48 World Scientific Studies in International Economics

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Analyzing the Cumulative Impact of Regulatory Reform

Douglas D. Evanoff, Andrew G. Haldane, and George G. Kaufman, Editors

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Securities Regulation During and After the 2008 Financial Crisis

— Chapter 9

- Jennifer E. Bethel and Erik R. Sirri

Babson College, USA and the US Securities and Exchange Commission

During the 2008 financial crisis, a number of issues surfaced for the SEC, including (1) heavy shareholder redemptions in money market funds that threatened the liquidity of the short-term funding markets, (2) a broad-based mistrust of credit rating agencies and skepticism towards credit ratings based on poor rating performance, especially the ratings of structured products, (3) a falling market amidst heavy short selling, coupled with vocal appeals to impose restrictions and bans on short selling, and (4) failing short- and long-term funding of large broker-dealer holding companies. We examine the regulatory response of

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the SEC during and after the financial crisis. We also discuss the limits of the SEC's regulatory authority and the resulting effectiveness of its regulatory responses.

Introduction

The 2008 financial crisis prompted widespread debate about how the US government should regulate its financial markets. Beyond efforts to resolve the immediate crisis, policymakers have sought to increase the resiliency of the markets and institutions and reduce the likelihood of future similar events. At the heart of these efforts are the initiatives of a number of regulatory agencies that Congress has charged with adopting, implementing, and enforcing rules that regulate the financial markets. Among these agencies is the US Securities and Exchange Commission (SEC).

During the 2008 financial crisis, a number of issues surfaced for the SEC, including (1) heavy shareholder redemptions in money market funds (MMFs) that threatened the liquidity of the short-term funding markets, (2) a broad-based mistrust of credit rating agencies and skepticism towards credit ratings based on poor rating performance, especially the ratings of structured products, (3) a falling market for the shares of financial firms amidst heavy short selling, coupled with vocal appeals to impose restrictions and bans on short selling, and (4) failing short- and long-term funding of large broker-dealer holding companies. In this paper, we examine the regulatory changes undertaken by the SEC during and after the financial crisis to address these issues, including MMFs, credit rating agencies (CRAs), the short selling rules, and the net capital regime for large broker-dealers. We then discuss limits to the SEC's statutory authority and its largely disclosure-focused toolkit and examine the resulting effectiveness of its regulatory responses.

The mission of the SEC, as defined by Congress, is to protect investors, maintain fair, orderly, and efficient markets, and to promote competition, efficiency, and capital formation.[1] Although the SEC oversees

[1] See US Securities and Exchange Commission (2014) and Section 106, National Securities Markets Improvement Act of 1996, 110 Stat. 3416, Public Law 104–290, October 11, 1996.

the financial markets, which is where firms whose cash flows are inherently risky raise capital from investors at large, Congress does not provide the SEC with an explicit mandate to manage systemic risk or guarantee the continuing financial viability of issuers or institutions. Instead, Congress passed the Securities Act of 1933 and the Securities Exchange Act of 1934, which require the SEC to promote full public disclosure of company information and to protect the investing public against fraudulent and manipulative practices in the securities markets. In addition, the Securities Exchange Act sets forth a regulatory regime for broker-dealers that has certain prudential aspects.[2] In 1940, Congress passed the Investment Company Act of 1940 to address conflicts of interest that arise in mutual funds. "The focus of this Act is on disclosure to the investing public of information about the fund and its investment objectives, as well as on investment company structure and operations."[3] To fulfill its mission, the SEC often resolves conflicts of interest among market participants and asymmetries in information by requiring "public companies to disclose meaningful financial and other information to the public."[4] It promotes "the disclosure of important market-related information, maintain[s] fair dealing, and protect[s] against fraud."[5]

The 2008 financial crisis highlighted the limits of the SEC's statutory authority and its largely disclosure-focused toolkit as the Federal regulators collectively attempted to stem the crisis. Without an explicit mandate to manage systemic risk, or to guarantee the continuing financial viability of issuers or institutions, the SEC was constrained to consider the economic consequences of its actions in light of their effect on investor protection and efficiency, competition, and capital formation in the markets. In addition, the SEC, by Congressional design, lacked the economic resources necessary to guarantee the financial viability of market participants. The mandates and resources of other financial

[2] See, for example, the Net Capital Rule (17 C.F.R. § 240.15c3-1) and the Customer Protection Rule (17 C.F.R. § 240.15c3-3).

[3] See US Securities and Exchange Commission (2014).

[4] See US Securities and Exchange Commission (2014).

[5] See US Securities and Exchange Commission (2014).

regulators, including the Federal Reserve System (Fed),[6] Office of the Comptroller of the Currency (OCC),[7] and Federal Deposit Insurance Corporation (FDIC),[8] provided a broader set of tools with which to work both, during and after the 2008 financial crisis.

Since the 2008 crisis, the SEC has continued to fulfill its mission to protect investors, maintain fair, orderly, and efficient markets, and to promote competition, efficiency, and capital formation. At the same time, the agency has had to adapt and expand its interpretation of what constitutes its mission in light of lessons learned from the financial crisis. It has also found additional non-disclosure-based solutions that are within its authority to meet certain financial market challenges that were highlighted by the financial crisis. In the following sections, we discuss four areas of regulatory reform by the SEC and the limitations presented by its Congressional mandate.

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[6] The Fed, for example, "was created by the Congress in 1913 to provide the nation with a safer, more flexible, and more stable monetary and financial system." Today, the Fed's responsibilities include supervising and regulating banks and other important financial institutions to ensure the safety and soundness of the nation's banking and financial system and maintaining the stability of the financial system and containing systemic risk that may arise in financial markets. See The Federal Reserve System (2005) and "Current FAQs: Informing the Public about the Federal Reserve," Board of Governors of the Federal Reserve System (2014) at http://www.federalreserve.gov/faqs/about_12594.htm.

[7] Operating in parallel with the Fed, the US Department of the Treasury provides financial regulation of banks and thrifts primarily through the operations of the OCC, which it oversees. The OCC's "primary mission is to charter, regulate, and supervise all national banks and federal savings associations," as well as supervise the federal branches and agencies of foreign banks. One of its four objectives is to "ensure the safety and soundness of the national system of banks and savings associations." See "About the OCC," Office of the Comptroller of the Currency, at http://www.occ.treas.gov/about/what-we-do/mission/index-about.html.

[8] The FDIC, created by Congress in 1933 to maintain stability and public confidence in the nation's financial system, provides deposit insurance that guarantees the safety of depositors' accounts in member banks up to a specified amount for each deposit ownership category in each insured bank. The FDIC also examines and supervises certain financial institutions for safety and soundness, performs certain consumer-protection functions, and manages banks in receiverships. See "FDIC Mission, Vision, and Values," Federal Deposit Insurance Corporation (May 4, 2009) at http://www.fdic.gov/about/mission/.

Regulation of Money Market Funds

In 1983 the SEC adopted rule 2a-7,[9] which allowed MMFs to value portfolio assets using "amortized cost" and "penny round" their prices. These methods allowed MMFs to stabilize their net asset values (NAVs), typically at US$1.00, providing investors with stable principal coupled with same-day liquidity. In exchange for allowing MMFs to use amortized cost to value fund assets, the SEC requires them to meet certain requirements, which included investing in short-term, high credit quality instruments, maintaining a well-diversified portfolio, and other guidelines set forth in rule 2a-7.

Over the next 25 years, MMFs were remarkably successful, both as a financial product and in their regulatory design. From the birth of the MMF industry through summer 2008, only one MMF failed to maintain its stable NAV.[10] The record of funds' success in maintaining stable NAVs, however, belies the financial stress through the years encountered by a number of MMFs when the value of portfolio assets became impaired. In a number of instances, a fund's shadow price, which is the current NAV per share calculated using available market prices or fair value, fell below the fund's stable NAV of US$1.[11] In the late 1980s, for example, several corporate issuers defaulted on their commercial paper (CP), which led to declines in the shadow prices of MMFs that held the instruments. Similarly, the shadow prices of several MMFs that held Orange County's notes fell below US$1 after it defaulted on its obligations in 1994.

If a fund's shadow price falls sufficiently below its stable NAV of US$1 and the fund's board decides to discontinue its use of the

[9] See Valuation of Debt Instruments and Computation of Current Price Per Share by Certain Open-End Investment Companies (Money Market Funds), Investment Company Act Release No. 13380 (July 11, 1983) [48 FR 32555 (July 18, 1983)].

[10] In 1994, the Community Bankers US Government MMF broke the buck when Orange County, California filed for Chapter 9 protection, defaulting on its notes (see Fink, 2008, p. 179). The US$100 million fund liquidated at US$0.96 per share. See Crane Data (2007). This event did not receive widespread attention, perhaps because it was a small fund with only institutional investors and its liquidation was based on exposure to targeted securities.

[11] See Fink (2008, p. 177–179).

amortized cost method of valuation to stabilize its price, the fund is said to have 'broken the buck'. Rule 2a-7 requires the MMF's board to then consider whether the deviation creates dilution or unfair treatment of shareholders and what action, including perhaps closing the fund to new investors, suspending redemptions, and liquidating the fund, should be taken to prevent such outcomes.[12] Before the SEC adopted rule 22e-3 in 2010, a fund's board could only suspend redemptions and liquidate a fund pursuant to a Commission order. After the adoption of rule 22e-3, funds that break a buck can suspend redemptions and distribute assets to investors if, among other things, the directors have irrevocably approve the liquidation of the funds.[13] Alternatively, the sponsor of a fund, which can include the fund's adviser or the parent company of the adviser, can provide financial support to the fund to help it maintain a stable NAV of US$1.00. For example, a sponsor can purchase impaired portfolio assets at amortized cost, or directly infuse cash into the fund. In November 2007, Moody's reported there were 145 cases in prior years where money funds received some type of support from sponsors to mitigate losses.[14]

As the 2008 financial crisis unfolded, a number of securities suffered credit rating downgrades and declining prices, which caused some MMFs to no longer meet the credit standards of rule 2a-7 and a number of funds to re-price their portfolio assets.[15] On September 16, 2008, the

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[12] See Rule 2a-7(g)(1)(i)(C).

[13] See Money Market Fund Reform, Investment Company Act Release No. 28807 (June 30, 2009) [74 FR 32688 (July 8, 2009)] and Money Market Fund Reform, Investment Company Act Release No. 29132 (February 23, 2010) [75 FR 10060 (March 4, 2010)].

[14] See Moody's Investors Service Special Comment (2010), Brady *et al.* (2012) and "Response to Questions Posed by Commissioners Aguilar, Paredes, and Gallagher," in US Securities and Exchange Commission (2014), pp. 15–17.

[15] A number of MMFs received financial support from their sponsors during the 2008 financial crisis. See Money Market Fund Reform; Amendments to Form PF, Release Nos. 33-9408; IA-3616; IC-30551 (June 5, 2013) [78 FR 36834, (June 19, 2013)].

Reserve Primary Fund broke the buck.[16] The Reserve Primary Fund applied to the SEC for an order permitting it to suspend redemptions and postpone payment of shares submitted for redemption, and the fund began a year-long process to liquidate its portfolio.[17]

After the Reserve Primary Fund broke the buck, many investors, especially institutions, began redeeming non-government MMF shares, investing instead in assets offering increased quality, liquidity, transparency, and performance. Investors that held shares of funds whose portfolio holdings' values were impaired redeemed shares to avoid dilution.[18] To meet heightened redemption requests, MMF managers sold fund assets into illiquid asset markets at prices below amortized costs. One fund manager, Putnam, announced that its MMF would liquidate, with shareholders receiving shares on a US$1 per share basis of a Federated fund.[19] To manage portfolio risk and conserve cash, MMF managers dramatically reduced investments in commercial paper, investing instead in government securities. Their withdrawal from the CP market

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[16] According to *Market Watch*, "Another Reserve fund, International Liquidity Fund, which is only available to offshore investors, also broke the buck. Also Tuesday, Standard & Poor's Ratings Services said that it had downgraded the Colorado Diversified Trust to Dm from AAAm due to exposure to Lehman paper. S&P said the Trust, which had about [US]$260 million in assets, liquidated Wednesday at a net asset value of 98.2 cents. The Trust held money from local schools and governments. Its assets were transferred to the [US]$3.5 billion Colorado Local Government Liquid Asset Trust." See Mamudi (2008).

[17] The Reserve Primary Fund announced on September 16, 2008 that it would reprice its shares at US$0.97, and the SEC issued an order, effective September 17, 2008, allowing the fund to suspend redemptions of shares and liquidate (see http://www.sec.gov/rules/ic/2008/ic-28386.pdf). See also, US Department of Treasury (2010). Ultimately fund investors received more than US$0.99/share (Hurtado and Condon, 2012).

[18] See "Response to Questions Posed by Commissioners Aguilar, Paredes, and Gallagher," in US Securities and Exchange Commission (2014).

[19] See press release by Federated and Putnam Investments, "Federated Investors, Inc. and Putnam Investments Announce Transaction to Benefit Money Market Fund Shareholders" (September 24, 2008), at http://www.federatedinvestors.com/FII/about/pressrelease/detail.do?cid=65207.

dried up critical financing for firms relying on the sale of CP to meet payroll and other short-term expenses.

To help stabilize the financial markets during this period, the Fed and the Treasury took unprecedented actions. On September 19, 2008, the Fed announced the immediate creation of the Asset Backed Commercial Paper Money Market Mutual Fund Liquidity Facility (AMLF) to help guarantee asset market liquidity. The AMLF offered non-recourse loans to US depository institutions and bank holding companies that purchased certain high-quality asset back commercial paper (ABCP) directly from MMFs.[20] On September 29, 2008, the Treasury announced the Temporary Guarantee Program to stem the tide of shareholder redemptions in MMFs.[21] This program insured the September 19, 2008 investments of both retail and institutional investors in funds that chose to participate in the program. The Fed subsequently announced on October 21, 2008 that it would establish the Money Market Investor Funding Facility (MMIFF), effective November 24, 2008.[22] Administered by the Federal Reserve Bank of New York, the MMIFF provided senior secured funding to a series of special purpose vehicles established by the private sector (PSPVs). Each PSPV would purchase eligible money market instruments from MMFs using financing from the MMIFF and from the issuance of ABCP. By facilitating the sale of money market instruments in the secondary market, the Fed hoped the MMIFF would improve the liquidity positions of MMFs, thereby increasing their ability to meet further redemption requests and willingness to invest in money market instruments.[23] The New York Fed engaged in Open Market Operations that indirectly also affected

[20] See "Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility," Board of Governors of the Federal Reserve System at http://www.federalreserve.gov/monetarypolicy/abcpmmmf.htm

[21] See US Department of Treasury (2008).

[22] See "Money Market Investor Funding Facility," Board of Governors of the Federal Reserve System, at http://www.federalreserve.gov/monetarypolicy/mmiff.htm.

[23] The Fed created the MMIFF, but no funds were ever used. See "Net Portfolio Holdings of LLCs funded through the Money Market Investor Funding Facility (DISCONTINUED SERIES)," Federal Reserve Bank of St. Louis (September 18, 2014) at http://www.research.stlouisfed.org/fred2/series/WMMIFF.

MMFs. For example, it purchased agency discount notes,[24] commonly held by MMFs, on September 19, 23, and 26, 2008 with the stated purpose of providing liquidity to the market.[25]

Because the markets remained highly illiquid for some time after the initial crisis, the market prices of fund assets diverged from fair fundamental values. In response, the SEC announced on October 10, 2008 that MMFs could shadow price very short-term assets using amortized cost through January 12, 2009, "unless the particular circumstances, i.e., the impairment of the creditworthiness of the issuer, suggest that amortized cost is no longer appropriate."[26]

In response to the MMF issues highlighted by the financial crisis, the SEC adopted amendments to rule 2a-7 of the Investment Company Act in February 2010.[27] These amendments were designed to increase the resiliency of MMFs to losses in portfolio holdings by reducing the interest rate, credit, and liquidity risks of funds and by increasing disclosure of fund portfolios. More specifically, the amendments restricted the maximum 'weighted average life' maturity of MMFs' portfolios and reduced the maximum 'weighted average maturity' of fund portfolios. The rules decreased funds' permissible holdings of instruments with lower credit ratings and increased portfolio diversification requirements. In addition, the rules required that funds hold a minimum percentage of their assets in highly liquid securities so funds could readily

[24] These are short-term debt obligations issued by Fannie Mae, Freddie Mac, and the Federal Home Loan Banks.

[25] See press release dated September 19, 2008, by Board of Governors of the Federal Reserve System, at http://www.federalreserve.gov/newsevents/press/monetary/20080919a.htm.

[26] See no-action letter from Robert E. Plaze, Associate Director, Division of Investment Management, SEC to Karrie McMillan, General Counsel, Investment Company Institute (October 10, 2008), at http://www.sec.gov/divisions/investment/noaction/2008/ici101008.htm. The SEC staff's no-action position was "limited to portfolio securities that (i) have a remaining maturity of 60 days or less, (ii) are First Tier Securities as that term is defined in paragraph (a)(12) of rule 2a-7, and (iii) the fund reasonably expects to hold to maturity. For purposes of this letter, the remaining maturity of a security is measured without regard to paragraph (d) of rule2a-7."

[27] See Money Market Fund Reform, Investment Company Act Release No. 29132 (February 23, 2010) [75 FR 10060 (March 4, 2010)].

convert portfolio holdings to cash to pay redeeming shareholders. Finally, the 2010 amendments mandated that MMFs conduct periodic stress tests to assess whether funds could maintain stable NAVs under scenarios involving interest rate, credit, and redemption shocks, and required that funds disclose portfolio holdings monthly.

To explore potential further reforms, the SEC sought comment on a 2010 report on MMF reform prepared by the President's Working Group on Financial Markets,[28] and it hosted a roundtable on May 10, 2011 to discuss MMFs. In November 2012, the Financial Stability Oversight Council (FSOC) recommended the SEC proceed with structural reforms to MMFs,[29] and the SEC staff published an economic study on MMFs addressing a series of questions related to the causes of the fund outflows during the 2008 financial crisis, the effects of the 2010 MMF reforms, and possible effects of further reforms on the short-term funding market.[30] In response to these initiatives, further SEC analyses, and extensive public comment to a June 2013 Proposing

[28] See US Department of Treasury (2010). The members of the group included the Secretary of the Treasury Department (as chairman), the Chairman of the Board of Governors of the Federal Reserve System, the Chairman of the SEC, and the Chairman of the CFTC.

[29] See Proposed Recommendations Regarding Money Market Mutual Fund Reform, Financial Stability Oversight Council [77 FR 69455 (Nov. 19, 2012)]. The FSOC has a statutory mandate to identify risks and respond to emerging threats to financial stability and authorities to constrain excessive risk in the financial system. It is chaired by Secretary of Treasury and has ten voting members, which include the heads of the Treasury, Fed, OCC, FDIC, and SEC. Other voting members include the heads of the U.S. Commodity Futures Trading Commission, Federal Housing Finance Agency, National Credit Union Administration, and Bureau of Consumer Financial Protection, as well as an independent member with insurance expertise appointed by the President and confirmed by the Senate. The FSOC also has five non-voting members, including the director of the Office of Financial Research, the director of the Federal Insurance Office, a state insurance commissioner, a state banking supervisor, and a state securities commissioner. See "About FSOC: Frequently Asked Questions," 11 Jul. 2014, Financial Stability Oversight Council (July 11, 2014), at http://www.treasury.gov/initiatives/fsoc/about/Pages/default.aspx.

[30] See "Response to Questions Posed by Commissioners Aguilar, Paredes, and Gallagher," in US Securities and Exchange Commission (2014).

Release,[31] the SEC adopted amendments in July 2014 that require, among other things, (i) institutional prime MMFs to price and transact at a "floating NAV" and (ii) non-government MMFs to impose liquidity fees and redemption gates during times of stress.[32] The 2014 amendments also increase the diversification requirements of MMF portfolios, enhance funds' stress testing requirements, and heighten funds' disclosure requirements to the SEC and the public. Lastly, the amendments enhance the reporting requirements for advisers of large private liquidity funds so that the SEC can monitor the flows and portfolio holdings of these funds.

The 2010 and 2014 MMF reforms addressed many of the issues that arose during the 2008 financial crisis. The reforms enhanced the quality, liquidity, transparency of funds' portfolio holdings, reducing the likelihood that investors choose to redeem shares during times of fund distress. The floating NAV requirement for institutional prime funds addressed the issue of share dilution. The reforms do not, however, eliminate fund risk, and thus do not eradicate the possibility that investors, especially institutions, may want to redeem shares in times of stress. To address this risk, the SEC mandated stress testing to help fund managers and boards better monitor and manage fund risk. The 2014 reforms also require that non-government funds impose liquidity fees and gates in times of fund distress.

Regulation of Credit Rating Agencies

During the decades leading up to the 2008 financial crisis, credit ratings became increasingly important to the US and global financial systems. Investors used credit ratings to inform their investment decisions and some institutional investors were required, either because of their investment strategies, bylaws or statutory requirements, to only hold securities with particular credit ratings in their portfolios. Many lending

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[31] See Money Market Fund Reform; Amendments to Form PF, Release Nos. 33-9408; IA-3616; IC-30551 (June 5, 2013) [78 FR 36834, (June 19, 2013)].

[32] See Money Market Fund Reform; Amendments to Form PF, Release Nos. 33-9616, IA-3879; IC-31166 (July 23, 2014).

agreements, derivative contracts, and debt securities also tied loan or contract terms to borrowers' or counterparties' credit ratings. CRAs created methodologies to produce ratings and generally used an "issuer pays" business model to collect fees for ratings from issuers. CRAs successfully relied on the free-speech protections afforded by the First Amendment of the US Constitution to defend themselves if and when investors brought legal claims challenging the accuracy or quality of credit ratings.[33]

The use of credit ratings and importance of CRAs in the financial system expanded significantly over time, supported in part by regulatory language in the securities laws.[34] For example, the SEC adopted the term 'nationally recognized statistical rating organization' (NRSRO) in 1975 as part of its reforms to the broker-dealer net capital rule under the Securities Exchange Act of 1934.[35] The net capital rule specifies the amount of net capital that broker-dealers must hold, and it used NRSRO credit ratings to determine the charges to capital that broker-dealers must apply to debt instruments based on their liquidity and volatility. Over time, the SEC incorporated the NRSRO concept into a number of other rules, as well. For example, the SEC adopted Rule 2a-7 under the Investment Company Act of 1940, which prescribed the type of securities that MMFs could hold based on the securities' NRSRO credit ratings.[36] In addition, the SEC adopted regulations under the Securities Act of 1933 that incorporated credit ratings by NRSROs into certain issuer eligibility requirements.[37]

[33] See Protess, B. and L. Sebert (2009a; 2009b).

[34] The SEC recently removed references to NRSRO credit ratings from its rules, per the requirements of the Dodd-Frank Act, which requires all federal agencies to remove references to, or requirements of reliance on, credit ratings and instead substitute appropriate standards of credit worthiness in their regulations.

[35] See Adoption of Amendments to Rule 15c3-1 and Adoption of Alternative Net Capital Requirement for Certain Brokers and Dealers, Release No. 34-11497 (June 26, 1975) [40 FR 29795].

[36] Under Rule 2a-7, NRSRO ratings are minimum requirements; fund advisers must also make an independent determination that the security presents 'minimal credit risks'.

[37] See, for example, Adoption of Integrated Disclosure System, Release No. 33-6383 (Mar. 3, 1982) [47 FR 11380] and Shelf Registration, Release No. 33-6499 (Nov.

The SEC did not, however, define 'NRSRO' in 1975, but instead identified NRSROs through staff no-action letters. If a CRA wanted its ratings to be used for regulatory purposes, it requested a no-action letter from the SEC's staff, which would review information about the CRA to determine whether it had the financial and managerial resources and appropriate policies and procedures to consistently issue credible and reliable credit ratings. The SEC's staff also would determine whether the predominant users of credit ratings considered the credit rating agency to be credible and reliable. If these assessments were both affirmative, the SEC's staff would issue a no-action letter stating that regulated entities could treat the CRA as an NRSRO for regulatory purposes; that is, the staff would not recommend an enforcement action against the bank or broker-dealer if it relied upon the CRA's ratings for net capital charges.

Between 1975 and 2006, the SEC's staff identified nine CRAs as NRSROs.[38] As a result of consolidation, however, the number of NRSROs dropped to a low of three during the 1990s. As of 2006, only five CRAs were identified as NRSROs.[39] In September 2006, Congress passed the Credit Rating Agency Reform Act following criticism that the SEC's 'no-action letter' approach lacked transparency and the SEC had too little regulatory oversight of NRSROs.[40] The law required the SEC to establish a process for CRAs to register as NRSROs and gave the SEC the power to regulate NRSRO internal processes regarding, among other things, disclosure, reporting, record-keeping, the handling of material non-public information, and how they guard against conflicts of interest. It also made NRSRO determination a matter of Commission order, rather than staff determination.[41] Notably, however, the law

17, 1983) [48 FR 5289], *and* Simplification of Registration Procedures for Primary Securities Offerings, Release No. 336964 (Oct. 22, 1992) [57 FR 32461].

[38] See Definition of Nationally Recognized Statistical Rating Organization, Release Nos. 33-8570; 34-51572; IC-26834 (April 25, 2005) [70 FR 21306].

[39] See Definition of Nationally Recognized Statistical Rating Organization, Release Nos. 33-8570; 34-51572; IC-26834 (April 25, 2005) [70 FR 21306].

[40] See Credit Rating Agency Reform Act of 2006, Pub. L. 109–291, 120 Stat. 1327 (2006).

[41] See "Credit Rating Agencies," US Securities and Exchange Commission (August 6, 2014) at http://www.sec.gov/spotlight/dodd-frank/creditratingagencies.shtml.

specifically prohibited the SEC from regulating either the substance or the methods of an NRSRO's ratings. In 2007, the SEC adopted its first rules to implement the Credit Rating Agency Reform Act.[42]

In 2007 and 2008, the widespread defaults of highly-rated structured finance products raised questions as to the accuracy of credit ratings and the integrity of CRAs' rating processes. Notable was the concern that the 'issuer pays' business model employed by the CRAs led to a conflict of interest with regard to the quality of ratings, especially in the structured finance area. To address these concerns, the SEC adopted amendments in 2009 to its 2007 rules that among other things, improve NRSRO rating transparency and recordkeeping, prohibit NRSROs from engaging in certain practices that create conflicts of interest, and require NRSROs to disclose and provide data on credit ratings history information so that credit rating users and market participants can assess rating performance.[43] The amendments also create a mechanism by which NRSROs not hired to rate structured finance products can nonetheless determine and monitor credit ratings for these instruments.

In 2010 Congress passed the Dodd-Frank Act,[44] which outlines a series of broad reforms to the CRA market, but delegates the responsibility for developing specific rules to the SEC and other federal agencies.[45] First, the Dodd-Frank Act requires all federal agencies to remove references to, or requirements of reliance on, credit ratings and instead substitute appropriate standards of credit worthiness in their regulations. In 2011, the SEC continued the process of amending its rules, which was begun in 2008,[46] to remove references to NRSRO credit

[42] See Oversight of Credit Rating Agencies Registered as Nationally Recognized Statistical Rating Organizations, Exchange Act Release No. 34-55857, (June 5, 2007) [72 FR 33564 (June 18, 2007)].

[43] See Amendments to Rules for Nationally Recognized Statistical Rating Organizations, Exchange Act Release No. 59342 (February 2, 2009) [74 FR 6456 (February 9, 2009)] and Amendments to Rules for Nationally Recognized Statistical Rating Organizations, Exchange Act Release No. 34-61050 (November 23, 2009) [74 FR 63832 (December 4, 2009)].

[44] See Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203 (2013).

[45] See Pollard, R. B. and T. Perry (2014).

[46] See Security Ratings, Release No. 33-8940 (July 1, 2008) [73 FR 40106]. In 2009, the SEC re-opened the comment period for the release for an additional 60 days. See

ratings,[47] adopting final rules in 2011 and 2013 and proposing or re-proposing other rules in 2013 and 2014.[48] Second, the Dodd-Frank Act mandates the SEC create an Office of Credit Ratings (OCR) with a director that reports to the Chair of the SEC.[49] The primary purpose of the OCR is to enhance the regulation, accountability, and transparency of NRSROs.[50] The OCR monitors the activities and conducts legislatively mandated annual, risk-based examinations of all registered NRSROs. Third, the Act significantly increases CRAs' liability for issuing inaccurate ratings by lessening the pleading standards for private actions against CRAs under Rule 10b-5 of the Securities and Exchange Act of 1934.[51] In 2014, the SEC also adopted amendments and new rules to enhance its oversight of NRSROs. The changes were designed to enhance the governance of NRSROs in their role as 'gatekeepers' in

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References to Ratings of Nationally Recognized Statistical Rating Organizations, Release No. 33-9069 (October 5, 2009) [74 FR 52374].

[47] See Security Ratings, Release No. 33-9186 (February 9, 2011) [76 FR 8946 (February 16, 2011)], References to Credit Ratings in Certain Investment Company Act Rules and Forms, Securities Act Release No. 9193 (March 3, 2011) [76 FR 12896 (March 9, 2011)], and Removal of Certain References to Credit Ratings under the Securities Exchange Act of 1934, Exchange Act Release No. 64352 (April 27, 2011), 76 FR 26550 (May 6, 2011).

[48] See, for example, Security Ratings, Securities Act Release No. 9245 (July 27, 2011) [76 FR 46603 (August 3, 2011)], Removal of Certain References to Credit Ratings Under the Securities Exchange Act of 1934 Release No. 34-71194 (December 27, 2013) [79 FR 1521 (January 8, 2014)], Removal of Certain References to Credit Ratings Under the Investment Company Act Release No. 30847 (December 27, 2013) [79 FR 1316 (January 8, 2014)], and Removal of Certain References to Credit Ratings and Amendment to the Issuer Diversification Requirement in the Money Market Fund Rule (July 23, 2014).

[49] Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203, § 931, 124 Stat. 1376, 1872 (2013). §§ 931-939H.

[50] See "About the Office of Credit Ratings," US Securities and Exchange Commission (August 4, 2014) at http://www.sec.gov/about/offices/ocr.shtml.

[51] Imposing greater liability for rating inaccuracies may have some unintended consequences. Using a comprehensive sample of corporate bond credit ratings from 2006 to 2012, Dimitrov, Palia, and Tang find results that suggest CRAs after the passage of the Dodd-Frank Act may be protecting their reputations by lowering their ratings beyond levels justified by issuers' fundamentals. See Dimitrov *et al.* (2015, forthcoming).

the debt issuance process and increase the transparency of the credit rating process as a whole, as well as with respect to structured finance products more specifically.[52]

Since the 2008 financial crisis, a number of investors have brought lawsuits against some of the CRAs,[53] challenging their alleged protection under the First Amendment.[54] In addition, the Department of Justice and a number of states have sued certain CRAs for defrauding investors[55] Some suits have been settled, whereas other suits continue to be litigated, and it will almost certainly take years for all litigation to be resolved.

It is important to note that despite the passage of the Dodd-Frank Act, which mandates sweeping changes to the oversight of CRAs, and the actions of the SEC to enhance CRAs' disclosure of their rating performance and methodologies, the fundamental problem of CRAs remains today. The private sector continues to rely on credit ratings despite understanding the conflicts of interest inherent in the economics of the CRA business model and the limitations of CRAs' methodologies to accurately forecast ratings.

Regulation of Short Selling

The State of Short Selling Regulation Before 2008

A short sale is the sale of a security that the seller does not own or a sale that is consummated by the delivery of a security borrowed by, or for

[52] The SEC proposed amendments to existing rules and new rules in 2011. See Nationally Recognized Statistical Rating Organizations, Exchange Act Release No. 64514 (May 18, 2011), 76 FR 33420 (June 8, 2011). The SEC adopted changes in 2014. *See* Nationally Recognized Statistical Rating Organizations, Exchange Act Release No. 72936 (August 27, 2014), 79 FR 55078 (September 15, 2014).

[53] See, for example, Freifeld (2013) and Segal (2009).

[54] Both Standard and Poor's, and Moody's were held liable for 'misleading and deceptive' ratings in litigation in Australia. See Fickling and Robinson (2012).

[55] See "Department of Justice Sues Standard & Poor's for Fraud in Rating Mortgage-Backed Securities in the Years Leading Up to the Financial Crisis," US Department of Justice (February 5, 2013) at http://www.justice.gov/opa/pr/2013/February/13-ag-156.html.

the account of, the seller.[56] Although the process can be complex, there are usually three steps in selling equity securities short. First, the seller must borrow or locate shares for the short sale, though the shares are generally not immediately borrowed. Second, the short sale order is executed. In the last step, delivery and payment occur, generally within three settlement days of the trade date. The seller physically borrows the shares from the lender and delivers them to the broker-dealer to fulfill the settlement obligation. Ultimately the seller must 'cover' the position by purchasing sufficient shares in the open market and returning them to the lender. Alternatively, the lender may demand the return of their borrowed shares by 'calling' the shares in, forcing the short seller either to find another lender for the shares or to purchase new shares in the open market for return to the lender.

Investors may engage in short selling shares for a host of reasons. A short sale may be an expression of a fundamentally negative view about the prospects of an issuer. In such a case, the short seller hopes to replace the borrowed shares sold short with ones purchased at a lower price, pocketing the price difference as a profit. Alternatively, the short sale may be part of a hedging strategy, including a hedge related to a complex security. For example, a buyer of a convertible bond may want to capture the value of a mispriced option embedded in the bond by selling short the stock into which the bonds may be converted.

Regulation of short selling in the United States before 2008 consisted of two distinct strands of regulation. The first strand of regulation focused on the price at which the shorted security was sold, and was commonly known as the 'uptick rule'.[57] Rule 10a-1(a)(1) provided that, subject to certain exceptions, a listed security could be sold short (A) at a price above the price at which the immediately preceding sale was effected (plus tick), or (B) at the last sale price if it was higher than the last different price (zero-plus tick). Short sales were not permitted on minus ticks or zero-minus ticks, subject to narrow exceptions. It was intended to restrict short sales in falling markets, and was in part motivated by a 1937 SEC study of concentrated short selling during the

[56] Portions of this section of the paper are adapted from Sirri (2010).

[57] 17 CFR § 240.10a-1

market break of 1937. In part due to a decrease in the tick size from US$0.125 to US$0.01, as well as economic analysis supporting a need to revise the rule,[58] the SEC rescinded the relevant rule in July 2007.

The second strand of the SEC's policy concerning short selling relates to the delivery of shorted shares. The SEC states that 'naked' short selling is "... selling short without having stock available for delivery and intentionally failing to deliver within the standard three day settlement cycle."[59] The SEC historically was concerned naked short selling could result in failures to deliver, which could have harmful effects on the markets and shareholders. Failing to deliver securities on settlement converts a securities contract into a forward contract, causing the buyer (or a clearing agency) to be exposed to the credit risk of the seller. It can also create problems with respect to the voting of shares as a buyer might not be in possession of the security by the record date of the vote and thus would lose the ability to vote. Over the years, the SEC had also become concerned that naked short selling was at times used to facilitate various abusive and manipulative practices.

In response, the SEC adopted new Regulation SHO in August 2004.[60] Among other things, Regulation SHO replaced disparate SRO rules with the requirement that a broker-dealer must either borrow the security, or enter into an arrangement to borrow the security, or have reasonable grounds to believe the security can be borrowed so that it can be delivered on the date delivery is due before it can accept or effect a short sale order in that security.[61] In addition, it established the creation of a 'threshold list' of certain securities for which the aggregate amount of failures to deliver at a registered clearing agency is greater than both 10,000 shares and one-half of one percent of the shares outstanding. If a security is on such a threshold list and the broker-dealer

[58] See Office of Economic Analysis (2007).

[59] Short Sales, Exchange Act Release No. 34-48709 (October 28, 2003) [68 FR 62975 (November 6, 2003)].

[60] Short Sales, Exchange Act Release No. 34-50103 (July 28, 2004) [69 FR 48008, (August 6, 2004)].

[61] The locate must occur and be documented prior to the trade.

has a failed to deliver position for 13 consecutive days, the broker must buy shares to 'close-out' this position. The rule originally contained a number of exceptions from these requirements, including a provision for pre-existing fail positions (the 'grandfather' exception) and an exception for options market makers.

Regulation SHO was an attempt to reduce the number of failures to deliver in the settlement system. To promote disclosure, the threshold list made public the names of stocks that had substantial amounts of open failures to deliver for the first time. The SEC gradually moved to reduce the number of securities with substantial fails by tightening and/or eliminating some of the rule's exceptions. For instance, the SEC eliminated the grandfather exception and proposed to eliminate the options market maker exception in August 2007.[62] In 2008, the SEC eliminated the options market maker exception to the closeout requirement of Regulation SHO.[63]

SEC Actions in 2008–2009

As the large investment banks came under financial pressure in 2008, stories began to circulate about short sellers teaming up to aggressively short the equity of these firms.[64] Heads of major financial firms complained that short sellers were unfairly pressuring their firms' stock prices, driving their companies toward the brink of ruin.[65] Congress became concerned about the effects of short selling as well, questioning SEC

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[62] See Amendments to Regulation SHO, Exchange Act Release No. 34-56212, (August 7, 2007) [72 FR 45544, (August 14, 2007)] for elimination of the 'grandfather' exception, and Amendments to Regulation SHO, Exchange Act Release No. 34-56213, (August 7, 2007) [72 FR 45558, (August 14, 2007)] for the proposed elimination of the options market maker exception.

[63] See Amendments to Regulation SHO, Exchange Act Release No. 34-58775, (October 14, 2008) [73 FR 61690, (October 17, 2008)].

[64] See Moyer (2008), Burrough (2008), or Saporito (2008).

[65] See *The Wall Street Journal*'s "Mack Blames Short Sellers," dated September 17, 2008 at http://blogs.wsj.com/wallstreetcrisis/2008/09/17/mack-blames-short-sellers/.

Chairman Christopher Cox about these activities and asking the SEC to investigate whether inappropriate trading was occurring.[66] Senator John McCain, who at the time was a candidate for the presidency, said in a portion of a speech that touched upon short selling, "... The Chairman of the SEC serves at the appointment of the President and has betrayed the public's trust. If I were President today, I would fire him."[67]

Beginning in March of 2008, the SEC undertook no less than six regulatory actions targeted at the practice of short selling. While a complete description of each of these actions is beyond the scope of this paper, we highlight the salient points of the key regulatory changes.

Mandatory pre-borrowing to short certain financial firms: Beginning on July 15, 2008, the SEC issued the first of a series of emergency orders to limit short selling.[68] Such orders can be effective for up to 30 calendar days, including extensions. The July 15 order required that for a group of 19 identified financial firms, "... no person may effect a short sale in these securities using the means or instrumentalities of interstate commerce unless such person or its agent has borrowed or arranged to borrow the security or otherwise has the security available to borrow in its inventory prior to effecting such short sale and delivers the security on settlement date."[69] The order essentially required short sellers to pre-borrow shares of those 19 financial firms before selling them short. The 19 firms covered by the order consisted of

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[66] See *Reuters* (2008).

[67] Sasseen (2009).

[68] Section 12(k)(2) of the 1934 Securities and Exchange Act states that "The Commission, in an emergency, may by order summarily take such action to alter, supplement, suspend, or impose requirements or restrictions with respect to any matter or action subject to regulation by the Commission or a self-regulatory organization under this title, as the Commission determines is necessary in the public interest and for the protection of investors (i) to maintain or restore fair and orderly securities markets (other than markets in exempted securities); or (ii) to ensure prompt, accurate, and safe clearance and settlement of transactions in securities (other than exempted securities)." Such orders can be effective for up to 30 days. 15 U.S.C. §78(l) (2004).

[69] Emergency Order Pursuant To Section 12(k)(2) Of The Securities Exchange Act Of 1934 Taking Temporary Action To Respond To Market Developments, Exchange Act Release 58166, (July 15, 2008) [73 FR 42379 (July 21, 2008)].

Fannie Mae, Freddie Mac, and the seventeen primary dealers in Treasury securities.[70]

The pre-borrow requirement was a significant change from standard industry practice. To comply with the order, a seller had to actually borrow the shares or establish an exclusive arrangement to borrow the shares, known as a 'hard locate,' before the sale was effected. The requirement differed from the usual situation where a short seller could locate the shares before the sale, but not actually take possession of them until settlement date. Pre-borrowing also meant a set of shares could be pledged to only one short seller who ultimately may, or may not actually borrow them, as opposed to being pledged to multiple borrowers.[71]

Tightening Regulation SHO delivery requirements: On September 17, 2008, the SEC enhanced delivery requirements on broker-dealers with respect to the sales of all equity securities.[72] Similar to the previous emergency order, the SEC justified the order by its concern "... about the possible unnecessary or artificial price movements based on unfounded rumors regarding the stability of financial institutions and other issuers exacerbated by 'naked' short selling."[73] The rule penalized a member of any registered clearing agency (any broker-dealer from which it receives trades for clearance and settlement) for having

[70] The seventeen dealers were recently given access to the newly created Primary Dealer Credit Facility (PDCF), an overnight facility that makes collateralized loans to insure the liquidity of the dealers (see "Federal Reserve Announces Establishment of Primary Dealer Credit Facility," Board of Governors of the Federal Reserve (March 16, 2008) at http://www.newyorkfed.org/newsevents/news/markets/2008/rp080316.html).

[71] This order was modified three days later by providing a number of exemptions from the order's scope, such as for market makers and block positioners. For example, the order excepted registered market makers, block positioners, and other market makers in certain circumstances, as well short sales effected pursuant to Rule 144 of the Securities Act of 1933. *See* Amendment to Emergency Order Pursuant to Section 12(k)(2), Exchange Act Release 58190, (July 18, 2008) [73 FR 42837 (July 23, 2008)].

[72] Emergency Order Pursuant to Section 12(k)(2), Exchange Act Release 58572 (September 17, 2008) [73 FR 54875 (September 23, 2008)].

[73] *Id.*

a failure to deliver position at a registered clearing agency in any equity security for a long or a short sale transaction in that equity security. The fail had to be closed out by the morning of the day after settlement. If the clearing member or any of its correspondent clients failed to close-out the fail to deliver position, it had to pre-borrow or enter into a bona-fide arrangement to borrow the security before accepting or effecting a short sale in that security, thereby imposing a 'hard locate' requirement.[74] The pre-borrow requirement remained in effect until the fail to deliver position was closed out and the purchased shares settled.

Banning short sales in all financial firms: On September 18, 2008, the SEC issued the most binding of its various emergency orders, banning all short sales in a large group of financial firms, including all banks, insurance companies, and securities firms.[75] The list ultimately contained approximately a thousand financial firms. The SEC's justification for the order was its concern

> "... that short selling in the securities of a wider range of financial institutions may be causing sudden and excessive fluctuations of the prices of such securities in such a manner so as to threaten fair and orderly markets.
>
> Given the importance of confidence in our financial markets as a whole, we have become concerned about recent sudden declines in the prices of a wide range of securities. Such price declines can give rise to questions about the underlying financial condition of an issuer, which in turn can create a crisis of confidence, without a fundamental underlying basis."[76]

[74] The order also did two other things. First, it caused Rule 10b-21, the naked short selling anti-fraud rule, to become immediately effective. The rule had been proposed in March 2008 but had not yet adopted. Second, it immediately closed the options market maker exception under Regulation SHO. See Order Extending Emergency Order Pursuant to Section 12(k)(2), Exchange Act Release 58711 (October 3, 2008) [73 FR 58698 (October 7, 2008)].

[75] Emergency Order Pursuant to Section 12(k)(2), Exchange Act Release 58592, [73 FR 55169 (September 18, 2008).

[76] *Id. at 1.*

The order was also remarkable in its implementation in that unlike some of the earlier orders, it went into immediate effect. Market participants had only hours to adjust to the effect of the ban.[77,78]

The return of the price test: The final installment in the SEC's burst of activity with respect to short selling occurred on April 10, 2009 when it proposed four alternative price-driven tests to replace the 10a-1 uptick rule and the bid test that were rescinded in July 2007.[79] The release noted that the extreme market conditions and deterioration in investor confidence had caused many commenters to ask the SEC to reconsider its termination of the old uptick rule, and made it appropriate for the SEC to seek comment on a restriction for short selling. The release asked whether the proposed restriction might help "... to prevent short selling, including potentially abusive or manipulative short selling, from being used as a tool for driving the market down or from being used to accelerate a declining market ..."[80] This justification is notable in the wake of what many regarded as an asset bubble, as well as the generally poor economic condition of a number of large financial firms.[81]

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[77] *Id.* The order contained a provision that allowed any issuer covered by the ban to opt out of it if they chose to do so. Very few firms took advantage of this opportunity.

[78] This order was subsequently amended to (a) provide an exception from the short sale ban for ETFs and for market makers in derivatives on the covered securities (see Amendment To Emergency Order Pursuant To Section 12(k)(2) Of The Securities Exchange Act Of 1934 Taking Temporary Action To Respond To Market Developments, Exchange Act Release No. 58611, (September 21, 2008) [73 FR 55556 (Septmeber 25, 2008)]), and (b) provide for the order's expiration three business days from the President's signing of the Emergency Economic Stabilization Act, or at the 30-day statutory limit for the Order, whichever came first (see Order Extending Emergency Order Pursuant To Section 12(k)(2) Of The Securities Exchange Act Of 1934 Taking Temporary Action To Respond To Market Developments, Exchange Act Release No. 58723, (October 2, 2008) [73 FR 58994 (October 8, 2008)]).

[79] 74 FR 42033-42037 (August 20, 2009).

[80] *Id.* at 42036.

[81] Omitted from the above discussion is the Naked Short Selling Anti-Fraud Rule, Exchange Act Release No. 34-57511, (March 17, 2008) [73 FR 15376 (March 21, 2008)] and the order requiring public reporting by institutional managers form their daily short positions and trading (Order Extending Emergency Order Pursuant To

Comments on the Effectiveness of the Short Selling Rules

The SEC's 2008–2009 regulatory activities on short selling were remarkable for their direction and motivation. The orders and rules promulgated by the SEC over this period uniformly tightened restrictions on short selling, both on the 'price test' and the 'failure to deliver' branches of regulatory policy. In July 2007, the SEC rescinded the uptick rule and bid test and gradually tightened its grip on the failures to deliver associated with short selling. The SEC tied its position generally to a desire to minimize abusive naked short selling.[82] In 2008 and thereafter, little evidence emerged that naked short selling had increased or was responsible for inaccurate security prices. A review of the September 12, 2008 list of NYSE stocks for which there were a meaningful number of failures to deliver shows neither Lehman, Citigroup, AIG, Morgan Stanley, Goldman Sachs or Wachovia were on the list, nor were any number of other stocks that allegedly were threatened by naked short selling.[83]

The short selling regulations promulgated in 2008 had a notably different stated tone and purpose than preceding rulemakings. The earlier rulemakings expressed concerns about abusive practices, whereas the 2008 orders and rules expressed prudential concerns about issuers, shareholders, and the markets. For example, in the July 15, 2008 order requiring pre-borrowing before shorting the stock of 19 firms, the SEC argued false rumors can cause a lack of confidence, which can lead to panic selling that is exacerbated by naked short selling. The September 18th order banning all short sales makes a similar argument, but goes on to state that ensuing price declines can lead to a loss of confidence. The word 'confidence' appears in a number of the short sale orders and

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Section 12(k)(2) Of The Securities Exchange Act Of 1934 Taking Temporary Action To Respond To Market Developments, Exchange Act Release No. 58591, (September 18, 2008) [73 FR 55175 (September 24, 2008)]).

[82] See pg. 3, Amendments to Regulation SHO, Exchange Act Release No. 34-54154, (July 14, 2006) [71 FR 41710 (July 21, 2006)].

[83] See Exhibit 2 of Sirri (2010).

rules promulgated during this period, suggesting that the SEC was concerned with boosting market participants' confidence rather than with traditional market quality issues.

Academic evidence has generally not been supportive of efficacy of the 2008 short selling policy changes. While a complete recitation of academic findings related to short selling restrictions is beyond the scope of this paper, a few key results are of note. Using data from 2006 to 2008, Boulton and Braga-Alves (2012) finds no connection between naked short selling activity and future stock price declines.[84] Instead the authors find naked short sellers are contrarians that sell shares short after price increases, and that prices generally rise following public revelations of material fails-to-deliver in issuers' stocks. The authors state their results "... are not consistent with the recent portrayal of naked short sellers as abusive and manipulative, but instead suggest naked short sellers promote efficient markets by providing liquidity, risk-bearing, and selling stocks they view as overpriced."[85] Fotak *et al.* (2014) examines data from before and after the short selling ban. In this paper, the authors conclude the SEC's ban on failures-to-deliver arising from naked short selling "... led to a significant increase in absolute pricing errors, relative bid-ask spreads, and intraday volatility ..." and "... the gently regulated failure-to-deliver regime that existed after Regulation SHO up to mid-2008 was net beneficial for pricing efficiency and market liquidity."[86]

Boehmer *et al.* (2013) looks at the effect of the 2008 short selling bans and finds that although the bans decreased shorting activity, they also decreased market quality, as measured by quoted spread, effective spread, and volatility.[87] The study's results are supported by the findings of Boulton and Braga-Alves (2010), which examines the effects of the July 2008 short sale restriction on the 19 financial firms. The authors

[84] See Boulton and Braga-Alves (2012).
[85] See Boulton and Braga-Alves (2012).
[86] Fotak *et al.* (2014).
[87] Boehmer *et al.* (2013).

find that although the prices of the restricted firms reacted positively to the announcement of the ban, the market quality of the subject firms suffered.[88] Although not directly related to the short-sale rules for equity securities in the United States, Arce and Mayerdomo (2014) documents these same negative effects on market quality in a study of the 2011 ban on short selling of Spanish bank stocks.[89] These findings about short selling extend to the fixed income markets as well. A recent paper by Kozhan and Raman (2014) analyzes trading in the corporate bond market and finds evidence that short selling is particularly valuable during a crisis and contributes to price discovery and liquidity.

It is notable that in an interview he gave to *The Washington Post* less than a month before leaving the SEC, Chairman Christopher Cox stated that agreeing to the September 2008 short selling ban on financial firms was the biggest mistake of his tenure.[90] Cox went on to say, "... he had been under intense pressure from Treasury Secretary Henry M. Paulson Jr. and Fed Chairman Ben S. Bernanke to take this action and did so reluctantly."[91]

The SEC and the Consolidated Supervised Entity Program

The United States possesses a complex system for regulating financial firms engaged in the securities business. As a general matter, banks are regulated by one (or more) of several federal banking regulators that include the Fed, the FDIC, and the OCC, in addition to being subject to state banking requirements. The SEC generally regulates activities related to, and entities involved in, securities issuance and trading. Both banking entities and broker-dealers, however, may be part of large firms

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[88] Boulton and Braga-Alves (2010).

[89] Oscar Arce and Sergio Mayerdomo, "Short Selling Constraints and Financial Stability: Evidence from the Spanish Market," Banco de Espana, Documentos de Trabajo No 1401.

[90] Paley and Hilzenrath (2008).

[91] *Id.*

that are organized in holding company structures. If one of the subsidiaries of a holding company is a banking entity, then the holding company is a "bank holding company" and enterprise oversight falls to the Fed, even if the OCC or FDIC regulates the bank subsidiary. With respect to broker-dealers, if the holding company contains a banking entity, as well as a broker-dealer, then once again enterprise supervision falls to the Fed. If, however, the holding company does not contain a banking entity but does contain a broker-dealer, then there is no federal oversight of the enterprise; that is, although individual subsidiaries, including the broker-dealer, may be functionally regulated by either federal or state regulators, the holding company itself has no overarching supervisor.

With respect to the SEC's regulation of broker-dealers, the basic design of the regulatory framework is to ensure a broker-dealer can unwind itself in the event it becomes insolvent or illiquid in such a way that all customer property is returned and customers suffer no losses due to the impairment of the broker-dealer. Whether the broker-dealer continues as an ongoing entity is less important to the SEC than the broker-dealer's ability to wind down its affairs in an orderly fashion, pay off its liabilities and obligations to counterparties, and return the customer property it carries. Although the regulatory regime of broker-dealers is complex, it revolves around two important core rules, one of which is the broker-dealer net capital rule.[92] The net capital rule basically requires that broker-dealers maintain more actual net capital than required minimum net capital;[93] that is, broker-dealers maintain more than one dollar of highly liquid assets for each dollar of liabilities (other than subordinated liabilities) at all times. Consequently, the net capital rule positions broker-dealers to be able to quickly pay off all liabilities to unsubordinated creditors (subordinated lenders typically are the

[92] Net Capital Requirements for Brokers or Dealers, Exchange Act Rule 15c3-1, 17 CFR 240.15c3-1 (1991). The key rule in this area is the Customer Protection Rule, Exchange Act Rule 15c3-3, 17 CFR 240.15c3-3 (2001).

[93] Net capital is defined as net worth plus qualified subordinated loans less illiquid assets such as fixed assets, goodwill, real estate and unsecured receivables, and less the application of rule-based haircut charges associated with the securities positions.

broker-dealer's parent). Because each broker-dealer's actual net capital is adjusted to reflect the riskiness of its assets and operations, the requirement creates a financial cushion that protects creditors and the customer assets held by the broker-dealer.

This regulatory regime has generally worked well for standalone broker-dealers, but may be problematic for broker-dealers that are subsidiaries of large financial firms. In these instances, broker-dealers are exposed to the risk of their parent firms' other subsidiaries, which may include affiliates that engage in derivatives and structured finance trading, as well trading or the holding of illiquid assets that otherwise would receive a 100% capital charge if held by a standalone broker-dealer.[94] The situation was highlighted in the 1980s by the failure of Drexel Burnham Lambert Group. Drexel was an active participant in the market for high yield bonds, and contained one U.S. and one U.K. regulated securities entities. When the holding company came under criminal sanctions due to the actions of Michael Milken and others, and the market liquidity of high-yield bonds fell, the market lost confidence in the holding company's ability to make good on its short-term liabilities. When the holding company suffered a liquidity crisis, its affiliates, including the brokerage entity, suffered as well. Ultimately the holding company was liquidated and the brokerage subsidiaries failed, although no brokerage customers suffered any impairment. This episode caused the SEC to realize that its narrow oversight of broker-dealers within large holding companies was insufficient to guarantee proper functioning.

Congress responded in 1990 by granting additional authority to the SEC,[95] but the SEC's authority was still quite limited. The 1999 Gramm-Leach-Bliley Act, which weakened the line between commercial and investment banking, contained no language to improve the regulatory situation highlighted by Drexel's bankruptcy. The rise of large securities firms, such as Goldman Sachs, Morgan Stanley, Merrill Lynch, Bear

[94] Alternative Net Capital Requirements for Broker-Dealers That Are Part of Consolidated Supervised Entities, Exchange Act Release No. 34-48690, (October 24, 2003) [68 FR 62872 (Nov. 6, 2003)].

[95] Section 17(h) of the Securities and Exchange Act of 1934 was added by the Market Reform Act of 1990. See 15 USC 78q(h).

Stearns, and Lehman Brothers, made the disparity between what the SEC regulated on the statutory basis (the broker-dealer) and the far-flung nature of the total enterprise even more stark. In addition, the European Union (EU) instituted a requirement that all financial firms doing business in EU countries must be subject to consolidated supervision. The large U.S. brokerage firms, some of which were holding companies without a consolidated supervisor, needed to either find such a supervisor or else become subject to the EU's requirement to "ring fence" their European operations, a costly and inefficient organizational option.[96]

In response, the SEC created the Consolidated Supervised Entity (CSE) program in 2004.[97] In essence, the SEC tried to do by *rule* what Congress had not done by *statute*. The SEC created an optional regulatory regime for large financial non-bank holding companies in which their broker-dealer subsidiaries would receive more favorable capital treatment in exchange for allowing limited SEC access to, and oversight of, the activities at the holding company and in unregulated subsidiaries. With respect to the regulated broker-dealer entities, the CSE rule allowed the firms to compute capital haircuts not by the standardized method prescribed in the net capital rule, but by using a quantitative VaR-type approach consistent with the then Basel II standards.[98] By doing so, firms would likely get a more efficient use of their regulatory capital. In exchange, the firms consented to enterprise-wide supervision, including (a) providing risk and operational information about the ultimate holding company, (b) implementing an enterprise-wide risk management system for credit, liquidity, legal, and operational risk, (c) consenting to SEC examination on an enterprise-wide basis, and (d) computing enterprise-wide capital and certain risk measures in a

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[96] Because Lehman Brothers, Merrill Lynch, and Morgan Stanley each owned a thrift, the Office of Thrift Supervision (OTS) was technically the holding company supervisor of these firms. However, the OTS did not take an active rule in supervision of the holding company or other non-thrift subsidiaries.

[97] Alternative Net Capital Requirements for Broker-Dealers That Are Part of Consolidated Supervised Entities, Exchange Act Release No. 34-48690, (June 8, 2004) [69 FR 34428 (June 21, 2004)].

[98] At the same time, the rule required these broker-dealers to maintain substantially higher levels of tentative net capital (i.e., net capital before applying haircuts).

manner consistent with the Basel II standards. Though not part of the original rule, the CSE program later required firms to maintain, and the SEC to be allowed to monitor, a distinct liquidity pool composed of cash and unencumbered assets held for the benefit of the holding company and its unrestricted subsidiaries.[99]

The CSE program was created to overcome a statutory shortcoming with respect to the SEC's supervision of some of the largest financial firms in the world. Although the SEC functionally regulated these firms' U.S. broker-dealers, and certain other functional regulators oversaw other subsidiaries, no single regulator actively exercised oversight or supervision of the entire consolidated firms. By creating this optional regulatory regime, the SEC hoped to entice the firms to exchange limited oversight of the holding company and its unregulated subsidiaries for a more modern treatment of capital — one that was consistent with how the firms' senior managers (and banking regulators) measured, monitored, and managed risk. Ultimately the five firms previously mentioned opted into the CSE program.

As the crisis unfolded in 2008, it became apparent that these firms could not survive without some type of financial support. The SEC had neither the regulatory authority nor the financial resources to guarantee their financial viability, and because the firms were not banks, they lacked direct access to the Fed discount window or Fed 'lender of last resort' facilities. In the end, Bear Stearns was merged into J.P. Morgan, Lehman Brothers was liquidated, Merrill Lynch was merged into Bank of America, and Morgan Stanley and Goldman Sachs' subsidiaries became national and New York state chartered banks, respectively (and thus under the Fed's supervision). It is notable the US broker-dealer

[99] "Each CSE firm was expected to maintain a liquidity pool consisting of cash or highly liquid and highly rated unencumbered debt instruments. However, the standards regarding the types of assets that could be included in this liquidity pool, and the manner in which those assets could be held, were not set forth in a Commission regulation ...", Mary L. Schapiro, "Testimony Concerning the Lehman Brothers Examiner's Report," 20 April 2010, before the House Financial Services Committee, at http://www.sec.gov/news/testimony/2010/ts042010mls.htm.

entities of all of these firms remained well-capitalized throughout the financial crisis and made good on their promises to their customers. The same, of course, was not necessarily true of the firms' liability holders and customers of their non-US broker-dealers.[100]

In September 2008, SEC Chairman Christopher Cox announced the termination of the CSE program:

> The last six months have made it abundantly clear that voluntary regulation does not work. When Congress passed the Gramm-Leach-Bliley Act, it created a significant regulatory gap by failing to give to the SEC or any agency the authority to regulate large investment bank holding companies, like Goldman Sachs, Morgan Stanley, Merrill Lynch, Lehman Brothers, and Bear Stearns.
>
> ...As I have reported to the Congress multiple times in recent months, the CSE program was fundamentally flawed from the beginning, because investment banks could opt in or out of supervision voluntarily. The fact that investment bank holding companies could withdraw from this voluntary supervision at their discretion diminished the perceived mandate of the CSE program, and weakened its effectiveness.[101]

In testimony before the House financial services committee, Mary Schapiro, who succeeded Christopher Cox as chairman of the SEC, stated that the CSE program "... created classic regulatory arbitrage — a system in which a regulated entity was permitted to select its regulator." She went on to say:

> The SEC believed at the time that it was stepping in to address an existing gap in the oversight of these entities. Once the agency took on that

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[100] There has been much written about the failure of the SEC's supervision of these five large securities holding companies. Much of this critique is inaccurate, and beyond the space and scope of this paper. A more detailed discussion of these points can be found in a speech by Erik R. Sirri (2009) and in Andrew Lo's working paper (2011).

[101] See US Security and Exchange Commission press release 2008-230, "Chairman Cox Announces End of Consolidated Supervised Entities Program," 26 September 2008, at http://www.sec.gov/news/press/2008/2008-230.htm.

> responsibility, however, it had to follow through effectively. Notwithstanding the hard work of its staff, in hindsight it is clear that the program lacked sufficient resources and staffing, was under-managed, and at least in certain respects lacked a clear vision as to its scope and mandate.[102]

It is impossible to know whether the CSE program benefited the US financial system. Such an evaluation would ultimately require knowing how these large firms would have performed in the absence of the limited consolidated supervision of the holding company actually provided by the SEC. Although this counterfactual world cannot, by definition, be observed, it is notable that the grant of regulatory relief to the regulated broker-dealers in terms of net capital treatment caused no impairment to the broker-dealers' liabilities to its customers.

Conclusion

In contrast to many other financial regulators around the world, the SEC's core mandate — to protect investors, maintain fair, orderly, and efficient markets, and to promote competition efficiency, and capital formation — is neither prudential nor merit-based in nature in that Congress does not provide the SEC with an explicit mandate to manage systemic risk or the resources to guarantee the continuing financial viability of issuers or institutions. The SEC's primary tool to regulate the financial markets is disclosure; that is, to ensure market participants are provided accurate and complete information. The four topics discussed in this paper, MMFs, CRAs, short selling, and the regulation of large broker-dealers' net capital, all fall squarely within the ambit of the SEC's core mission. Yet when the 2008 financial crisis hit, it became apparent the mandate and toolkit Congress has provided the SEC were of questionable value to the demands of the moment.

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[102] See Mary L. Schapiro's testimony before the House of Financial Services Committee, "Testimony Concerning the Lehman Brothers Examiner's Report," 20 Apr. 2010, at http://www.sec.gov/news/testimony/2010/ts042010mls.htm.

For MMFs, the rules in place in 2008 have since been judged inadequate. The chain of events that unfolded during the financial crisis highlighted not only structural weaknesses in the design of certain MMFs, but also the importance of MMFs to the short-term funding markets. SEC rulemaking has since improved certain structural features of funds as well as the quality and diversification of MMF portfolio assets. We note the SEC has continued to focus on its Congressional mandates of investor protection and the promotion of capital formation throughout the post-2008 period rather than attempting to become a prudential regulator. That said, the agency appears to have adapted and expanded its interpretation of what constitutes these mandates in light of lessons it learned from the financial crisis.

In many ways CRAs are the most problematic of the four examples examined in this paper. Throughout the buildup to the crisis, CRAs were largely unregulated. In a rare example of the Congressional intervention before a crisis hits, Congress gave the SEC authority over CRAs in 2006, permitting it to regulate conflicts of interest and increase the transparency of the firms. That said, the changes made by the SEC even to this day are incremental to the core problem of CRAs, which is the continued reliance by the private sector on credit ratings despite understanding the conflicts of interest inherent in the economics of the CRA business model and the limitations of CRAs' methodologies to accurately forecast whether obligors will meet their financial obligations.

With respect to short selling, although the SEC had the tools needed to change the amount and character of short selling, it is impossible to judge whether the SEC's regulatory decisions were correct. The results of empirical academic studies conducted after the crisis strongly suggest the SEC's short selling restrictions harmed customary measures of market quality. Yet we do not know how things would have progressed had the *status quo ante* framework been allowed to continue unaltered. Demagoguery of short sellers was rampant, and the SEC was concerned that the situation, if left unaddressed, could affect investors' perception of the fairness and efficacy of the markets. What does seem clear is that fundamental forces affected the security prices of many financial firms, and that short selling was one of several mechanisms used by traders to express their negative views.

With respect to the CSE program for large broker-dealers embedded within non-bank financial holding companies, it seems clear the primary responsibility for the regulatory shortcomings associated with oversight of these firms should lie on the doorstep of Congress. As discussed above, the SEC attempted to plug the regulatory gap in the oversight of these large holding companies ahead of the crisis. But for the advent of the crisis, its efforts may have been successful for some time. These firms operated for decades without the Fed's guarantee of liquidity, relying instead on the financial markets for both short- and long-term funding needs. What we cannot know is whether things would have been better or worse during the crisis had the SEC not provided limited supervision of the holding companies before the financial crisis.

In terms of future supervision, we note the issues and risks associated with these firms, including daily mark-to-market valuations of trading assets and certain funding models, are now deeply embedded within the banking sector. In recognition of at least some of these risks, the Fed recently expressed concern about the funding stability of broker-dealers that are part of large bank holding companies during times of market stress.[103]

As discussed in the paper, differences in various domestic financial regulators' missions have created inter-agency tensions as each strives to fulfill its congressionally mandated purpose.[104] No other Federal regulators, however, have challenged the SEC's exclusive authority over the securities trading markets or the oversight of CRAs. The same cannot be said of MMFs and large non-bank financial firms. With respect

[103] See Tracy (2014), which references a speech by Boston Fed President Eric Rosengren, "Broker-Dealer Finance and Stability," Federal Reserve Bank of Boston (13 August 2014) http://www.bostonfed.org/news/speeches/rosengren/2014/081314/081314text.pdf.

[104] These tensions are nothing new. For example, the SEC and bank regulators disagreed in 1997 about Sun Trust Bank's treatment of certain reserve items (see, for example, Michael Schroeder (1999). More recently, the SEC and the Fed reached a Memorandum of Understanding in 2008 over cooperation with respect to the use of information produced by large bank holding companies that also had significant broker-dealers (see the press release by the Federal Reserve Board of Governors (July 7, 2008), at http://www.federalreserve.gov/newsevents/press/bcreg/20080707a.htm).

to both of these financial institutions, the FSOC, a product of the Dodd-Frank Act, has entered the regulatory fray both directly and indirectly. One can clearly sympathize with the Fed's interest, expressed through the FSOC, in the sound regulation of entities irrespective of the existing regulatory framework and entities' current federal regulators. The Fed serves as a lender of last resort and liquidity provider and has done so to any number of financial institutions, even when the Fed did not directly supervise them. To the extent the Fed is expected to guarantee the performance of the financial system, it is not surprising that it expects to have a hand in all aspects of the financial system's regulation. This view ignores, however, the statutory mandates of the other financial regulators. Let us hope that the toolkit of the respective regulators, as well as the Commissioners and Governors, can work together to find solutions that best meet the needs of taxpayers, investors, and financial market participants.

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