank also aims to reduce the potential systemic risk hedge funds pose to the broader financial system as illustrated by the Long Term Capital situation.[142] The main tool in the regulatory arsenal provided by Dodd–Frank is that hedge funds could become subject to supervision as nonbank financial companies if regulators determine that they pose a threat to the financial stability of the U.S. capital markets.[143] This would happen if the FSOC, by a two-thirds vote, including a vote of the Secretary of the Treasury as Chair, determines that such a threat exists.[144] Further, if a hedge fund is a securities holding company that is the parent of a broker–dealer required by foreign law to be subject to consolidated regulation, the hedge fund might be required to register with the Federal Reserve Board and be subject to Federal supervision.[145]

The European Union also has adopted a new regime for the regulation of alternative investment funds (AIFs), including hedge funds, and alternative investment fund managers (AIFM), that in some respects overlaps with the new U.S. regulatory scheme, but in other ways conflicts with the Dodd–Frank framework.[146] The Directive on Alternative Investment Fund Managers (AIFMD) generated extensive controversy, not

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137. *Id.*

138. Freedom of Information Act, 5 U.S.C. § 522(b)(8) (2007); *see* Freedom of Information Act sec. 3717, 111th Cong. (2010) (amending to insert provisions applying the Freedom of Information Act). President Obama signed this bill on Oct. 5, 2010. Freedom of Information Act, 111 Pub. L. No. 257, 124 Stat. 2646 (2010).

139. Dodd–Frank § 411.

140. *See generally infra* note 141.

141. Investment Advisers Act Rel. No. 2968 (Dec. 30, 2009), 75 Fed. Reg. 1456 (Jan. 11, 2010), *amending* Rule 206(4)-2, 17 C.F.R. § 275.206(4)-2 (2008); *see* Mari-Anne Pisarri, *The New Landscape of Investment Adviser Custody*, 43 REV. SEC. & COMM. REG. 103 (Apr. 21, 2010) (describing the protections of the Advisers Act).

142. *SEC Proposes Private Fund Systemic Risk Reporting Rule*, U.S. SEC. & EXCH. COMM'N (Jan. 25, 2011), http://www.sec.gov/news/press/2011/2011-23.htm.

143. Dodd–Frank § 113.

144. CHRIS DODD, CHAIRMAN, SENATE COMM. ON BANKING, HOUS., & URBAN AFFAIRS, SUMMARY: RESTORING AMERICAN FINANCIAL STABILITY (2010), *available at* http://banking.senate.gov/public/_files/FinancialReformSummaryAsFiled.pdf.

145. Dodd–Frank § 618.

146. Peter Green & Jeremy Jennings-Mare, *Comparison of Dodd Frank Act and EU Regulatory Reform*, MORRISON & FOERSTER (2011), http://www.mofo.com/files/Uploads/Images/Reg-Reform-PPT.pdf.

only within Europe, but between Europe and the United States. The European Parliament approved the AIFMD in November 2010, but it was not finally published until July 1, 2011.[147] The AIFMD does not directly regulate the funds, but, as in the United States, it imposes registration requirements and regulatory responsibilities on the managers of AIFs.[148] Also, as in the United States, the directive applies essentially to all collective investment funds that are not regulated funds or UCITS.[149] Nevertheless, the United States and the European Union part company with regard to some of the substantive requirements imposed upon AIFs.

Managers of AIFs must be authorized in the home state of the AIF, or if the AIFM is not based in the European Union, in the most appropriate member state.[150] In order to be authorized, the AIFM must comply with various requirements, including capital requirements and the requirements to have a depository for the assets under management.[151] The Directive also has conduct of business rules,[152] a requirement for independent asset valuation,[153] restrictions on delegation,[154] transparency[155] and disclosure requirements,[156] restrictions on remuneration of senior staff,[157] and five percent "skin in the game" requirements for investing in securitizations.[158] Once authorized, the manager has a passport to sell the AIF throughout Europe.[159]

The issue of regulation of "third country funds" has been contentious. A non-EU manager will be permitted to manage EU domiciled AIFs and market non-EU domiciled AIFs subject to certain restrictions and agreements between the European Union and the home regulator of the AIF.[160] There are complicated phase-in requirements for non-EU domiciled AIFs beginning in 2013 that could disadvantage non-EU domiciled AIFS then and now.[161] During the debating and drafting of the AIFMD, bitter disputes broke out between the EU authorities and U.S. regulators, especially the U.S. Secretary of the Treasury, who claimed that the directive was protectionist.[162] Although the final form of the AIFMD has resolved some of these tensions, final regulations have not yet been put

147. Council Directive 2011/61, 2011 O.J. (L 174) 1 (EC).

148. *Implementation of the Alternative Investment Fund Managers Directive* (Fin. Servs. Auth., Discussion Paper No. DP12/1, Jan. 2012), *available at* http://www.fsa.gov.uk/static/FsaWeb/Shared/Documents/pubs/discussion/dp12-01.pdf.

149. UCITS refers to "Undertakings for Collective Investments in Transferable Securities." They are EU registered and regulated investment funds similar to U.S. investment companies. *See* Council Directive 2001/107, 2001 O.J. (L 41) 1 (EC); Council Directive 2001/108, 2001 O.J. (L 41) 1 (EC) (describing the features of UCITS).

150. *See* Council Directive 2011/61, 2011 O.J. (L 174) 10 (EC).

151. *See* Council Directive 2011/61, art. 18, 2011 O.J. (L 174) 4, 31 (EC).

152. The conduct of business rules cover conflicts of interest, risk management, and liquidity management. *See* Council Directive 2011/61, art. 13, 2011 O.J. (L 174) 12, 24 (EC).

153. Council Directive 2011/61, art. 18, 2011 O.J. (L 174) 1, 26 (EC).

154. *Id.* at art. 20.

155. *Id.* at art. 22.

156. *Id.* at art. 23.

157. *Id.* at art. 13.

158. Council Directive 2011/61, art. 17, 2011 O.J. (L 174) 1, 26 (EC).

159. Council Directive 2011/61, art. 35, 2011 O.J. (L 174) 42 (EC).

160. Council Directive 2011/61, 2011 O.J. (L 174) 9 (EC).

161. *See generally id.* at 1–2.

162. James Politi, *Geithner Urges EU Fund Rules Rethink*, FIN. TIMES, Apr. 6, 2010, http://www.ft.com/cms/s/0/00591036-41bb-11df-865a-00144feabdc0.html#axzz1WWr4Q9lZ.

into place.[163] The European Commission needs to develop numerous detailed rules in order to implement the AIFMD.[164] This challenge is similar to that facing the SEC in implementing Dodd–Frank. The Commission has asked the European Securities Market Authority[165] (ESMA) for draft advice and that advice is voluminous.[166]

Asian jurisdictions also have been developing new regulations for hedge funds. Hong Kong requires hedge funds to register with its financial regulator, the Securities and Futures Commission (SFC).[167] Recently, the SFC has focused on increasing its enforcement efforts by stepping up its inspections of registered funds.[168] On June 25, 2011, the SFC also implemented increased disclosure rules that require SFC registered funds to provide investors with a product key facts statement and an offering document that satisfy a number of additional disclosure requirements as set out in the SFC Handbook, which came into effect a year ago.[169] Singapore, a direct competitor to Hong Kong, has also been vying for hedge fund business and is attempting to make it easier for hedge funds to operate there.[170] As part of an attempt to attract start-up hedge funds, the Monetary Authority of Singapore (MAS) approved rules in April 2010, exempting funds with less than $250 million ($183 million USD) from registration so long as the fund serves 30 or fewer "qualified" investors.[171]

Whether the standards enunciated by IOSCO will serve to harmonize hedge fund

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163. Non-EU hedge fund managers may be able to continue to market non-EU AIFs to professional investors under member states' private placement regimes. The EU AIFM must comply with all of the provisions in the AIFMD except the depositary requirements, there must be cooperation arrangements in place, and the non-EU AIF must not be established in a jurisdiction that is designated as non-cooperative by FATF. Additionally, Member States may impose stricter marketing requirements on the EU AIFM. Council Directive 2011/61, art. 34–40, 2011 O.J. (L 174) 1, 42–54 (EC).

164. Sheila Nicoll, Dir. of Conduct Policy, Fin. Serv. Auth., Speech at the PWC Global Alternative Investments Seminar: The Alternative Investment Fund Managers Directive—ESMA's Draft Technical Advice to the European Commission (July 21, 2011), *available at* http://www.fsa.gov.uk/library/communication/speeches/2011/0721_sn.shtml.

165. "ESMA is an independent EU Authority that contributes to safeguarding the stability of the European Union's financial system by ensuring the integrity, transparency, efficiency and orderly functioning of securities markets, as well as enhancing investor protection. In particular, ESMA fosters supervisory convergence both amongst securities regulators, and across financial sectors by working closely with the other European Supervisory Authorities." *About ESMA*, EUR. SEC. & MKTS. AUTH., http://www.esma.europa.eu/ (last visited June 20, 2012).

166. ESMA's advice regarding the AIFMD is over 400 pages long, and it is outside the scope of this Article to summarize the advice. It is worthy to note, however, that the ESMA provided the most comments in the areas of depository requirements, transparency, and leverage. *See Draft Technical Advice to the European Commission on Possible Implementing Measures of the Alternative Investment Fund Managers Directive*, EUR. SEC. & MKTS. AUTH. (July 2011), http://www.esma.europa.eu/system/files/2011_209.pdf (continuing implementation advice).

167. Helena Chan, *SFC to Balance Investor Protection as Hedge Funds Stampede Hong Kong*, THOMSON REUTERS ACCELUS, May 14, 2011, http://www.complinet.com/dodd-frank/news/analysis/article/sfc-to-balance-investor-protection-as-hedge-funds-stampede-hong-kong.html.

168. *Id.*

169. HONG KONG SEC. & FUTURES COMM'N, QUARTERLY REPORT 3 (Apr.–June 2011), *available at* http://www.sfc.hk/sfc/doc/EN/speeches/public/quartely/apr_jun_11.pdf.

170. Netty Ismail, *Singapore's New Hedge-Fund Regulation Puts City 'Back on Map'*, BLOOMBERG, July 28, 2010, http://www.bloomberg.com/news/2010-07-28/singapore-hedge-fund-regulations-lure-managers-put-city-back-on-the-map-.html.

171. *Id.*

regulation around the world remains an open question, especially since differences have emerged between United States and EU regulation of the funds, and Asian markets are attempting to attract hedge funds into their markets. Although the mature capital markets are following IOSCO's principles with regard to hedge funds by requiring their registration and regulation, it does not follow that such regulation will be consistently formulated or applied.

### *B. Credit Rating Agencies*

The Financial Crisis Inquiry Commission (FCIC) examined the financial and economic crisis of 2008 and explained its causes. The FCIC concluded that "the failures of credit-rating agencies were essential cogs in the wheel of financial destruction" and "[t]he three dominant credit rating agencies were key enablers of the financial meltdown."[172] Although criticism of the conduct and competence of credit-rating agencies (CRAs) after 2008 focused on the huge number of rating agencies' write downs of previously highly rated residential mortgage-backed securities (RMBS) and collateralized-debt obligations (CDOs) in the context of the sub-prime mortgage crisis, intense scrutiny of CRAs has been ongoing in the United States and overseas since at least the collapse of Enron.[173] Even earlier, the rating agencies' failure to anticipate the 1997–1998 Asian debt crisis adversely impacted sovereign debt issues.[174]

CRAs analyze and evaluate the creditworthiness of corporate and sovereign issuers of debt securities.[175] While CRA ratings are often thought to represent a judgment on the worthiness of an investment because of the use of the term "investment grade" to refer to highly rated securities, the CRAs' opinions merely assess the likelihood that a particular debt security will perform according to its terms.[176] A high credit rating does not purport to be an opinion that the debt instrument is a good investment.[177] Nevertheless, specific references to credit ratings, in the rules of the SEC and the Basel II and Basel III accords as a surrogate for the riskiness of investments held by regulated entities, gave such ratings significance and credibility as a measure of the creditworthiness of issuers.[178] In

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172. FIN. CRISIS INQUIRY COMM'N, THE FINANCIAL CRISIS INQUIRY REPORT: FINAL REPORT OF THE NATIONAL COMMISSION ON THE CAUSES OF THE FINANCIAL AND ECONOMIC CRISIS IN THE UNITED STATES, at xxv (2011) [hereinafter FINANCIAL CRISIS INQUIRY], *available at* www.gpo.gov/fdsys/pkg/GPO-FCIC/pdf/GPO-FCIC.pdf.

173. Major CRAs persistently rated Enron's debt as "investment grade" until four days before Enron declared bankruptcy. Claire A. Hill, *Regulating the Rating Agencies*, 82 WASH. U. L.Q. 43, 43 (2004). Similarly, WorldCom was rated "investment grade" three months before filing for bankruptcy, and Global Crossing was rated "investment grade" in March 2002 and then defaulted on loans in July 2002. Letter from Egan-Jones Ratings Company, to Jonathan G. Katz, SEC Secretary (Nov. 10, 2002), *available at* www.sec.gov/news/extra/credrate/eganjones2.htm.

174. *Id.*

175. Marwan Elkhoury, Credit Rating Agencies and Their Potential Impact on Developing Countries, United Nations Conference on Trade and Development, No. 186 (Jan. 2008), http://archive.unctad.org/en/docs/osgdp20081_en.pdf.

176. TECHNICAL COMM. OF IOSCO, THE ROLE OF CREDIT RATING AGENCIES IN STRUCTURED FINANCE MARKETS 4 (2008) [hereinafter IOSCO ROLE OF CRAS], *available at* www.iosco.org/library/pubdocs/pdf/IOSCOpd270.pdf.

177. *Id.*

178. *See* SEC, REPORT ON THE ROLE AND FUNCTION OF CREDIT RATING AGENCIES IN THE OPERATION OF THE SECURITIES MARKETS 5 (2003) [hereinafter SARBANES–OXLEY REPORT], *available at* http://www.sec.gov/

1975, the SEC adopted the term "nationally recognized statistical rating organization" (NRSRO) to determine capital charges for broker–dealers for purposes of the SEC's capital adequacy or net capital rule.[179] Marketplace and regulatory reliance on credit ratings then gradually increased, and the concept of an NRSRO became embedded in a wide range of U.S. regulations of financial institutions, as well as state, federal, and foreign laws relating to creditworthiness.[180] The failure of the CRAs to promptly adjust ratings or forecast the demise of issuers that went bankrupt when the stock market technology bubble burst then led to scrutiny of their performance and lack of government regulation.

The SEC never passed a rule defining NRSROs, but rather recognized agencies as such through a no-action letter process.[181] The SEC staff considered a number of factors, the most important of which was that the agency was "nationally recognized" for ratings reliability.[182] This opaque process and the highly concentrated number of NRSROs led to criticism of the SEC's procedures, but government regulation of CRAs was too controversial to result in legislation. Some believed that the NRSRO designation was a barrier to competition in the credit-rating business.[183] Others argued that the SEC lacked authority to substantively regulate CRAs[184] and that such authority would be inappropriate because the activities of CRAs are journalistic and protected by the First Amendment.[185] Yet, shortcomings by CRAs raised questions as to whether their lack of regulation and the SEC's process for designating NRSROs was appropriate. Accordingly, the Sarbanes–Oxley Act of 2002[186] mandated that the SEC study the role and function of CRAs and submit a report to Congress.[187] This study was required to cover the following areas: the role of CRAs in evaluating issuers; the importance of that role to investors and the markets; impediments to accurate appraisals of the financial resources and risks of securities issuers; barriers to entry to the CRA business; measures to improve dissemination of CRA appraisals; and conflicts of interest in rating operations. The SEC issued this required report, but it did not draw any firm conclusions concerning how, if at all, CRAs should be regulated. Instead, the SEC stated that it intended to issue a concept

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news/studies/credratingreport0103.pdf (describing credit agencies' role); BASEL COMM. ON BANKING SUPERVISION, BASEL III: A GLOBAL REGULATORY FRAMEWORK FOR MORE RESILIENT BANKS AND BANKING SYSTEMS (2010), *available at* http://www.bis.org/publ/bcbs189.pdf.

179. SARBANES–OXLEY REPORT, *supra* note 178, at 6.

180. *Id.* at 7–8.

181. *See* Kenneth C. Kettering, *Securitization and Its Discontents: The Dynamics of Financial Product Development*, 29 CARDOZO L. REV. 1553, 1696 (2008) (discussing problems with securitization).

182. Hill, *supra* note 173, at 55. Other factors taken into consideration were organizational structure, size, and experience of staff, the agency's independence from the company it rates, and internal procedures to prevent misuse of inside information. *Id.* at 55–56.

183. *E.g.*, Steven L. Schwarcz, *Private Ordering of Public Markets: The Rating Agency Paradox*, 2002 U. ILL. L. REV. 1, 20 (2002) (noting that the NRSRO designation blocks competition among rating agencies because it limits the number of agencies).

184. As will be explained, some authority was given to the SEC in the Credit Rating Agency Reform Act of 2006, Pub. L. No. 109-291, 120 Stat. 1327 (2006).

185. Rating Agencies and the Use of Credit Ratings Under the Federal Securities Law, Exchange Act Release No. 34-47972, 80 SEC Docket 1003 (June 4, 2003) [hereinafter Rating Agencies Concept Release].

186. 15 U.S.C. § 7201 (2002).

187. The SEC was to file the report not less than 180 days after the passage of the Act. Sarbanes–Oxley Act of 2002, Pub. L. No. 107-204, § 702, 16 Stat. 745 (2002).

release covering the following issues: mandating disclosure by NRSROs about the ratings process and other matters; conflicts of interest; anti-competitive or unfair practices; reducing barriers to entry; and ongoing SEC oversight of CRAs.[188] The SEC duly issued this concept release in June 2003.[189]

In the meantime, the Technical Committee of IOSCO formed a task force to study issues relating to CRAs and issued a report in September 2003 describing the role of CRAs in the global capital market.[190] This task force was chaired by a commissioner of the SEC and included representatives from Australia, Brazil, France, Germany, Hong Kong, Italy, Japan, Ontario, Canada, Portugal, Spain, and the United Kingdom.[191] At the same time, IOSCO published a set of principles that regulators, CRAs, and other market participants could follow to improve the integrity of the ratings process and help ensure that investors are provided with timely, high quality ratings.[192] These principles were generic and related to the quality and integrity of the ratings process, independence and conflicts of interest, transparency and timeliness of ratings disclosure, and the use of confidential information.[193]

In response to criticism that these principles were insufficient to address the problems posed by CRAs, particularly in light of credit ratings' role in Basel II, IOSCO continued to analyze the regulation of CRAs.[194] In September 2003, IOSCO issued a report on the activities of CRAs and a Code of Conduct Fundamentals for CRAs.[195] In contrast to the earlier published principles, the Code of Conduct Fundamentals was much more specific. It focused on the quality of the ratings process, including updating of opinions, conflicts of interest, employee and analyst independence, and transparency.[196] In response, Moody's and Standard & Poor's published their own Code of Professional Conduct in the second half of 2005.[197]

The U.S. Congress then passed the Credit Rating Agency Reform Act (CRA Reform Act) in 2006, which established a system of registration and regulation of NRSROs and instructed the SEC to formulate implementing rules.[198] The CRA Reform Act led to three changes in the SEC's regulation of NRSROs. First, the Act contained new definitions of "credit rating," "credit rating agency," "nationally recognized statistical rating

188. SARBANES–OXLEY REPORT, *supra* note 178, at 43–45.

189. Rating Agencies Concept Release, *supra* note 185.

190. TECHNICAL COMM. OF IOSCO, REPORT ON THE ACTIVITIES OF CREDIT RATING AGENCIES 15–17 (2003) [hereinafter REPORT ON THE ACTIVITIES], *available at* www.iosco.org/library/pubdocs/pdf/IOSCOPD153.pdf.

191. *Id.* at 1 n.3. The three largest international CRAs—Moody's, Standard & Poor's, and Fitch—are all U.S. companies. *Id.* at 8.

192. IOSCO, IOSCO STATEMENT OF PRINCIPLES REGARDING THE ACTIVITIES OF CREDIT RATING AGENCIES (2003), *available at* www.iosco.org/library/pubdocs/pdf/IOSCOPD151.pdf.

193. *Id.*

194. *See* Karmel & Kelley, *supra* note 26, at 927.

195. *See* REPORT ON THE ACTIVITIES, *supra* note 190 (reporting on the activities of credit rating agencies); IOSCO, CODE OF CONDUCT FUNDAMENTALS FOR CREDIT RATING AGENCIES: ANNEX A (2008), *available at* http://www.iosco.org/library/pubdocs/pdf/IOSCOPD271.pdf (including the code of conduct fundamentals).

196. *See* Karmel & Kelley, *supra* note 26, at 927.

197. Marwan Elkhoury, *Credit Rating Agencies and Their Potential Impact on Developing Countries* 12 (UNCTAD, Discussion Paper No. 186, UNCTAD/OSG/DP/2008/1, 2008).

198. Credit Rating Agency Reform Act of 2006, Pub. L. No. 109-291, 120 Stat. 1327 (2006) (implementing SEC rules that were issued in June 2007).

organization," and "person associated" with an NRSRO.[199] Second, it introduced a new registration procedure for recognition of NRSROs and imposed substantive requirements on NRSROs with respect to misuse of non-public information, conflicts of interest, and anti-competitive or abusive conduct.[200] Third, it amended the Exchange Act, subjecting NRSROs to the SEC's recordkeeping and reporting requirements.[201] This statute, however, did not allow the SEC to regulate "the substance of credit ratings or the procedures and methodologies by which any [NRSRO] determines credit ratings."[202] It also made clear that it did not provide for a private right of action against the rating agency.[203]

In June 2007, the SEC promulgated rules implementing the CRA Reform Act, elaborating on the basic registration requirements for NRSROs and obligations to update registration forms.[204] The rules subjected NRSROs to recordkeeping and annual financial reporting rules,[205] and required NRSROs to establish procedures to prevent the misuse of confidential information and to manage conflicts of interest.[206] Finally, NRSROs were prohibited from certain anti-competitive or abusive practices relating to tying the issuance or level of a credit rating to an issuer's purchase of services or products in addition to the credit rating.[207]

IOSCO continued to tackle the challenges posed by CRAs. In March 2008, IOSCO issued a consultation report on the role of CRAs in structured finance markets, as well as a new Code of Professional Conduct.[208] This new code did not propose any major changes, so the European financial commissioner at the time called it "toothless" and began pushing for EU regulation of CRAs.[209] In reaction to this development, and in response to the financial crisis, IOSCO issued a paper on international cooperation in the oversight of CRAs.[210]

In that paper, IOSCO expressed the view that as more jurisdictions adopt regulations for the oversight of CRAs in response to the financial crisis, regulatory fragmentation

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199. Securities Exchange Act of 1934, Pub. L. No. 73-291, § 3(a)(62), 48 Stat. 881 (1934) (codified at 15 U.S.C. § 78(a)-(Pp) (2009).

200. *Id.* § 15(E).

201. *Id.* § 17(a).

202. Frank Partnoy, *Rethinking Regulation of Credit Rating Agencies: An Institutional Investor Perspective* 6 (San Diego Legal Studies, Paper No. 09-014, 2009), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1430608.

203. *Id.*

204. Application for Registration as a Nationally Recognized Statistical Rating Organization, 17 C.F.R. § 240.17g-1 (2007).

205. Records to be Made and Retained by Nationally Recognized Statistical Rating Organizations, 17 C.F.R. § 240.17g-2 (2007); Annual Financial Reports to be Furnished by Nationally Recognized Statistical Rating Organizations, 17 C.F.R. § 240.17g-3 (2007).

206. Prevention of Misuse of Material Nonpublic Information, 17 C.F.R. § 240.17g-4 (2007); Conflicts of Interest, 17 C.F.R. § 240.17g-5 (2007).

207. Prohibited Acts and Practices, 17 C.F.R. § 17g-6 (2007).

208. *See* IOSCO ROLE OF CRAS, *supra* note 176 (reporting on the role of credit rating agencies in structured finance markets).

209. *See* Tony Barber, *Bloc Turns up Heat on Rating Agencies*, FIN. TIMES, July 8, 2008, at 3; Gillian Tett, *Unease as Regulators Call for More Control over Ratings System*, FIN. TIMES, June 25, 2008, at 25.

210. TECHNICAL COMM. OF THE IOSCO, INTERNATIONAL COOPERATION IN OVERSIGHT OF CREDIT RATING AGENCIES (2009) [hereinafter IOSCO INTERNATIONAL COOPERATION], *available at* www.iosco.org/library/pubdocs/pdf/IOSCOPD287.pdf.

among jurisdictions is of concern.[211] To that end, IOSCO expressed the view that the most effective approach to avoid such fragmentation was to enhance cross-border cooperation among national regulators with powers to inspect and oversee CRAs.[212] Such an approach would allow members to remain primarily responsible for CRA activities that occurred within their jurisdictions, while regulators with concurrent jurisdiction could cooperate on devising regulations and overseeing CRA activities.[213] This approach would also allow regulators to achieve more efficient regulation, streamline the monitoring and surveillance of CRAs by sharing information on CRAs' activities in foreign jurisdictions, and permit a greater degree of cross-border regulatory efficiency, particularly for jurisdictions that might not directly regulate CRAs.[214]

In an effort to facilitate the sharing of information among members, IOSCO's CRA Task Force developed a confidential model examination module for members with examination authority.[215] The module offers a baseline set of information about CRAs that would be of interest to an examiner, thus providing basic guidance on what type of information individual regulators should expect to share with a counterpart.[216] In addition, IOSCO announced that it had converted the CRA Task Force into a permanent standing committee in order to continue to assist securities regulators' effort in overseeing CRAs.[217] The main functions of the Standing Committee are to consider regulatory and policy initiatives regarding CRA activities and to facilitate dialogue between securities regulators and the CRA industry.[218]

In November 2009, the European Union published a regulation requiring the registration and oversight of CRAs.[219] Under this regulation, all EU-established CRAs are required to seek authorization from relevant national authorities, and EU entities may only use the credit ratings issued by such CRAs.[220] A subsequent regulation augmented this regulation in May 2011, which is described below.[221]

The United States then passed Dodd–Frank, which increased the SEC's regulatory responsibilities with respect to CRAs and provided for heightened transparency of rating methodologies in structured and non-structured financial products.[222] Among other

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211. *Id.* at 3.

212. *Id.*

213. *See* Karmel & Kelley, *supra* note 26, at 927.

214. "Possible mechanisms" for carrying out enhanced cross-border cooperation include bilateral arrangements and a college of regulators. *Id.* Bilateral agreements could provide more robust joint oversight of specific CRAs and could be more tailored to address specific regulatory concerns. A "college of regulators," on the other hand, should incorporate certain membership criteria to ensure that the size of the college remains manageable, that the most significant CRA regulators are part of the college, and that all participants are legally able to share information with one another. IOSCO INTERNATIONAL COOPERATION, *supra* note 210, at 4.

215. *Id.*

216. *Id.* at 5.

217. *Id.*

218. *Id.*

219. Commission Regulation 1060/2009, 2009 O.J. (L 302) (EC) (focusing on credit rating agencies).

220. IOSCO, REGULATORY IMPLEMENTATION OF STATEMENT OF PRINCIPLES REGARDING ACTIVITIES OF CREDIT RATING AGENCIES 11 (May 2010), *available at* http://www.iosco.org/library/pubdocs/pdf/IOSCOPD319.pdf.

221. Commission Regulation 513/2011, 2011 O.J. (L 145) (EU), *amending* Commission Regulation 1060/2009, 2009 O.J. (L 302) (EC).

222. Dodd–Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203, §§ 931–939H,

things, Dodd–Frank imposes conflict-of-interest restrictions on CRA boards, prescribes the establishment of internal control structures,[223] attempts to separate sales and marketing from ratings, and imposes new duties on CRA compliance officers.[224] Dodd–Frank directed the SEC to create a new Office of Credit Ratings.[225] In addition, Dodd–Frank sought to drastically reduce the importance of credit ratings in the financial system by requiring the removal of certain statutory references to credit ratings.[226] New liability provisions for CRAs also were set forth.[227]

In February 2011, IOSCO issued its final report on CRAs.[228] This report declared a victory for IOSCO's 2003 principles for CRAs by claiming that "although the structure and specific provisions of CRA regulatory programs may differ, the objectives of the four IOSCO CRA Principles are embedded into each of the programs."[229] In this report, IOSCO compared the implementation of CRA regulation in seven jurisdictions—Australia, Brazil, European Union, Japan, Mexico, Switzerland, and the United States.[230] Despite some of the differences among these countries' regulatory programs and their different stages of implementation, IOSCO felt that all of them had implemented IOSCO principles.[231] The report pointed out differences in each jurisdiction's definition of "credit rating agency," registration requirements, and enforcement authority.[232] For example, while the European Union, United States, and Japan have definitions for "credit rating" and "credit rating agency" that build on each other, Australia defines only "credit rating" while Mexico defines only "credit rating agency."[233] Australia's program compels registration of all CRAs operating in the country, the European Union requires CRAs to register with their home member states, and the United States requires a CRA to be registered as an NRSRO if the agency's ratings are to be used for regulatory purposes.[234]

This effort probably demonstrates that the level of generality of the IOSCO principles is such that implementation discrepancies can be explained away. Yet, it raises a question as to how influential IOSCO is in harmonizing regulations to avoid

124 Stat. 1376 (2010).

223. Securities Exchange Act of 1934, Pub. L. No. 73-291, § 15E(c)(3)(A), 48 Stat. 881 (1934).

224. *Id.* § 15E(j)(2)(B).

225. 15 U.S.C. § 78o-7(p), *as amended by* Dodd–Frank § 932.

226. Dodd–Frank § 939.

227. Section 939G repealed the exemption of rating agencies from liability under section 11 of the Securities Act of 1933 so that NRSRS could be sued as "experts" for statements made in prospectuses and registration statements. But in the first offering to occur after Dodd–Frank was passed, the SEC waived this requirement because the rating agencies refused to consent to be named as experts, and so a $1 billion Ford Motor Credit Company debt offering could not go forward. Ford Motor Credit Company LLC, SEC No-Action Letter (Nov. 23, 2010), *available at* http://www.sec.gov/divisions/corpfin/cf-noaction/2010/ford072210-1120.htm.

228. IOSCO, REGULATORY IMPLEMENTATION OF THE STATEMENT OF PRINCIPLES REGARDING THE ACTIVITIES OF CREDIT RATING AGENCIES (Feb. 2011) [hereinafter REGULATORY IMPLEMENTATION], *available at* http://www.iosco.org/library/pubdocs/pdf/IOSCOPD346.pdf.

229. *Id.* at 3.

230. *Id.*

231. *Id.* at 38.

232. *Id.* at 13–17.

233. REGULATORY IMPLEMENTATION, *supra* note 228, at 13–14.

234. *Id.* at 14–15.

competitive races to the bottom among different jurisdictions. Ironically, the three major CRAs are all U.S. companies,[235] so differential regulations of CRAs is unlikely to prevent them from moving from the United States to other locations, unless the United States were to impose more stringent regulations than other jurisdictions. Rather, what could happen is that other jurisdictions, in particular the European Union, could attempt to break up this oligopoly or set up rival CRAs.

In May 2011, the European Union published a regulation on CRAs, amending its prior regulation that had assigned ESMA the task of registering and regulating CRAs.[236] Although this regulation is similar to Dodd–Frank, in certain ways it goes further in attempting to reform the credit ratings process. Independence requirements for the CRA's boards are specified and the board members must have expertise as well as independence.[237] Their terms are limited to five years. They must identify and eliminate conflicts of interest.[238] Internal control mechanisms must be established. Consultancy or advisory services cannot be provided to issuers undergoing a rating.[239] The possibility that the European Union will take stronger action against the CRAs than the United States is related to the ire the EU Commission and European governments have at the CRAs for their role in the sovereign debt crisis in Europe. CRAs have been castigated for failing to exercise stricter standards with regard to structured finance products and for downgrading, or threatening to downgrade, sovereign debt. EU politicians have even floated the idea of creating a European foundation or agency to counter the dominance of the big three rating agencies.[240] It is more likely that the EU will act to reduce investor reliance on credit ratings, which will mirror provisions of Dodd–Frank requiring U.S. regulators to eliminate references to ratings in their regulations.[241]

In Hong Kong, CRAs are now subject to a new regulatory regime, which became

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235. Moody's is an independent public company listed on the NYSE. Standard & Poor's is a subsidiary of McGraw Hill. Fitch is partly owned by a French parent, but its origin is a U.S. firm. These three firms account for 80% of all ratings. *See* Kathleen L. Casey, Comm'r, SEC, Remarks at the Commission Open Meeting (Dec. 3, 2008), *available at* http://www.sec.gov/news/speech/2008/spch120308klc.htm#P23_2884; *c.f.*, Aline van Duyn & Richard Milne, *Arbiters Under Fire*, FIN. TIMES, July 25, 2011, http://www.ft.com/intl/cms/s/0/a246b0c2-b629-11e0-8bed-00144feabdc0.html#axzz1r7MzuOEg.

236. Commission Regulation 513/2011, 2011 O.J. (L 145) (EU), *amending* Commission Regulation 1060/2009, 2009 O.J. (L 302) (EC).

237. *Id.*

237. *Id.*

239. Commission Regulation 513/2011, Annex III, 2011 O.J. (L 145) (EU), *amending* Commission Regulation 1060/2009, 2009 O.J. (L 302) (EC). The SEC has proposed rules on the supervision, transparency, and integrity of credit ratings. Under the proposed rules, each NRSRO must file an annual report with the SEC on its internal controls; prohibit employees who participate in the NRSRO's sales or marketing from also participating in determining credit ratings; conduct a "look back" review on former employees; publicly disclose additional information on the historical performance of its credit ratings on a uniform basis; and establish standards of training, experience, and competence for credit analysts. Proposed Rules for Nationally Recognized Statistical Rating Organizations, Exchange Act Release No. 64,514 (May 18, 2011), 76 Fed. Reg. 33,423-76 (June 18, 2011).

240. *See Downgrade the Rating Agencies*, FIN. TIMES, Jan. 19, 2012, http://www.ft.com/intl/cms/s/0/b9aaf7b0-4291-11e1-93ea-00144feab49a.html#axzz1tNis9vSA.

241. Dodd–Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203, § 939, 124 Stat. 1885 (2010). Unfortunately, this requirement conflicts with Basel Committee mandates. *See* Jacqui Street, *US Regs: Basel III Conflicts with Dodd–Frank*, GFSNEWS, July 27, 2011, http://www.gfsnews.com/article/2540/1/USr_regs_Bael_III-conflicts-with-Dodd-Frank (identifying conflicts between Basel III and Dodd–Frank).

effective on June 1, 2011.[242] CRAs and analysts who provide rating services in Hong Kong are now required to file registration materials with the SFC.[243] The revised code is based on IOSCO's Code of Conduct Fundamentals for CRAs, and the SFC believes that the new standard in Hong Kong will be consistent with the enhanced standards that have been adopted in a number of other jurisdictions.[244] Also in an attempt to conform to international standards and practices, Singapore MAS put forward, in March 2011, a proposal on the regulation of CRAs.[245] The proposed regulatory regime would add "providing credit rating services" to the list of regulated activity under the Securities and Futures Act, thus requiring CRAs to be licensed.[246] Similar to the regime in Hong Kong, the proposed Singaporean regime also includes a Code of Conduct for CRAs based largely on IOSCO's Code of Conduct.

IOSCO has played the role of both a leader and a follower with regard to the improved regulation of CRAs. Since the two biggest CRAs are U.S. companies, and the third is a U.S. subsidiary of a French company, the regulation of CRAs is necessarily a primary concern of the SEC.[247] Yet the activities of CRAs are worldwide, and Europeans have been at least as unhappy with CRA responsibility for the 2008 financial crisis as U.S. politicians. Although IOSCO has taken its cue from the SEC to some extent in its efforts to advocate better regulation of CRAs, it has sometimes gotten in front of the SEC in promoting new regulatory initiatives. At other times it has followed the SEC and other jurisdictions in articulating new standards.

### C. *Short Sale Regulation*

Regulation of short sales is another politicized topic. "A short sale . . . is a sale of any security the seller does not own or any sale consummated by the delivery of a borrowed security."[248] A former SEC rule prohibited any person from affecting a short sale of any exchange listed security below the price at which the last sale of that security

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242. Press Release, Sec. & Futures Comm'n, SFC Achieves Smooth Transition for Credit Rating Agencies Falling Within New Regulatory Regime (June 2, 2011), *available at* http://www.sfc.hk/sfcPressRelease/EN/sfcOpenDocServlet?docno=11PR63.

243. *Id.*

244. SEC. & FUTURES COMM'N, CONSULTATION CONCLUSIONS CONCERNING THE REGULATORY OVERSIGHT OF CREDIT RATING AGENCIES (2010), *available at* http://www.sfc.hk/sfc/doc/EN/speeches/public/consult/conclusions_cra_eng.pdf.

245. Press Release, Monetary Auth. of Singapore, MAS Consults on Proposal to Regulate Credit Rating Agencies (Mar. 23, 2011).

246. *Id.*

247. *See generally* SEC, SUMMARY REPORT OF COMMISSION STAFF'S EXAMINATIONS OF EACH NATIONALLY RECOGNIZED STATISTICAL RATING ORGANIZATION (Sept. 2011), *available at* http://www.sec.gov/news/studies/2011/2011_nrsro_section15e_examinations_summary_report.pdf.

248. Rule 3b-3 promulgated under the 1934 Act defines the term "short sale" to mean any sale of a security which the seller does not own or any sale which is consummated by the delivery of a security borrowed by, or for the account of, the seller. A person shall be deemed to own a security if (1) he or his agent has title to it; or (2) he has purchased, or has entered into an unconditional contract, binding on both parties thereto, to purchase it but has not yet received it; or (3) he owns a security convertible into or exchangeable for it and has tendered such security for conversion or exchange; or (4) he has an option to purchase or acquire it and has exercised such option; and (5) he has rights or warrants to subscribe to it and has exercised such rights or warrants: Provided, however, that a person shall be deemed to own securities only to the extent that he has a net long position in such securities. 17 C.F.R. § 242.200 (2010).

was reported."[249] "This was known as the 'uptick' rule."[250] The SEC rescinded it in the summer of 2007 because it believed the rule had become unnecessary with decimal pricing and the transparency and surveillance in exchange markets.[251] Further, the widespread availability of options and derivatives had made the rule of questionable utility because it could be so easily evaded by trades in the futures markets. Nevertheless, after the financial crisis was triggered by the collapse of Bear Stearns, and Lehman Brothers began to fail, there was a hue and cry about short sellers, and the SEC responded by prohibiting short sales in financial stocks.[252]

Between July 21 and July 29 of 2007, the SEC restricted short sales in 19 financial stocks.[253] After this emergency order expired, turmoil in the stock market continued, and financial firms claimed that their stocks were being pounded by short sellers. In September 2008, the SEC banned short selling in the stocks of 799 U.S. financial sector companies and later allowed the exchanges to add additional companies to the list.[254] Nearly 1000 stocks went on to this list, including CVS Caremark Corp., International Business Machines Corp., General Motors Corp., and General Electric Corp.[255] The SEC also required hedge fund managers to disclose their short positions publicly, and it announced that this requirement would be made permanent.[256]

The SEC then banned "abusive naked short selling," or short selling by persons who do not actually borrow stock to deliver against a sale and fail to deliver stock to the buyer.[257] By a temporary rule, on September 17, 2008, the SEC required short sellers and their broker–dealers to deliver securities by the close of business on settlement date and imposed penalties for failure to do so.[258] The SEC made this ban permanent in July 2009.[259]

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249. Roberta Karmel, Address at the University of Washington School of Law: Harry Cross Visiting Professor Lecture (Jan. 29, 2009), *available at* http://www.law.washington.edu/Multimedia/2009/karmel/Transcript.aspx?&lang=en_us&output=json. Former rule 10a-1 under the Securities Exchange Act of 1934 was adopted in 1938 to prevent bear raids. Exchange Act Release No. 1,548 (Jan. 24, 1938), 3 Fed. Reg. 213 (Jan. 26, 1938).

250. Karmel, *supra* note 249; *see generally* GERALD T. LINS ET AL., HEDGE FUNDS AND OTHER PRIVATE FUNDS: REGULATION AND COMPLIANCE § 6:21 (Nov. 2011).

251. Regulation SHO and Rule 10a-1, Exchange Act Release No. 55,970 (June 28, 2007), 72 Fed. Reg. 36,348 (July 3, 2007).

252. *See generally infra* notes 253–56.

253. Emergency Order, Exchange Act Release No. 58,166, 93 SEC Docket 2122 (July 15, 2008); *see* Mark Hulbert, *Maybe Short-Selling Isn't So Bad, After All*, N.Y. TIMES, Sept. 28, 2008, http://www.nytimes.com/2008/09/28/your-money/28iht-28stra.16527650.html (noting the ban of short sales on a large number of stocks).

254. Emergency Order, Exchange Act Release No. 58,592, 94 SEC Docket 460 (Sept. 18, 2008); Amendment to Emergency Order, Exchange Act Release No. 58,611, 94 SEC Docket 501 (Sept. 21, 2008).

255. Kara Scannell & Serena Ng, *SEC's Ban on Short Selling Is Casting a Very Wide Net*, WALL ST. J., Sept. 26, 2008, at C1, *available at* http://www.marketwatch.com/story/sec-ban-casts-wide-net-2008-09-25.

256. Emergency Order, Exchange Act Release No. 58,591, 94 SEC Docket 312 (Sept. 18, 2008).

257. The SEC adopted Regulation SHO to replace Rules 3b-3, 10a-1 and 10a-2, seeking to solve the problem of naked short selling. This regulation required short sellers in equity securities to locate securities to borrow before selling and imposed strict delivery requirements. Text of Proposed Regulation SHO, Amendments and Temporary Rule, Exchange Act Release No. 48,709, 2003 WL 22461522 (Oct. 28, 2003).

258. 7 C.F.R. § 242.204T (2008); Emergency Order, Securities Exchange Act Release No. 58,572, 94 SEC Docket 293 (Sept. 17, 2008).

259. Amendments to Regulation SHO, Exchange Act Release No. 60,388, 74 Fed. Reg. 38,266 (July 31, 2009).

Other jurisdictions quickly copied the SEC's bans on short selling.[260] The United Kingdom banned short positions in 34 financial stocks until January 2009, and it required daily disclosure of all net short positions.[261] Other European countries also put in bans.[262] Hong Kong enforced its uptick rule that allowed shorting of shares that had risen in value, and Singapore tightened its rules to discourage naked short selling.[263] Australia banned naked short selling and required disclosure of other short selling.[264]

The SEC's short selling bans were criticized as making a volatile market worse—a "clumsy effort to buoy shares of battered financial stocks."[265] It appears that the SEC's short sale bans cut the volume in the stocks on the no-short-sale list, resulting in wide price swings.[266] Further, despite the bans, stocks including National City Corp. and Sovereign Bancorp Inc. declined sharply, and Washington Mutual Inc. and Wachovia Corp. failed.[267] SEC Chair Christopher Cox later concluded that the SEC's emergency short sale rules were a mistake.[268]

The political pressure around the world to ban or at least mitigate short selling was responded to in a fairly measured way by IOSCO in a paper authored by IOSCO's Technical Committee and issued in June 2009.[269] This paper asserted that short selling plays an important and beneficial role in the market, but it can also contribute to disorderly markets.[270] The Committee does not define "short selling" but believes that it is "more pragmatic to [look at] whether a particular transaction is a short selling activity by looking at the nature of the transaction."[271] If a transaction is a sale of stock that the seller does not own at the point of sale, then the Committee will deem such a transaction a short selling activity.[272] In recognizing that the regulation of short selling varies substantially among its members, the Committee urges a more common approach and recommends that market authorities develop short selling regimes based on the principles described below.[273]

IOSCO formulated four principles for regulating short selling. The first principle

260. James Mackintosh, *Short Shrift*, FIN. TIMES, Oct. 6, 2008, at 10.

261. *Id.*; FIN. SERVS. AUTH., SHORT SELLING (NO. 2) INSTRUMENT 2008 (2008), *available at* http://www.fsa.gov.uk/pubs/other/Short_selling_FAQs_V5.pdf.

262. *See* EUROPEAN SEC. & MKTS. AUTH., UPDATE ON MEASURES ADOPTED BY COMPETENT AUTHORITIES ON SHORT SELLING (Feb. 16, 2012), *available at* http://www.esma.europa.eu/system/files/2011-39.pdf.

263. Mackintosh, *supra* note 260.

264. *Naked Short Selling Not Permitted and Covered Short Selling to Be Disclosed*, AUS. SEC. & INV. COMM'N (Sept. 19, 2008), http://www.asic.gov.au/asic/asic.nsf/byheadline/08-204+Naked+short+selling+not+permitted+and+covered+short+selling+to+be+disclosed?openDocument.

265. Tom Lauricella et al., *SEC Extends 'Short' Ban As Bailout Advances*, WALL ST. J., Oct. 2, 2008, at C1.

266. *Id.*

267. *Id.*

268. Rachelle Younglai, *SEC Chief Has Regrets over Short-Selling Ban*, REUTERS, Dec. 31, 2008, http://www.reuters.com/article/2008/12/31/us-sec-cox-idUSTRE4BU3GG20081231.

269. TECHNICAL COMM. OF THE IOSCO, REGULATION OF SHORT SELLING (June 2009) [hereinafter REGULATION OF SHORT SELLING], *available at* http://www.iosco.org/library/pubdocs/pdf/IOSCOPD292.pdf.

270. *Id.* at 4.

271. *Id.* at 8.

272. *Id.* at 23.

273. *Id.* at 6.

states that "short selling should be subject to appropriate controls to reduce or minimize the potential risks that could affect the orderly and efficient functioning and stability of financial markets."[274] Some jurisdictions already employ a variety of measures and controls designed to counter the risks of short selling.[275] However, the Committee recognizes that not all of these measures are appropriately applicable across borders.[276] To discourage and deter abusive short selling behavior, the Committee instead recommends that regulations impose a strict settlement of failed trades—in other words, outlaw naked short selling.[277]

IOSCO's second principle with regard to short selling is that such "selling should be subject to a reporting regime that provides timely information to the market or to market authorities."[278] While the Committee believes that "regulators should aim to promote appropriate transparency of short selling information to the market," it also recognizes that "information on short selling may mislead the market and [that] increasing transparency might expose short sellers and subject them to [a] potential short squeeze."[279] The Committee thus urges regulators to carefully address the objective of the transparency regime for short sales.[280]

As might be expected, IOSCO'S third principle relates to enforcement. It is that short selling should be subject to an effective compliance and enforcement system.[281] In order to instill settlement discipline and minimize the potential for settlement disruption risk, the Committee believes that there must be strict settlement of failed trades.[282] To do so, the Committee encourages authorities to consider whether they can extend the power to require information from not only persons and entities that are domestically licensed,

274. REGULATION OF SHORT SELLING, *supra* note 269, at 4.

275. *Id.* at 5.

276. *Id.* at 7–8.

277. Some jurisdictions achieve this by compulsory buy-in or closeout, while some impose monetary penalties on market participants. A short settlement cycle can also help reinforce settlement discipline—IOSCO and CPSS recommend a T+3 settlement cycle—and the Committee strongly encourages market authorities to consider implementing these recommendations of strict settlement requirements while taking into account domestic conditions. In addition to strict settlement requirements, other tools that authorities should consider include eligibility criteria for stocks that can be short sold; pre-borrowing or "locate" requirements; price restriction rules; or the "flagging" of short sales. *Id.* at 9–10.

278. *Id.* at 6.

279. REGULATION OF SHORT SELLING, *supra* note 269, at 11.

280. *Id.* at 11–12. Specifically, the Committee recommends regulators to consider these objectives:

> [p]rovide ready access to information on short selling to improve insight into market dynamics; [d]eter market abuse; [m]itigate the potential disorderly market effects of aggressive short selling; [p]rovide early warning signs of build-up of large short positions and alerts to prompt investigation and . . . [p]rovide evidentiary proof that aids in post-event investigation and disciplinary action.

*Id.* at 12. In addition, the Committee discusses and makes recommendations with regard to what should be reported, the frequency and trigger level of reporting, the constituents responsible for reporting, and the recipients of these reports. *Id.* at 12. Finally, with regard to the reporting models—flagging of short sales versus short position reporting—the Committee believes that it may be easier for national market authorities to monitor compliance with the first method because brokers can be held accountable for any failure to report short sales. *Id.* at 12–15.

281. REGULATION OF SHORT SELLING, *supra* note 269, at 16.

282. *Id.*

but also parties suspected of breach that may not be licensed or registered.[283] Furthermore, the Committee encourages cross-border enforcement cooperation using several tools and frameworks that IOSCO has already created and put in place.[284]

As discussed above, the Committee believes that short selling has certain benefits and facilitates market development.[285] Accordingly, IOSCO's fourth principle is that "[s]hort selling regulation should allow appropriate exceptions for certain types of transactions for efficient market functioning and development."[286] The Committee thus envisions a regulatory regime where more flexibility is given to "short selling activities that are critical to the efficient functioning of capital markets and the orderly development of the market for better risk management"—activities such as bona fide hedging, market making, and arbitrage.[287] Although these activities may be exempt from restrictions, the Committee does not believe they should be exempt from reporting requirements and urges authorities to clearly define what falls under exempted activities.[288]

Although enormous political pressure was brought to bear on the SEC to reinstate the uptick rule,[289] the SEC instead adopted a circuit breaker rule that would apply only during a severe price decline in a particular security.[290] The SEC's short sale rule goes into effect on a day when the price of an individual security declines intra-day by 10% or more from the prior day's closing price of that security as determined by the security's listing market.[291] In such an event, the rule imposes an uptick rule for the remainder of the day and the following day prohibiting short sellers from selling at or below the current national best bid while the circuit breaker is in effect.[292] The SEC rejected its own proposal that the uptick rule could be based on the last sale price on the ground that the national best bid is more suitable to today's markets.

Under the rule, broker–dealers must mark all sell orders of an equity security as "long," "short," or "short exempt."[293] Once the circuit breaker has been triggered, a broker–dealer may execute certain "short exempt" sales, but in order to do so, the order must be so marked and the short sale must, at the time of its submission to a trading center, be priced above the national best bid.[294] Further, broker–dealers must establish, maintain, and enforce written policies and procedures that are reasonably designed to

283. Authorities should also use the surveillance data collected from either the flagging of short sales or the short positions reporting methods to analyze and identify potential market abuses and systemic risk. *Id.* at 16–17.

284. *Id.* at 17.

285. *Id.* at 18.

286. REGULATION OF SHORT SELLING, *supra* note 269, at 4.

287. *Id.* at 18.

288. *Id.* at 18–19.

289. Mary Schapiro, President Obama's appointee for Chairman of the SEC, represented in her Senate confirmation hearing that she would quickly examine whether the uptick rule should be restored. Stephen Labaton, *S.E.C. Nominee Offers Plan for Tighter Regulation*, N.Y. TIMES, Jan. 16, 2009, at B3.

290. 17 C.F.R. § 242.201 (2010); *see* SEC Final Rule—Amendments to Regulation SHO, Exchange Act Release No. 34-61595 (Feb. 26, 2010).

291. Amendments to Regulation SHO, 17 C.F.R. pt. 242 (2010), *available at* http://www.sec.gov/rules/final/2010/34-61595fr.pdf.

292. *Id.*

293. *Id.*

294. *Id.*

prevent the incorrect identification of "short exempt" orders.[295] There are certain other limited exceptions to the rule, which include an owner whose delivery is delayed, odd lot transactions, and domestic and international arbitrage transactions. But there is no exception for market making activity.[296] Market centers are required to institute policies and procedures to ensure that orders are not displayed or executed contrary to the rule.[297] These new procedures need to include mechanisms to avoid the display of impermissibly priced sale orders and the display and execution of "short exempt" orders.[298] But if an order is improperly priced, the trading center can re-price it upwards or hold it.

The short sale rule applies only to "covered securities," which generally are securities trading on a national securities exchange.[299] The rule will not apply to non-national market system securities, options, or derivatives. The SEC recognized that parties can obtain a short position through the use of derivative products and such synthetic short positions may undermine the goals for adopting the new short sale rule. But the SEC's former short sale rule did not apply to derivative products, and the SEC lacks the authority to extend the short sale rule to such products if they are financial futures.[300]

The general policies behind the rule are to allow long sellers to sell first in a declining market, to facilitate and maintain stability in the markets and help ensure that they function efficiently, and to help restore investor confidence in times of substantial uncertainty. The narrow reach of the rule demonstrates the SEC's own skepticism as to the merits of a new short sale rule in the face of the SEC's recognition that short selling benefits market liquidity and pricing efficiency. The SEC had already banned naked short selling.[301]

The SEC's actions were consistent with IOSCO's principles and short sale regulations in other jurisdictions. By 2010, many regulators had decided to regulate short selling through disclosure. On March 2, 2010, CESR[302] issued a recommendation to the European Commission to implement a pan-European short selling disclosure regime.[303] As proposed, "[t]he regime will require investors to reveal big short-selling positions to regulators and empower an EU watchdog to ask for sensitive information and temporarily stop short-selling.[304] "EU countries will, however, be allowed veto such a ban."[305] If both parliament and EU member countries reach agreement, the law could be in place by the end of this year. Hong Kong has also announced that it will implement a short

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295. *Id.*

296. 17 C.F.R. pt. 242.

297. *Id.*

298. *Id.*

299. *Id.*

300. *Id.*

301. Kathleen L. Casey, Comm'r, SEC, Statement at Open Meeting Short-Sale Restrictions (2010), *available at* http://www.sec.gov/news/speech/2010/spch022410klc-shortsales.htm.

302. CESR was the Committee of European Securities Regulators, now replaced by ESMA.

303. *CESR Recommends Pan-European Short-Selling Disclosure Regime*, HEDGEWEEK (Mar. 2, 2010 6:26 PM), http://www.hedgeweek.com/2010/03/02/37162/cesr-recommends-pan-european-short-selling-disclousre-regime.

304. John O'Donnell, *EU Countries Back Plans to Tackle Short-Selling*, REUTERS, May 17, 2011, http://www.reuters.com/article/2011/05/17/us-eu-shortselling-idUSTRE74G6XW20110517.

305. *Id.*

position reporting regime.[306] Under the new regulations "[m]arket participants will have to disclose any short position that is equal to or greater than 0.02 per cent of the issued share capital of a listed company, or a market value of HK $30M ($3.8M [USD]), whichever is lower."[307]

Railing against short sellers seems to be shooting the messenger rather than listening to the message, but many observers believe that abusive short selling drove down the prices of financial stocks in 2008. But the problem of leverage in the bull market that preceded the 2008 market collapse was a more serious cause of the financial meltdown than eliminating the uptick rule. Further, there is no way to reinstate a meaningful uptick rule without limiting derivatives on stocks. The AIG credit default swaps debacle[308] demonstrates that a short sale rule for bonds may also be justified if a new short sale rule for stocks is promulgated.

Although IOSCO generally has responded to the financial crisis by recommending principles or standards that increase regulation, in the case of short selling, IOSCO's response was to limit political pressures for either absolute bans on short selling or an uptick rule.[309] Instead, IOSCO opted to recommend disclosure and restrictions on failed trades, which in effect bans naked short selling.[310]

Considering how ineffective the short sale bans were in 2008, regulators in Europe surprisingly re-imposed short sale bans on bank stocks in the summer of 2011, in the midst of the sovereign debt crisis.[311] ESMA implemented the ban in Belgium, France, Italy, and Spain, and some have argued that "short-selling prohibitions [were] better coordinated and more tailored than those imposed after the 2008 collapse of Lehman Brothers."[312] Others sharply criticized the measures as an ineffective waste of resources and a drain on market efficiency.[313] It is worth noting that Germany and the United Kingdom declined to participate in the short selling ban.[314]

As the sovereign debt crisis continues to rage in Europe, the EU has taken steps to make the increased regulation of short selling a permanent fixture in the region's financial markets. At the member-state level, France has extended its ban on short sales in the shares of ten French financial firms, including behemoths Société Générale and BNP Paribas.[315] At the EU level, on November 15, 2011, the European Parliament approved the final text of the Regulation on Short Selling and Certain Aspects of Credit

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306. Robert Cookson, *HK Unveils New Regime on Short Selling*, FIN. TIMES, Mar. 2, 2010, http://www.ft.com/intl/cms/s/0/1517dbae-2624-11df-aff3-00144feabdc0.html#axzz1WWr4Q9lZ.

307. *Id.*

308. *See* FINANCIAL CRISIS INQUIRY, *supra* note 172, at 50–51, 344–45 (describing the credit default crisis swaps).

309. *See generally* REGULATION OF SHORT SELLING, *supra* note 269 (noting the IOSCO's response in the face of widespread political pressure).

310. *Id.*

311. Brooke Masters, *European Short-Selling Ban Comes Under Attack*, FIN. TIMES, Aug. 12, 2011, http://www.ft.com/intl/cms/s/0/763a185e-c4e1-11e0-9c4d-00144feabdc0.html#axzz1WWr4Q9lZ.

312. *Id.*

313. *Id.*

314. *Id.*

315. Press Release, Autorite des Marches Financiers, Extension of the Ban on the Taking of Net Short Positions in Ten French Securities of Financial Sector (Nov. 10, 2011), *available at* http://www.amf-france.org/documents/general/10201_1.pdf.

Default Swaps (the Regulation).[316] The Regulation, subject to formal approval by the EU Council, will come into effect on November 1, 2012.[317] It will introduce restrictions and disclosure requirements on short selling EU shares and sovereign bonds, and it will also prohibit naked or uncovered credit default swaps relating to EU sovereign debt.[318] ESMA will enforce these new restrictions and disclosure requirements.[319]

For the shares of EU corporations, the Regulation requires natural or legal persons to privately notify financial regulators if they accumulate "net short positions" above 0.2% of the issued share capital of an issuer and further notifications at each further 0.1% increment.[320] If such position crosses 0.5%, the investor must publicly disclose its existence and make further public disclosures for each additional 0.1% increment.[321] These disclosures must also include the identity of the person holding the net short position.[322] The Regulation has similar disclosure requirements regarding short positions in the sovereign debt of EU countries; however, the required disclosure is only made to financial regulators and will never become public.[323] The Regulation does not provide criteria for when the disclosure requirement is triggered with regards to sovereign debt as "ESMA shall publish on its website the notification thresholds for each Member State."[324]

The remaining portion of the Regulation institutes a ban on naked short sales involving the shares of EU corporations and EU sovereign debt. The Regulation prohibits a natural or legal person from entering a short sale unless one or more of the following conditions are satisfied:

> (a) the natural or legal person has borrowed the share; or has made alternative provisions resulting in a similar legal effect;
>
> (b) the natural or legal person has entered into an agreement to borrow the share or has another absolutely enforceable claim under contract or property law to be transferred ownership of a corresponding number of securities of the same class so that settlement can be effected when it is due;
>
> (c) the natural or legal person has an arrangement with a third party under which that third party has confirmed that the share has been located and has taken measures vis-à-vis third parties necessary for the natural or legal person

316. Commission Regulation 263/2012, Short Selling and Certain Aspects of Credit Default Swaps Regulation, 2012 O.J. (L 86) (EU), *available at* http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2012:086:0001:0024:en:PDF.

317. *Id.* at 24.

318. *Parliament Seals Ban on Sovereign Debt Speculation and Short Selling Limitations*, EUR. PARLIAMENT (Nov. 15, 2011, 12:26 PM), http://www.europarl.europa.eu/en/pressroom/content/20111115IPR31525/html/Parliament-seals-ban-on-sovereign-debt-speculation-and-short-selling-limitations.

319. *Id.*

320. Commission Regulation 263/2012, Short Selling and Certain Aspects of Credit Default Swaps Regulation, art. 5, 2012 O.J. (L 86) (EU), *available at* http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2012:086:0001:0024:en:PDF.

321. *Id.* at art. 7.

322. *Id.*

323. EUR. PARLIAMENT, *supra* note 318.

324. *Id.*

to have reasonable expectation that settlement can be effected when it is due.[325]

The ban on naked short sales involving EU sovereign debt is identical to the one covering corporate shares except for two important distinctions. First, there has been a textual change to subsection (c), which reads as follows: "the natural or legal person has an arrangement with a third party under which that third party has confirmed that the sovereign debt has been located *or* has otherwise reasonable expectation that settlement can be effected when it is due."[326] The switch from "and" to "or" in subsection (c) provides market participants more freedom to short EU sovereign debt than EU corporate shares. The second difference is a provision allowing suspension of the ban if "liquidity of sovereign debt falls below the threshold determined in accordance with [the Regulation]."[327] These two important differences are likely a response to the fear that a more aggressive short sale ban could erode liquidity in the EU sovereign debt markets if investors felt they were unable to adequately hedge their positions.

The EU, recognizing that "[b]uying credit default swaps without having a long position in underlying sovereign debt . . . can be, economically speaking, equivalent to taking a short position on the underlying debt instrument," has also included a ban on uncovered credit default swaps referencing EU sovereign debt.[328] Under the Regulation, a credit default swap is considered "uncovered" unless it serves as a hedge against:

> (a) the risk of default of the issuer where the natural or legal person has a long position in the sovereign debt of that issuer to which the sovereign credit default swap relates, or
>
> (b) the risk of a decline of the value of the sovereign debt where the natural or legal person holds assets or is subject to liabilities, including but not limited to financial contracts, a portfolio of assets or financial obligations the value of which is correlated to the value of the sovereign debt.[329]

As with the naked short sale ban on sovereign debt, the ban on uncovered credit default swaps can be temporarily suspended if a country's financial authority believes[330]

325. Commission Regulation 263/2012, Short Selling and Certain Aspects of Credit Default Swaps Regulation, art. 12a.1, 2012 O.J. (L 86) (EU), *available at* http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2012:086:0001:0024:en:PDF.

326. *Id.* at art. 12a.1.c (emphasis added).

327. *Id.* at art. 12a.1b.

328. *Id.* at art. 13.

329. *Id.* at art. 4.

330. The Regulation lays out the following criteria for a country's financial regulator to consider when making this determination:

> (a) high or rising interest rate on the sovereign debt;
>
> (b) widening of interest rate spreads on the sovereign debt compared to the sovereign debt of other sovereign issuers;
>
> (c) widening of the sovereign credit default swap spreads compared to the own curve and compared to other sovereign issuers;
>
> (d) timeliness of the return of the price of the sovereign debt to its original equilibrium after a large trade;
>
> (e) amounts of sovereign debt that can be traded.

its "sovereign debt market is not functioning properly and that such restrictions might have a negative impact on the sovereign credit default swap market, especially by increasing the cost of borrowing for sovereign issuers or affecting the sovereign issuers' ability to issue new debt."[331] Once again, the insertion of this provision shows the tension between limiting short selling and ensuring market liquidity.

The discrepancies between IOSCO's recommendations, the U.S. regulation of short selling, and the bans on short selling in Europe demonstrate a failure of international regulation. Where national regulators perceive a strong national interest in a regulatory reaction to a problem in the capital markets, they go their own ways. The global marketplace is then left to cope with inconsistent regulation however it can, either by moving trades to less regulated jurisdictions, or inventing synthetic securities to mimic outlawed transactions. While IOSCO can recommend approaches to problems, it does not have the clout to impose those approaches on jurisdictions that choose to approach the problems differently.

### *D. The Flash–Crash, High Frequency Trading, and Dark Pools*

As regulators scrambled to address the issues surrounding hedge funds, credit rating agencies, and short selling in the wake of the 2008 financial crisis, they were confronted with yet another set of issues stemming from the market events of May 6, 2010, commonly referred to as the "Flash–Crash." On that day, when U.S. stocks were already down five percent, around 2:40 p.m. the market began to plummet.[332] Shares in Proctor & Gamble fell 37%; shares of Accenture slid from $40 a share to trade at one cent.[333] At one point, the Dow Jones average was down 998.50 points—its biggest intraday point drop ever.[334] Eventually the market bounced back to close down 347.80 points, or 3.2%, at 10,520.32.[335] Despite this late recovery, the extreme volatility exhibited during the Flash–Crash compelled regulators to investigate what had caused the extreme price movements.

According to the joint SEC–CFTC Report on the Flash–Crash (the Report),[336] the chain of events that day leading to the crash began at 2:32 p.m. when, in the midst of high volatility and thinning market liquidity, "a mutual fund firm used an algorithm to sell a total of 75,000 E-Mini contracts[337] (worth approximately $4.1 billion) to hedge an

Commission Regulation 263/2012, Short Selling and Certain Aspects of Credit Default Swaps Regulation, art 12b.2, 2012 O.J. (L 86) (EU), *available at* http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2012:086:0001:0024:en:PDF.

331. *Id.*

332. Tom Lauricella & Peter A. McKay, *Dow Takes a Harrowing 1,010.14-Point Trip*, WALL ST. J., May 7, 2010, http://online.wsj.com/article/SB10001424052748704370704575227754131412596.html.

333. *Id.*

334. *Id.*

335. Aline van Duyn et al., *That Sinking Feeling*, FIN. TIMES, June 2, 2010, at 9.

336. SEC & CFTC STAFFS, FINDINGS REGARDING THE MARKET EVENTS OF MAY 6, 2010 (Sept. 30, 2010) [hereinafter MARKET EVENTS REPORT], *available at* http://www.sec.gov/news/studies/2010/marketevents-report.pdf. This report builds upon the initial analyses of May 6 performed by the staffs of the Commissions and released May 18, 2010. SEC & CFTC STAFFS, PRELIMINARY FINDINGS REGARDING THE MARKET EVENTS OF MAY 6, 2010 (May 18, 2010) [hereinafter PRELIMINARY REPORT], *available at* http://www.sec.gov/sec-cftc-prelimreport.pdf.

337. An E-mini is "[a]n electronically traded futures contract on the Chicago Mercantile Exchange that

existing equity position."[338] To execute the trade, the fund employed a sell algorithm that targeted trading volume, without any consideration for price or timing, selling the entire block extremely rapidly in just 20 minutes.[339] This sell pressure was initially absorbed by the market and most notably high frequency traders, which traded nearly "140,000 E-Mini contracts—or over 33% of the total trading volume."[340] Like a runaway train, the sell algorithm responded to the increased volume coming from high frequency traders, and other entities, by increasing the rate at which it fed the orders into the market, even though orders that it already sent to the market were arguably not yet fully absorbed by market participants.[341]

While the Report finds that the mutual fund's massive sale of E-mini contracts via a selling algorithm initially triggered the Flash–Crash, it falls short of singling out any specific cause or set of causes for the extreme market movements observed that day.[342] The Report does acknowledge the role of high frequency trading (HFT), noting that "the automated execution of a large sell order can trigger extreme price movements, especially if the automated execution algorithm does not take prices into account" and that "the interaction between automated execution programs and algorithmic trading strategies can quickly erode liquidity and result in disorderly markets."[343] The Report also notes that the ensuing "sudden decline in both price and liquidity [are] symptomatic" of rapid price movement, such that "fundamental buyers and cross-market arbitrageurs were either unable or unwilling to supply enough buy-side liquidity."[344] Though not directly mentioned in the Report, current SEC Chairperson Mary Schapiro also implicated dark pools as one of the causes of the Flash–Crash, stating that "[t]he continuing growth of trading in dark pools and other types of dark venues can challenge the quality of the market's price-discovery function. And the complexity of the market structure sometimes makes it difficult for even sophisticated investors to pursue their own best interests."[345] Regardless of the specific cause, the Flash–Crash illustrates the inter-connectedness of the derivatives and securities markets, rendering the potential impact of HFT and dark pools under those conditions very broad.[346] Accordingly, in the aftermath of the Flash–Crash, IOSCO and other regulators around the world have set out to address these issues.

represents a portion of the normal futures contracts. E-mini contracts are available on a wide range of indexes such as the Nasdaq 100, S&P 500, S&P MidCap 400 and Russell 2000." *E-mini*, INVESTOPEDIA.COM, http://www.investopedia.com/terms/e/emini.asp#axzz1XlGY8oDZ (last visited June 22, 2012).

338. MARKET EVENTS REPORT, *supra* note 336, at 2.

339. *Id.*

340. *Id.*

341. *Id.* at 3.

342. *Id.* at 2. "The execution of this sell program resulted in the largest net change in daily position of any trader in the E-Mini since the beginning of the year (from January 1, 2010 through May 6, 2010). Only two single-day sell programs of equal or larger size—one of which was by the same large fundamental trader—were executed in the E-Mini in the 12 months prior to May 6." MARKET EVENTS REPORT, *supra* note 336, at 2.

343. *Id.* at 6.

344. *Id.* at 4. "In the four-and-one-half minutes from 2:41 p.m. through 2:45:27 p.m., prices of the E-Mini had fallen by more than 5% and prices of SPY suffered a decline of over 6%. At the same time, cross-market trading firms were purchasing the E-Mini and selling either SPY, baskets of individual securities, or other index products." *Id.*

345. Mary Schapiro, Chairman, SEC, Testimony Before the Subcommittee on Securities, Insurance, and Investment (Mar. 10, 2011), *available at* http://sec.gov/news/testimony/2011/ts031011mls.htm.

346. MARKET EVENTS REPORT, *supra* note 336, at 6.

### *1. Direct Electronic Access*

The Flash–Crash was in some ways similar to the 1987 stock market crash but occurred much more quickly.[347] One development that happened between 1987 and 2010 to cause this increased pace was advancement in trading technology. In the 1990s, with the blessing of regulators around the world, the industry moved rapidly to computerize exchanges.[348] Some brokerage firms created computerized trading systems by which customers could enter orders through their own computers.[349] In 1993, the Integrated Technology Plan was implemented on trading floor networks, computerizing every aspect of trading floor operations.[350] In 1996, NYSE launched real-time stock tickers on CNBC and CNN-FN.[351] The following year, the Wireless Data System allowed brokers to receive orders, access market information, and transmit execution reports from any location on the trading floor.[352] At the same time, the securities industry began trading in increments of sixteenths in 1997 and then went to decimal trading in 2001.[353] Of all these developments, one of the most important is the rise of direct electronic access (DEA) because without it neither HFT nor dark pools would be possible. DEA is defined by IOSCO as a "process by which a person transmits orders on their own (i.e., without any handling or re-entry by another person) directly into the market's trade matching system for execution."[354] The NYSE first offered DEA in 2000 under a pilot program named NYSE Direct+, which has since significantly expanded.[355] DEA is crucial to the Flash–Crash story: first, because it provides HFT trading programs access to the securities markets, and second, because it links the various exchanges where securities are traded.

IOSCO has correctly highlighted DEA as an issue, and published its first report on the topic, *Principles for Direct Electronic Access to Markets* (Final Report), in August 2010.[356] The Final Report was largely a continuation of a February 2009 Consultation Report by the IOSCO Technical Committee that had identified three key elements for consideration in relation to DEA: pre-conditions for DEA; information flow; and adequate systems and controls.[357] Based on the guidance given by the consultation

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347. Scott Patterson, *How the "Flash Crash" Echoed Black Monday*, WALL ST. J., May 18, 2010, at C1.

348. U.S. CONGRESS, OFFICE OF TECH. ASSESSMENT, ELECTRONIC BULLS AND BEARS, U.S. SECURITIES AND MARKETS AND INFORMATION TECHNOLOGY 130 (1990) [hereinafter ELECTRONIC BULLS AND BEARS]; Securities Exchange Act Release No. 27611, 55 Fed. Reg. 1890 (Jan. 12, 1990).

349. ELECTRONIC BULLS AND BEARS, *supra* note 348, at 140.

350. Timeline: Technology, NYSE EURONEXT, http://www.nyse.com/about/history/timeline_technology.html (last visited June 22, 2012).

351. *Id.*

352. NYSE "spent over $1 billion on technology between 1982 and 1995, allowing it to cut order execution time dramatically" and "to handle daily order flows in excess of 1.4 billion shares." Jerry W. Markham & David J. Harty, *For Whom the Bell Tolls: The Demise of Exchange Trading Floors and the Growth of ECNs*, 33 J. CORP. L. 865, 920 (2008).

353. Deborah Lohse, *U.S. Stock Exchanges Vote to Permit Trades of Big Board Stocks in Sixteenths*, WALL ST. J., May 13, 1997, at C18. The SEC's effort to introduce decimal trading was delayed until 2000. For a discussion of the decimal trading requirement imposed by the SEC on the exchanges, see Securities Exchange Act Release No. 42360 (Jan. 28, 2000), 65 Fed. Reg. 5003 (Feb. 2, 2000).

354. IOSCO, PRINCIPLES FOR DIRECT ELECTRONIC ACCESS TO MARKETS, Appendix I (August 2010) [hereinafter DEA PRINCIPLES], *available at* www.iosco.org/library/pubdocs/pdf/ioscopd332.pdf.

355. Timeline: Technology, *supra* note 350.

356. DEA PRINCIPLES, *supra* note 354, at 2.

357. *Id.* at 3.

report, the Final Report sets forth principles for DEA, a key aspect of which is to provide that neither markets nor intermediaries should offer DEA unless adequate pre-trade information is provided, and that both regulatory and financial controls are in place to allow intermediaries to implement appropriate risk limits.[358] The Committee concluded that the need for markets and intermediaries to make available and utilize these automated controls rests on the following basic proposition:

> Whatever level of risk a firm accepts, it must never be infinite. Rather, the risks undertaken must be limited to an appropriate level commensurate with the capital and other financial resources of the firm and the prudent management of both credit risk and any risk to fair and orderly trading. In an automated trading environment, the only controls that can effectively enforce such limits are automated controls.[359]

IOSCO formulated eight principles for DEA arrangements, which it groups into three key areas: pre-conditions for DEA; information flow; and adequate systems and controls.[360] The first principle covers minimum customer standards and provides that intermediaries should require DEA customers: (1) to have appropriate financial resources; and (2) to have "appropriate procedures in place to assure that all relevant persons are familiar with, and comply with, the rules of the market and have knowledge and proficiency in the use of the order entry system used by the DEA customer."[361] Further, market authorities should have rules in place to require the adoption of these standards.[362]

The second principle is that "there should be a recorded, legally binding contract between the intermediary and the DEA customer, the nature and detail of which should be appropriate to the nature of the service provided."[363] Further, "each market should consider whether it is appropriate to have a legally binding contract or other relationship between itself and the DEA customer."[364] The third principle is that the intermediary should retain "ultimate responsibility for all orders under its authority, and for compliance of such orders with all regulatory requirements and market rules."[365] In those jurisdictions where a DEA customer is permitted to sub-delegate its direct access privileges to another party (a sub-delegatee), the intermediary should continue to be ultimately responsible for all orders entered under its authority by the sub-delegatee and should require the sub-delegatee to meet minimum standards set for DEA customers in general. "There should be a recorded, legally binding contract between the DEA customers and the sub-delegatee, the nature and detail of which should be appropriate to the nature of the service provided."[366]

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358. *Id.* at 3–4.
359. *Id.* at 4.
360. *Id.* at 17.
361. DEA PRINCIPLES, *supra* note 354, at 17.
362. *Id.* at 18–19.
363. *Id.*
364. *Id.* at 18.
365. *Id.* at 19.
366. IOSCO, REGULATORY ISSUES RAISED BY THE IMPACT OF TECHNOLOGICAL CHANGES ON MARKET INTEGRITY AND EFFICIENCY (July 2011), *available at* http://markets.theasianbanker.com/assets/media/dl/whitepaper/IOSCO.pdf.

The third principle is related to the fourth principle that "intermediaries should disclose to market authorities upon request and in a timely manner the identity of their DEA customers in order to facilitate market surveillance. In those jurisdictions where sub-delegation is permitted, the intermediary also [should assume] such responsibility to the market authorities with respect to any sub-delegatees."[367] The fifth principle is that "markets should provide member firms with access to relevant pre- and post-trade information (on a real time basis) to enable these firms to implement appropriate monitoring and risk management controls."[368] The sixth, seventh, and eighth principles require a market to ensure the existence of systems and controls "reasonably designed to enable the management of risk with regard to fair and orderly trading" as a condition for DEA trading; require intermediaries to use controls to limit or prevent a DEA customer from placing an order that exceeds a relevant intermediary's existing position or credit limits; and require intermediaries and markets to have "adequate operational and technical capabilities to manage appropriately the risks posed by DEA."[369]

In addition to IOSCO, the SEC has also turned its attention to the issues surrounding DEA, starting with the adoption of Rule 15c3-5 on November 3, 2010.[370] This rule is designed to stop broker–dealers from allowing DEA to customers without any pre-trade supervision, a practice known as "naked access."[371] Under the new rule, broker–dealers must scrutinize customers' credit positions before the trade and stop reckless orders before they are executed.[372]

*2. High Frequency Trading*

DEA allows market participants to submit orders to the trading venue to buy or sell securities by utilizing automated trade matching programs run by exchange intermediaries.[373] At the heart of these programs are algorithms that attempt to match trades in the most efficient way possible.[374] However, arbitrageurs, who are non-exchange intermediaries, employ a different group of algorithms that are designed to profit from market-making type functions in the exchanges' electronic environment.[375] Most of these algorithms profit from buying and selling an exchange's standardized product as quickly as possible,[376] though some algorithms profit from long-term market

367. *Id.*

368. *Id.* at 20.

369. DEA PRINCIPLES, *supra* note 354, at 20–22.

370. 17 C.F.R. § 240.15c3-5(b) (2010).

371. Jonathan Spicer, *Insight: Brokers Point Fingers over "Naked Access" Rule*, REUTERS, Oct. 2, 2011, http://www.reuters.com/article/2011/10/02/us-financial-regulation-risk-idUSTRE7911DR20111002 (noting that it the rule aimed at ending a direct pipeline to exchange).

372. *Id.*

373. *See generally* THOMAS L. HAZEN & JERRY W. MARKHAM, 23 BROKER–DEALER OPERATIONS UNDER SECURITIES AND COMMODITIES LAW § 14:14 (2011).

374. *Id.*

375. Aaron Lucchetti, *Fast Lane: Firms Seek Edge Through Speed As Computer Trading Expands—Tradebot Moves Its Machines into Exchange Buildings; Competitors Follow Suit—100 Million Shares in a Day*, WALL ST. J., Dec. 15, 2006, at A1 (noting that these algorithms are the cornerstone of the DEA competitive advantage).

376. HAZEN & MARKHAM, *supra* note 373, at ch. 9 (2010).

movements.[377] HFT is a type of algorithmic trading that employs highly sophisticated equations designed to conduct trading in rapid and continuing bursts in order to take advantage of the narrowest market disparities.[378] HFT has become widespread, accounting for roughly 50% of trading volume by mid-2009.[379]

Prior to the Flash–Crash, the SEC recognized that HFT presented an array of regulatory issues, including co-location, the risks of naked/sponsored access, and the SEC's means of collecting information about the orders and transactions of large traders that are not necessarily registered broker–dealers.[380] The SEC noted that some high-frequency trades could be executed anonymously on the exchanges, such that retail traders were being excluded from this trading,[381] which could disrupt or cause market problems because the exchanges do not know the identity of the traders.[382] Another worrisome practice that the SEC highlighted were "flash orders," which involve high speed, brief posting of quotes by high frequency traders.[383] Finally, the average computer glitches or "fat-finger" errors at naked access firms could disrupt the entire market.[384]

Though the SEC–CFTC Report did not squarely lay the blame for the Flash–Crash on HFT, it expressly stated that "under stressed market conditions, the automated execution of a large sell order can trigger extreme price movements, especially if the automated execution algorithm does not take prices into account."[385] Furthermore, the Report noted that "the interaction between automated execution programs and algorithmic trading strategies can quickly erode liquidity and result in disorderly markets."[386] One crucial takeaway from the Report is that traders using HFT continued to execute automated algorithms and likely perpetuated the volatile price movements that their algorithms were designed to hedge against and even to profit from.[387] In contrast, traders that were not using HFT paused, slowed down, or refrained from trading altogether during the crash.[388] The Report attributes this difference to data integrity risk, which in the context of a Flash–Crash is better understood as a challenge facing market participants in interpreting what is happening across the exchanges in real-time.[389] Traders that do not utilize HFT are more likely to pause when faced with data integrity risks because they maintain human judgment over trading. While some HFT algorithms attempt to recreate this element of human judgment, the Report amply shows that this is not the case with the majority of automated high frequency algorithms, as most traders

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377. *Id.*

378. *See generally id.* § 14:14.

379. Charles Duhigg, *Stock Traders Find Speed Pays, in Milliseconds*, N.Y. TIMES, July 24, 2009, at A1.

380. Each of which the SEC has discussed in rule proposals or its Concept Release on Equity Market Structure. *See* Exchange Act Release No. 61358 (Jan. 13, 2010); Exchange Act Release No. 61908 (Apr. 14, 2010).

381. Charles Duhigg, *SEC Starts Crackdown on 'Flash' Trading*, N.Y. TIMES, Aug. 15, 2009, at B1.

382. *Report Sees Growth in High-Frequency Trading in Stock Markets*, DEALBOOK N.Y. TIMES, Dec. 14, 2009, http://dealbook.nytimes.com/2009/12/14/38-percent-of-us-trading-now-naked-study-finds/.

383. HAZEN & MARKHAM, *supra* note 373, § 14:14.

384. Jessica Holzer & Kristina Patterson, *SEC Bans 'Naked Access'*, WALL ST. J., Jan. 14, 2010, http://online.wsj.com/article/SB10001424052748703506904575592243789868142.html.

385. MARKET EVENTS REPORT, *supra* note 336, at 68.

386. *Id.* at 9.

387. *See id.* at 5–6.

388. *See generally id.* at 1–8.

389. *See id.* at 76.

using HFT continued to execute trades as the market rode the downward spiral.[390]

The data integrity risks are especially acute with HFT because of its heavy emphasis on speed. Micro—and nano—seconds in transmission time can make a big difference in returns; therefore, HFT operations seek the smallest advantages by doing things such as co-locating with exchange servers to cut down transmission times.[391] The need for speed has also led to the development of services that take news stories and information from social media sites and translate them into data that a HFT algorithm can understand and use to make trading decisions.[392] If the proliferation of these services continues, the role played by humans in trading will continue to decline, potentially creating further systemic risk due to data integrity risk.

After the Flash–Crash, the SEC and FINRA instituted market-wide circuit breakers that apply across all equity trading venues and the futures markets, as none of the circuit breakers previously in place were triggered on May 6.[393] The SEC and FINRA have also indicated that market participants should move toward a more uniform procedure for trading pauses based on different combinations of market signals, as the markets' events show that pausing a market can be an effective way of providing time for market participants to reassess their strategies and for an orderly market.[394] Additionally, rules must be developed to deter market conditions that lead to multiple market participants withdrawing simultaneously, as this can lead to the breakdown of a fair and orderly price-discovery process.[395]

In February 2011, the joint advisory committee to the SEC and CFTC issued recommendations for regulatory responses to the Flash–Crash.[396] The joint committee concurred with the steps the SEC took to create single stock pauses or circuit breakers for the Russell 1000 stocks and actively traded ETFs and to enact rules to determine which trades will be broken when there are multi-stock aberrant price movements.[397] The committee recommended, however, that these pause rules be expanded and adjusted in certain respects.[398] The committee then went on to discuss restrictions on co-location and direct access and urged the SEC to work closely with FINRA and other exchanges with examination responsibilities to develop effective testing of sponsoring broker–dealer risk management controls and supervisory procedures.[399] Further, the committee encouraged the CFTC to prohibit trading and quoting practices that were disruptive of fair and

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390. *See generally* MARKET EVENTS REPORT, *supra* note 336, at 1–8.

391. HAZEN & MARKHAM, *supra* note 373, § 14:14.

392. Tom Steinert-Threlkeld, *Machine-Readable Tweet Streams for Algos Arrive*, SECURITIESTECHNOLOGYMONITOR.COM (Nov. 17, 2011), http://www.securitiestechnologymonitor.com/news/machine-readable-tweet-streams-algo-trading-gnip-29578-1.html.

393. MARKET EVENTS REPORT, *supra* note 336, at 6.

394. *Id.* at 6.

395. *Id.* at 5. The extreme case is where trades are executed at stub-quotes used by market makers to fulfill their continuous two-sided quoting obligations.

396. *See* JOINT CFTC–SEC ADVISORY COMM. ON EMERGING REGULATORY ISSUES, RECOMMENDATIONS REGARDING REGULATORY RESPONSES TO THE MARKET EVENTS OF MAY 6, 2010 (2011) [hereinafter CFTC–SEC ADVISORY COMM.], *available at* http://www.cftc.gov/ucm/groups/public/@aboutcftc/documents/file/jacreport_021811.pdf (recommending a series of 14 responses to the flash crash).

397. *Id.* at 4.

398. *Id.* at 5–6.

399. *Id.* at 7.

equitable trading—in particular, large order algorithms that employ unlimited use of market orders.[400]

An argument could be made that HFT is moving the markets away from their traditional roles of price discovery and value creation for investors and capital formation for America's economy. Because high frequency traders do not have the same market capabilities or opportunities, growth of HFT could be creating a two-tiered market—one for high frequency traders and another for everyone else. As illustrated by the market data integrity risks, the trading during the Flash–Crash had no informational value for price discovery to investors that were not using HFT strategies. More than a year after the Flash–Crash and the CFTC–SEC Report on its causes, HFT continues to be controversial with strong critics and defenders.[401]

### *3. Dark Pools*

A "dark pool" is any pool of liquidity that can be accessed electronically and provides no pre-trade transparency regarding the orders that are received by the pool, while a "dark order" refers to an electronic order that can be automatically executed and for which there is no pre-trade transparency.[402] Some large market participants prefer dark pools because they allow investors to keep orders secret so that other market participants cannot detect large transactions and exploit them.[403]

Dark pools are operated as off-exchange trading venues in the form of electronic communications networks (ECNs). ECNs entered the financial markets as a significant force beginning in the early 1990s. Regulators often refer to ECNs as automated trading systems (ATSs)[404] because they match trades using computers and sophisticated algorithms.[405] Previously, traditional exchanges had employed algorithms for their own trading activities,[406] but trade-matching algorithms became the cornerstone of the development and competitive advantage of ECNs,[407] as major algorithms allow for

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400. *Id.* at 8.

401. *See* Liz Skinner, *Institutional Traders Down on High Frequency Traders*, INVESTMENT NEWS, Sept. 12, 2011, http://www.investmentnews.com/article/20110912/FREE/110919991; *NYSE Executive Calls For Clarity on High-Frequency Trading Controversy*, HUFFINGTON POST BUS., http://www.huffingtonpost.com/2011/09/12/high-frequency-trading-nyse_n_958499.html (last visited June 22, 2012).

402. TECHNICAL COMM. OF THE IOSCO, PRINCIPLES FOR DARK LIQUIDITY (2011) [hereinafter PRINCIPLES FOR DARK LIQUIDITY], *available at* www.iosco.org/library/pubdocs/pdf/IOSCOPD353.pdf.

403. For an example of exploitation, consider an institutional buyer, such as a large pension fund, that wishes to purchase a large amount of stock. Other traders, noticing the increased demand for this certain security due to the pension fund accumulating the position, may buy the stock as well in hopes that the pension fund will continue to buy, and they will be able to sell the stock to the fund at a profit, which effectively raises the price of the security for the pension fund.

404. *See generally* Paul D. Cohen, *Securities Trading via the Internet*, 4 STAN. J.L. BUS. & FIN. 1 (1999) (describing various forms of ECNs).

405. *See* Gerald T. Nowak, *A Failure of Communication: An Argument for the Closing of the NYSE Floor*, 26 U. MICH. J.L. REFORM 485, 485 (1993); *see generally* Lewis D. Solomon & Louise Corso, *The Impact of Technology on the Trading of Securities: The Emerging Global Market and the Implications for Regulation*, 24 J. MARSHALL L. REV. 299 (1991) (describing the effect of technology on trading).

406. "Exchanges typically employ a series of algorithms to address all of the different order issues the exchange may receive. For instance, the algorithms for recognizing user names or uncrossing orders can be applied to all markets exchange wide." Markham & Harty, *supra* note 352, at 902 n.301.

407. *See* COMMODITY FUTURES TRADING COMM'N, TECH. ADVISORY COMM., BEST PRACTICES FOR

anonymity of market users, speed, and liquidity capacity.[408] As detailed in the SEC's 2010 Market Structure Concept Release, ATSs have split into two distinct groups.[409] The distinction between the groups is largely a function of the rules promulgated by the SEC under the national market system (NMS) which Congress created in 1975 to replace the previous fixed commission regime. Under the NMS, exchange members are required to disclose consolidated market data regarding their trades to the market.[410] The following excerpt from the Market Structure Concept Release describes the content of the disclosure and Congress's motive in requiring it:

> [C]onsolidated market data includes both: (1) pre-trade transparency—real-time information on the best-priced quotations at which trades may be executed in the future ("consolidated quotation data"); and (2) post-trade transparency—real-time reports of trades as they are executed ("consolidated trade data"). As a result, the public has ready access to a comprehensive, accurate, and reliable source of information for the prices and volume of any NMS stock at any time during the trading day. This information serves an essential linkage function by helping assure that the public is aware of the best-displayed prices for a stock, no matter where they may arise in the national market system. It also enables investors to monitor the prices at which their orders are executed and assess whether their orders received best execution.[411]

The difference in ATSs revolves around pre-trade transparency. The first group of ATSs report consolidated quotation data for every trade that occurs on the exchange. These ATSs are essentially electronic equivalents to the traditional exchanges and some have grown so big that they seek registration as a stock exchange in order to compete directly with the traditional markets, such as the NYSE, through their electronic facilities.[412] The second group of ATSs, dark pools, do not report consolidated quotation

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ORGANIZED ELECTRONIC MARKETS 5 (2002), *available at* http://www.cftc.gov/ucm/groups/public/@aboutcftc/documents/file/tac_042402_bestpractices.pdf (defining privilege market access as "any rule, policy or processing convention of organized markets that discriminates among classes of market participants when providing any of their services, access to their services or access to market critical information").

408. *See* Markham & Harty, *supra* note 352, at 904 n.304; *see, e.g.*, U.S. FUTURES EXCHANGE, LLC, CFTC TECHNICAL QUESTIONNAIRE, 2 (Sept. 2003), *available at* http://www.cftc.gov/files/submissions/dcodcm/dcm037f.pdf (stating that "Eurex continuously upgrades its trading software, releasing and installing significantly upgraded versions about every fifteen months").

409. Concept Release on Equity Market Structure, Exchange Act Release No. 61358, 75 Fed. Reg. 3594 (Jan. 21, 2010) [hereinafter Market Structure Release].

410. *Id.* at 10.

411. *Id.*

412. *See, e.g.*, Elizabeth M. McCarroll, *Regulation of Electronic Communications Networks: An Examination of Tradepoint Financial Network's SEC Approval to Become the First Non-American Exchange to Operate in the United States*, 33 CORNELL INT'L L.J. 211, 216–17 (2000); Charles C. Cox & Douglas C. Michael, *The Market for Markets: Development of International Securities and Commodities Trading*, 36 CATH. U. L. REV. 833, 840–41 (1987); *see also* Securities Exchange Act Release No. 41666 (July 28, 1999); Markham & Harty, *supra* note 352, at 912. "'Electronic trading' encompasses a wide range of systems that facilitate the entry and execution of orders electronically by algorithms." *Id.* at 902. For a description of algorithmic trading in the futures industry, see Will Acworth, *Algorithmic Trading, Seeking an Edge*, FUTURES INDUS. MAG. 24 (July–Aug. 2007). An algorithm has been defined as a fixed step-by-step procedure for accomplishing a given result—usually a simplified procedure for solving a complex problem, and also a full statement of a finite number of steps. CHARLES J. SIPPL & ROGER J. SIPPL, COMPUTER DICTIONARY AND

data.[413]

The rise in dark pools began with the deregulation of the securities exchanges in 1975. Prior to 1975, dark pools were not possible because maintenance of fixed commission rates came with a constraint prohibiting exchange members from trading exchange-listed securities off the exchange board.[414] In 1975, however, the fixed commission regime ended and so did the ban on off-exchange trading in various situations, opening the door for off-exchange venues such as dark pools.[415]

Another factor that fueled the rise of dark pools was the demutualization of exchanges.[416] The first stock exchange to demutualize was the Stockholm Stock Exchange in 1993.[417] By 1999, of 52 exchanges present at a meeting of the Federation Internationale des Bourses des Valeurs, 15 had demutualized, 14 had member approval to demutualize, and 15 were actively contemplating demutualization.[418] The NYSE did not demutualize until 2005.[419] These changes in stock exchange structure and governance led to cross-border mergers that are still ongoing.[420] This changed model for the secondary trading markets was a response to international competition and competition from off exchange trading venues.

While deregulation and demutualization opened the door for dark pools, one of the chief reasons for their rapid proliferation in the last decade is the SEC's promulgation of Regulation NMS in 2004.[421] Prior to Regulation NMS, institutional investors were able to pursue strategies that kept their orders secret and thus avoid the problem of others exploiting their trade described above.[422] Regulation NMS, however, required registered national exchanges to aggregate as well as publicize all quotes and forced broker–dealers to execute trades at the best price.[423] This Regulation, combined with the move to listing stocks in decimal increments, made cloaking trades on the registered exchanges virtually impossible.[424] Institutional investors, therefore, sought a new way to hide their trades and found it in the form of Regulation ATS. Regulation ATS, enacted in 1998, allowed

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HANDBOOK 23 (2d ed. 1972) [hereinafter COMPUTER DICTIONARY].

413. HAZEN & MARKHAM, *supra* note 373.

414. COMPUTER DICTIONARY, *supra* note 412, at 156.

415. Securities Acts Amendments of 1975, Pub. L. No. 94-29, § 4, 89 Stat. 97, 107–09, *amending* Securities Exchange Act of 1934 § 6(e).

416. "'Demutualization' is a term used to describe the transition of a securities exchange from a mutual association of exchange members operating on a not-for-profit basis to a limited liability, for-profit company accountable to shareholders." Jennifer A. Elliott, *Demutualization of Securities Exchanges: A Regulatory Perspective* 4 (IMF, Working Paper No. 02/119, 2002).

417. MICHAEL GORHAM & NIDHI SINGH, ELECTRONIC EXCHANGES: THE GLOBAL TRANSFORMATION FROM PITS TO BITS 104 (2009).

418. TECHNICAL COMM. OF THE IOSCO, ISSUES PAPER ON EXCHANGE DEMUTUALIZATION 3 (2001).

419. *See Redrawing the Battle Lines*, ECONOMIST, Apr. 30, 2005, http://www.economist.com/node/3915123 (noting that consolidation has caused an uproar on NYSE).

420. *See generally* Roberta S. Karmel, *The Once and Future New York Stock Exchange: The Regulation of Global Exchanges*, 1 BROOK. J. CORP. FIN. & COM. L. 355 (2007) (noting cross-border mergers at the time).

421. Regulation of the National Market System, 17 C.F.R. §§ 242.600–612 (2009) (changing rules for the regulation of the national market system).

422. Regulation of Non-Public Trading Interest, 74 Fed. Reg. 61,208, 61,209 n.4 (proposed Nov. 13, 2009) (to be codified at 17 C.F.R. pt. 242) [hereinafter SEC Dark Pools Rule Proposal].

423. 17 C.F.R. §§ 242.600–612.

424. *See generally* ANDRE E. OWENS & CHRISTIE FARRIS ÖBERG, PRACTISING LAW INSTITUTE: BROKER–DEALER REG. § 18:5.1 (2009).

trading to occur without the disclosure of public quotes so long as trading volume in a particular stock on the ATS did not exceed five percent of the national trading volume in that stock.[425] This loophole, combined with advances in computer technology and trade matching algorithms, allowed dark pools to take off.[426]

Despite this growth, it was challenging for dark pool operators to find counter parties for their customers.[427] In response, dark pools started using indications of interest (IOI) to attract liquidity.[428] IOIs, which did not have to be disclosed under Regulation NMS, "served as notice that a dark pool was attempting to conduct a transaction involving a specific security."[429] This innovation, combined with many large broker–dealers engaging in dark trading,[430] established dark pools as a force to be reckoned with in the global markets.[431]

Even before the Flash–Crash the rise of dark pools caused regulators to worry about market fragmentation, which is the "the existence of multiple, geographically separated forums in which trading in the same security occurs . . . ."[432] Fragmentation can cause inefficiency and, under some conditions, systemic risk in the securities markets because it can disturb the price discovery mechanism of markets by scattering liquidity and order flow among various markets. One undesirable effect of fragmentation is an increase in the bid–ask spread for securities, which was exhibited during the Flash-Crash in spectacular fashion.[433] The SEC recognized these issues prior to the Flash-Crash in its January 2010 Concept Release on Market Structure (Market Structure Concept Release), which raised issues about fragmentation, efficiency, and fairness in the public equity markets in view of high frequency trading, dark pools, direct electronic access, and related matters.[434] In soliciting comments, the SEC asked: "[f]or example, do the high speed and enormous message traffic of automated trading systems threaten the integrity of trading center operations?"[435] Before the SEC even had an opportunity to evaluate the comments it received in response to this question; the Flash-Crash provided a resounding

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425. *See* Regulation Alternative Trading Systems, 17 C.F.R. § 242.300 (2009) (describing the requirements for ATS).

426. By 2007, it was estimated there were 40 such pools being operated. David Bogoslaw, *Big Traders Dive into Dark Pools*, BUS. WEEK ONLINE (Oct. 3, 2007, 12:01 AM), http://www.businessweek.com/print/investor/content/oct2007/pi20071002_394204.htm.

427. Robert Hatch, *Reforming the Murky Depths of Wall Street: Putting the Spotlight on the Security and Exchange Commission's Regulatory Proposal Concerning Dark Pools of Liquidity*, 78 GEO. WASH. L. REV. 1032, 1037 (2010).

428. *Id.*

429. *Id.* at 1038.

430. Many of Wall Street's investment banks sought to perform trades without using public exchanges. Goldman Sachs built the largest dark pool in the country, Sigma-X—and Merrill Lynch and Citigroup also built their own dark pool operations. *Id.*

431. In September 2009, 7.9% of share volume in NMS stocks was in dark pools. Market Structure Release, *supra* note 409, at fig. 6.

432. Junius W. Peake, *Entropy and the National Market System*, 1 BROOK. J. CORP., FIN. & COM. L. 301 (2007) (citing Exchange Act Release No. 14,416, 43 Fed. Reg. 4354, 4354 (Feb. 1, 1978)).

433. Roberta S. Karmel, *A Retrospective on the Unfixing of Rates and Related Deregulation*, *in* REGULATED EXCHANGES: DYNAMIC AGENTS OF ECONOMIC GROWTH 149, 156 (Larry Harris ed., 2010).

434. *See generally* Market Structure Release, *supra* note 409 (requesting comments from market participants).

435. *Id.* at 31.

"Yes."

Dark pools raise a number of regulatory concerns beyond market fragmentation. The first concern is that, by hiding information from the public, they can harm the integrity of public price quotes because investors do not know if they are getting the best price for their transactions.[436] A second concern is the dark pools could attract enough liquidity out of traditional exchanges to make it harder and more expensive for retail investors to trade.[437] The IOSCO Technical Committee has expressed the view that pre-trade transparency is a key element of the price discovery process and that it was concerned about free-rider problems when dark orders and dark pools do not contribute to pre-trade price discovery.[438] According to the Technical Committee, dark pools' lack of pre-trade transparency leads to information fragmentation problem, and when a jurisdiction has multiple dark pools, it faces the possibility that post-trade information may not be consolidated with post-trade information from other venues.[439]

Although the use of dark pools is most pronounced in the United States and Europe, other regions could also experience dark pool growth driven by the same elements that drove growth in the United States and Europe, such as innovative execution platforms and the search for low-cost, low-impact executions.[440] Jurisdictions differ in their regulation of dark pool operators—for example, some are regulated as exchanges, some are subject to registration requirements for investment dealers, and some are regulated as an intermediary.[441] Dark orders, on the other hand, are subject to regulations akin to those for displayed orders, but are not subject to pre-trade transparency requirements.[442] According to IOSCO, regulators agree that transparency is a core element in achieving fair, orderly, and efficient markets, but they approach transparency in different ways.[443] The United States and Canada, for example, encourage transparency by giving transparent orders time priority over dark orders that are at the same price level within a trading venue.[444] As markets become increasingly fragmented and complex, IOSCO believes that regulators should ensure that pre-trade information is available to markets, while being aware that the costs of pre-trade transparency is of concern to professional investors.[445] With respect to post-trade transparency, most jurisdictions require information about trades executed in dark pools to be published immediately, although the nature of the information that is disseminated to the public varies across

436. Keith Fitz-Gerald, *Are "Dark Pools" Destined to Be the Capital Markets' Next Black Hole?*, MONEYMORNING.COM (July 10, 2008), http://www.moneymorning.com/2008/07/10/dark-pools/.

437. *Id.*

438. PRINCIPLES FOR DARK LIQUIDITY, *supra* note 402, at 19. The regulatory frameworks that are used to protect the integrity of the price discovery process include: "ensuring transparent orders receive execution priority over dark orders; ensuring dark pools provide price improvement over the National Best Bid/Offer to small orders; ensuring limited scope for waivers to pre-trade transparency; referencing prices within the dark pools to those of the national exchange; and trade through protection." *Id.* at 20–21. As for information received post-trade, regulatory initiatives may be needed to improve the accuracy of information available. *Id.* at 21.

439. *Id.* at 20.

440. *Id.* at 11.

441. PRINCIPLES FOR DARK LIQUIDITY, *supra* note 402, at 14.

442. *Id.* at 15.

443. *Id.*

444. *Id.* at 16.

445. *Id.*

jurisdictions.[446] Also, most jurisdictions require trades executed on dark pools to be reported to regulators, although the nature of the information that is reported varies. Some reporting is done on a real-time basis, while other jurisdictions require reporting at the end of the day or at the end of the quarter.[447]

In May 2011, IOSCO published its Final Report on Principles for Dark Liquidity.[448] This report focused on transparency and price discovery, fragmentation, knowledge of trading intentions, fair access, and the ability of market players and regulators to assess actual trading volume in dark pools.[449] The expanded use of dark liquidity and dark pools is an innovation that developed as a result of the increased competition among trading venues that provide liquidity for equity securities.[450] Transparency in trades, however, suffered as a result of the increased use of dark liquidity. While IOSCO has long held the belief that market transparency is vital to the fairness and efficiency of a market, it also recognizes that transparency may lead to disincentives for those who have financial interests in larger trades.[451] Accordingly, IOSCO has previously urged regulators to assess the appropriate level of transparency and to develop transparent regimes that are coherent across all venues.[452]

The Technical Committee also raised concerns about fairness and market integrity.[453] As IOSCO has always called for fair access to markets and trading opportunities, the Technical Committee expressed its concern that dark pools might unfairly deny certain participants access because access to dark pools is often restricted.[454] To ensure fair price discovery, all similarly situated market participants should have equitable access to trading information on a reasonable and non-discriminatory basis, but dark pools compromise this principle.[455] Finally, the Technical Committee expressed concerns about market participants' lack of information about the operations of dark pools and dark orders, which may result in market participants making uninformed trading decisions and ultimately in a lack of confidence in the market.[456]

In view of these regulatory problems, IOSCO drafted principles on dark pools and dark orders that are designed to minimize the adverse impact on the price discovery process; mitigate the effect of potential fragmentation of information and liquidity; ensure regulators have access to adequate information to monitor the use of dark pools and dark orders; ensure that investors have sufficient information to understand how orders are handled and executed; and increase the monitoring of dark orders and dark pools to facilitate an appropriate regulatory response.[457] The principles are divided into five topics: transparency to market participants and issuers; priority of transparent orders; reporting to regulators; information available to market participants; and regulation of the

446. PRINCIPLES FOR DARK LIQUIDITY, *supra* note 402, at 17–18.
447. *Id.* at 19.
448. *See generally id.* (noting concerns about dark trading).
449. *Id.* at 2.
450. *Id.* at 4.
451. PRINCIPLES FOR DARK LIQUIDITY, *supra* note 402, at 6.
452. *Id.* at 6–7.
453. *Id.* at 21–24.
454. *Id.* at 21–22.
455. *Id.* at 22.
456. PRINCIPLES FOR DARK LIQUIDITY, *supra* note 402, at 22.
457. *Id.* at 24.

development of dark pools and dark orders.[458]

The first principle is that the price and volume of firm bids and offers should generally be transparent to the public.[459] The second principle is that information regarding trades should be transparent to the public.[460] Thirdly, where relevant, regulators should support the use of transparent orders rather than dark orders executed on transparent markets or orders submitted into dark pools.[461] Also, regulators should have access to information regarding orders and trade information in venues that offer trading in dark pools or dark orders. Regulators should ensure that entities that deal with anything deemed "dark" "provide market participants with sufficient information so that they are able to understand the manner in which their orders are handled and executed. Finally, regulators should periodically monitor the development of dark pools and dark orders in their jurisdictions . . . " to ensure "efficiency of the price formation process on displayed markets."[462]

In addition to IOSCO, the SEC and CFTC have issued recommendations concerning dark pools in their joint report on the regulatory response to the Flash–Crash. In regards to dark pools, the rising proportion of equity transactions that trade without any public display of liquidity prompted the SEC–CFTC Committee to encourage the SEC and CFTC to consider incentives to supply liquidity, especially in turbulent markets.[463] Similarly, the committee recommended the development of incentives or regulation for persons who implement market maker strategies to maintain best buy and sell quotations that are reasonably related to the market,[464] although this recommendation stopped short of recommending market maker obligations. The committee also focused on internalization, pointing out that one-third of share volume is executed on dark trading venues.[465] Therefore, the SEC should conduct further analysis as to the impact of a broker–dealer maintaining privileged execution access as a result of internalizing customer orders and imposing obligations on such broker–dealers with respect to these order executions.[466] Also, the committee recommended that the SEC study the costs and benefits of alternative routing requirements to Regulation NMS rules.[467] Both the SEC and CFTC were urged to consider reporting requirements for measures of liquidity and market imbalance for large market venues.[468] Finally, the committee recommended that

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458. *Id.* at 25–32.

459. "However, where regulators consider permitting different market structures or order types that do not provide pre-trade transparency, they should consider the impact of doing so on price discovery, fragmentation, fairness and overall market quality." TECHNICAL COMM. OF IOSCO, ISSUES RAISED BY DARK LIQUIDITY CONSULTATION REPORT (Oct. 2010), *available at* http://www.iosco.org/library/pubdocs/pdf/IOSCOPD336.pdf ?&lang=en_us&output=json.

460. This includes information on trades executed in dark pools or as a result of dark orders entered in transparent markets. Regulators should consider both positive and negative impacts of identifying a dark venue and/or the fact that the trade resulted from a dark order.

461. Transparent orders should have priority over dark orders at the same price within a trading venue.

462. IOSCO TECHNOLOGICAL CHANGES, *infra* note 470; PRINCIPLES FOR DARK LIQUIDITY, *supra* note 402, at 22.

463. CFTC–SEC ADVISORY COMM., *supra* note 396, at 10–11.

464. *Id.*

465. *Id.* at 11.

466. *Id.* at 12.

467. *Id.* at 13.

468. CFTC–SEC ADVISORY COMM., *supra* note 396, at 14.

the SEC proceed with some urgency to implement a consolidated audit trail for the U.S. equity markets and that the CFTC also enhance its data collection.[469]

### 4. *Recent Developments and Outlook Moving Forward*

Debates about market structure are likely to continue in the wake of the Flash–Crash and public criticism of HFT on a U.S. domestic and international level. IOSCO is fostering further debate through its Consultation Report on Regulatory Issues Raised by the Impact of Technological Changes on Market Integrity and Efficiency, which it published in July 2011.[470] This report was in response to a direction for reform from the G-20 to develop and report to the FSB "recommendations to promote markets' integrity and efficiency and to mitigate the risks posed to the financial system by the latest technological developments."[471] The purpose of the report is to build on the papers the IOSCO previously issued covering market structure, which this Article previously discussed, and specifically to seek comments on HFT.[472]

For purposes of its report, the Technical Committee put forth two important definitions. It defined "market integrity" as "the extent to which a market operates in a manner that is, and is perceived to be, fair and orderly and where effective rules are in place and enforced by regulators so that confidence and participation in the market is fostered."[473] "Market efficiency" is defined as "the ability of market participants to transact business easily and at a price that reflects all available market information" and is determined using factors such as "liquidity, price discovery and transparency."[474] Further, the report asserts that financial markets should fulfill their role of "financing the real economy, by channeling investments and savings, facilitating capital formation and efficiently allocating and transferring risk."[475] The Technical Committee then focuses on the most important technological changes in the trading markets: algorithmic trading, market fragmentation and dark liquidity, DEA, co-location, tick sizes, and fee structures.[476] It notes that high frequency traders provide liquidity to the markets, but discourage some market participants from using the market and contributing to the transmission of stocks across trading venues.[477] As a result, fundamental investors may withdraw from the market.[478]

Due to the level of concern emanating from the Flash–Crash, policy makers have put HFT at the top of the policy agenda.[479] Although HFT and all of the related problems arising from the technological changes this Article discusses are primarily the focus of

469. *Id.*

470. *See generally* TECHNICAL COMM. OF IOSCO, REGULATORY ISSUES RAISED BY THE IMPACT OF TECHNOLOGICAL CHANGES ON MARKET INTEGRITY AND EFFICIENCY CONSULTATION REPORT (July 2011) [hereinafter IOSCO TECHNOLOGICAL CHANGES], *available at* http://www.iosco.org/library/pubdocs/pdf/IOSCOPD354.pdf (analyzing HFT).

471. *Id.* at 6.

472. *Id.* at 7.

473. *Id.* at 8.

474. *Id.*

475. IOSCO TECHNOLOGICAL CHANGES, *supra* note 470, at 9.

476. *Id.* at 10.

477. *Id.*

478. *Id.* at 12.

479. *Id.* at 19.

market regulators in the United States and Europe, regulators in India, Australia, and Canada have also focused on these matters.[480] The Technical Committee acknowledges that HFT cannot be defined as any one strategy, but finds that most of the strategies are based on profiting from very small price changes and rapid capital turnover.[481] The Technical Committee states that HFT falls into three broad categories: market making, arbitrage, and directional.[482] As for the effects of HFT, the Technical Committee asserts that the empirical evidence on the impact of HFT is scarce, but the available evidence fails to uncover a consistent and significant negative effect on liquidity. Yet, the quality of that liquidity is of concern.[483] Further, HFT may have had an adverse impact on confidence in the fairness and integrity of markets.[484] It also appears that HFT may result in extreme price shocks that the market easily transmits.[485]

The Technical Committee noted some regulatory initiatives taken by the SEC, (proposals for a consolidated audit trail and larger trader reporting), the European Commission (review of MiFID with regard to HFT and other matters), and the ASIC in Australia (proposals on DEA, risk controls for automated trading, volatility controls, and pre-trade transparency).[486] It also noted its own prior reports relating to market structure and the principles set forth, many of which this Article discussed.[487] Some possible future actions for the regulation of trading firms, market operators, and market structure were also set forth.[488] The Technical Committee then posed fourteen questions of its members regarding the extent of the risks to market integrity and efficiency from HFT and other technological developments in the trading markets and how to prioritize steps to mitigate those risks.[489] The comments from industry members to the questions posed by the Joint SEC–CFTC Advisory Committee in their report were in large part negative.[490] Whether IOSCO members will respond differently to the questions posed by the Technical Committee remains to be seen.

More recently, there have been several signs that regulators are making moves to address the issues surrounding HFT and dark pools. In regards to HFT, one idea that has gained traction in a number of countries is the imposition of a financial transaction tax.[491] France has moved quickest on this idea, with its Senate approving a bill on November 22, 2011, that would apply a transaction tax to market participants "in cases where daily cancellation rates for orders for buying and selling financial instruments on public

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480. IOSCO TECHNOLOGICAL CHANGES, supra note 470, at 20. HFT accounts for 56% of the trading in the United States, for 38% in Europe, and for 10–30% in Asia. *Id.* at 22.

481. *Id.* at 23.

482. *Id.* at 23.

483. *Id.* at 27.

484. IOSCO TECHNOLOGICAL CHANGES, *supra* note 470, at 24–27.

485. *Id.* at 29.

486. *Id.* at 32–33.

487. *See id.* at 31–37, annexes 1–4.

488. *Id.* at 38–40.

489. IOSCO TECHNICAL CHANGES, *supra* note 470, at 41–42.

490. *Id.* at 27.

491. *See* Dave Crisant, *A Financial Transaction Tax Could Weed out All the Pointless Trading*, BUS. INSIDER (Jan. 4, 2012), http://articles.businessinsider.com/2012-01-04/markets/30587803_1_trading-volume-high-frequency-trading-yakov-amihud#ixzz1taRC3utk.

markets exceed 50%."[492] The European Union has brought forth a proposal to tax trades in stock and bonds at .1% and trades in derivatives at .01%.[493] Despite push back from financial interests, the EU Parliament has urged that such a tax be passed.[494] A similar proposal has been made in the U.S. Congress, with Senator Tom Harkin and Representative Peter DeFazio co-sponsoring a bill that would tax all financial transactions at .03%.[495] A financial transaction tax of the type that have been proposed would make HFT impossible because the very small profits that are made on each trade would be wiped out after the trade tax was assessed.[496] Fearing the loss of profits generated by HFT, certain members of the securities industry have voiced strong opposition to any such tax. In particular, Bill Brodsky, chief executive of the Chicago Board Options Exchange, has lauded HFT for brining cheaper and more efficient financial trading to all market participants.[497] According to Brodsky, "[t]o say [HFT] causes volatility is completely erroneous . . . [t]he flash crash was an aberration. The regulators forced changes on the markets and didn't understand all the consequences. The only effect HFT has had has been to make markets fast, cheap and liquid."[498]

Another idea is to install "limit up, limit down" trading mechanisms.[499] On May 25, 2011, NYSE Euronext, on behalf of a large number of U.S. stock exchanges, submitted a plan to the SEC entitled National Market System Plan to Address Extraordinary Market Volatility.[500] The proposed procedures "specify market-wide limit up-limit down requirements designed to prevent trades in individual national market system stocks from occurring outside specified price bands."[501] These procedures would be coupled with trading pauses to accommodate more fundamental price moves, as opposed to erroneous trades or gaps in liquidity that are momentary.[502]

While there has been significant attention paid to HFT, regulators have done little to address the issues surrounding dark pools. One notable exception to this is the SEC's first enforcement action concerning a dark pool, brought against Pipeline Trading Systems LLC.[503] The action, which was settled by the company for $1.2 million, alleged "that the firm was running a secret affiliate that sought to trade ahead of customers' orders before

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492. Ulrika Lomas, *French Senate Approves Automated Transactions Tax*, TAX-NEWS.COM, Nov. 23, 2011, http://www.tax-news.com/news/French_Senate_Approves_Automated_Transactions_Tax____52605.html.

493. Joshua Chaffin, *Business Lashes out at Trading Tax Plans*, FIN. TIMES, Sept. 29, 2011, at 1.

494. *See Push Ahead with Financial Transaction Tax, MEPs Urge*, PUBLIC SERVICE EUROPE, May 23, 2012, *available at* http://www.publicserviceeurope.com/article/1971/push-ahead-with-financial-transaction-tax-meps-urge.

495. Phil Mattingly, *U.S. Lawmakers Outline Financial-Transaction Tax Proposal*, BLOOMBERG BUSINESSWEEK, Nov. 8, 2011, http://www.businessweek.com/news/2011-11-08/u-s-lawmakers-outline-financial-transaction-tax-proposal.html.

496. *Id.*

497. Hal Weitzman, *Brodsky Slams 'Absurd' HFT Curbs*, FIN. TIMES, Oct. 4, 2011, at 24.

498. *Id.* (quoting Bill Brodsky).

499. Press Release, SEC, SEC Announces Filing of Limit up-Limit down Proposal to Address Extraordinary Market Volatility (Apr. 5, 2011), *available at* http://www.sec.gov/news/press/2011/2011-84.htm.

500. Joint Industry Plan, Securities Exchange Act Release No. 64547, 76 Fed. Reg. 31647 (May 25, 2011).

501. *Id.*

502. *Id.*

503. Jacob Bunge, *'Dark Pool' Settlement Shines Light on Potential Abuses*, WALL ST. J, Oct. 25, 2011, http://online.wsj.com/article/SB10001424052970204777904576651111404462184.html.

filling 'a vast majority'" of them on the private market."[504]

Another reform, proposed by the SEC, is the development of a consolidated audit trail.[505] This proposal aims to address the issues surrounding both HFT and dark pools by providing the SEC a real-time data feed of detailed market activity.[506] Currently, the SEC must rely on data from FINRA, exchanges, and firms, such as mutual funds and bank-trading desks, to track the market.[507] Further, the SEC is unable to track a large amount of trading every day.[508] Additionally, as was the case with the Flash–Crash report, the lack of a central repository for data can lead to significant delays in diagnosing what went wrong after an irregular market event. With a consolidated audit trail, the SEC would be able to directly monitor the market, reducing the negative effects of the current information asymmetry.

The Flash–Crash exposed serious dysfunction and risk in the trading markets, but it seems that the regulators thus far do not have the knowledge or backbone to take serious actions to mitigate these problems, especially in the face of industry opposition. Further, the securities industry has conflicts of interest with regard to these matters. Will IOSCO, as an international body, be able to generate reforms that the SEC, CFTC, and other national regulators are unwilling or unprepared to undertake? The answer to this question may depend in part upon what further pressure the G-20 brings to bear on IOSCO.

## IV. IOSCO'S ROLE IN INTERNATIONAL HARMONIZATION

Although many agencies are involved in international harmonization of financial regulation, and they have all been active in promulgating new standards in the wake of the 2008 financial crisis, IOSCO is the only organization specifically devoted to securities regulation. Also, it is the only organization that includes all or virtually all of the world's securities commissions. IOSCO is devoted to establishing harmonized international standards for the regulation of securities issuances and trading, but because it includes both developed and emerging marketplaces in its constituency, it is able to formulate only very general standards for all of its members. Although the Technical Committee is comprised of the mature capital market regulators, IOSCO is also hampered in developing rigorous international standards for those markets by the size and variety of the members of the Technical Committee, the different corporate finance structures in the countries of the Technical Committee, and rivalries among these countries and their regulators for primacy in the capital markets. The danger of a race to the bottom is always a threat to the effort by some jurisdictions, especially the continental countries of the European Union and the United States, to establish stricter regulatory standards. Further, many of the serious threats to market stability, such as fragmented markets and HFT, have emerged first in the United States, and then spread only later, if at all, to other marketplaces, so only a few of IOSCO members are even interested in

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504. *Id.*

505. Consolidated Audit Trail, Securities Exchange Act Release No. 34-62174 (proposed May 26, 2010) (to be codified at 17 C.F.R. pt. 242).

506. *Id.*

507. Scott Patterson, *SEC Pushes Plan for Audit Systems*, WALL ST. J., Sept. 21, 2011, http://online.wsj.com/article/SB10001424053111904491704576574883908453622.html.

508. *Id.*

developing harmonized standards to deal with these threats. Further, the political situation in the United States since the 2008 meltdown, and in Europe since the sovereign debt crisis, makes it very difficult for securities regulators to agree upon new measures to counter systemic threats.

Governments generally, and regulators particularly, are frequently fighting the last war. This Article has outlined some of IOSCO's initiatives in that regard, such as the regulation of hedge funds, CRAs, and short selling. Even with regard to these matters, there is a general agreement that hedge funds and CRAs should be subject to registration with securities authorities and better regulation, but there has not been agreement about what that better regulation should be. The IOSCO principles on short selling did not recommend short selling bans, but rather prohibitions on naked short selling and disclosure. Nevertheless, in the summer of 2011, several European countries imposed bans on the short selling of bank stocks. These bans probably were ineffective in curtailing the decline of the price of bank stocks except very temporarily.[509] National politics in this case trumped harmonization.

In the case of new and ongoing systemic threats, IOSCO seems unlikely to put a damper on DEA, dark pools, and HFT. Since the most advanced examples of these trading strategies are taking place in the United States, if the SEC or other U.S. regulatory agencies are unable to curb these threats to the public trading markets, it is unlikely that IOSCO will be able to do so. Where many regulators, particularly securities commissions represented in the Technical Committee, agree upon standards, then harmonization by IOSCO is possible. Even then, however, since any new standards must be implemented on a country-by-country basis, and primarily in countries with notice and comment procedures, standards that are strongly opposed by the securities industry may well not be implemented. In the United States, even where a controversial standard is put into place by a regulatory agency, a court challenge is always possible. Further, because IOSCO only establishes standards and does not enforce these standards, implementation of agreed upon standards may vary.

IOSCO has long been amenable to leadership by the SEC, but the SEC is currently under political attack by the left and the right. Although the agency survived under Dodd–Frank and even greatly increased its authority, especially with respect to some of the matters discussed in this Article, such as hedge fund and CRA regulation, its power has been eclipsed to some extent by the FSOC and the banking agencies. Just as the SEC must now pay attention to the Federal Reserve Board, IOSCO is to some extent subservient to the G-20. Although IOSCO has responded to the financial crisis by expanding its horizons and focusing on financial stability, it is not as important a player in the league of international financial regulators as others.

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509. *See* Jennifer Hughes, *Short Sellers Remain Calm Despite Bans*, FIN. TIMES, Aug. 23, 2011, http://www.ft.com/intl/cms/s/0/fbb599e2-c8e0-11e0-aed8-00144feabdc0.html#axzz1rHsqvxFC; James Mackintosh, *The Short View*, FIN. TIMES, Aug. 26, 2011, at 15.

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