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Credit Ratings in Financial Regulation: What's Changed Since the Dodd-Frank Act?

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The use of credit ratings in financial regulation created perverse incentives for market participants and contributed to the financial crisis. As part of the Dodd-Frank Wall Street Reform and Consumer Protection Act, Congress called for eliminating credit ratings in financial regulation. Regulatory agencies, in turn, introduced alternative means for evaluating credit. But these alternatives have their own challenges. This brief reviews how credit ratings have been used in financial regulation, the incentives they created, and how they were replaced after the Dodd-Frank Act.

Credit ratings became a fixture of financial regulation in 1975. That is when the Securities and Exchange Commission (SEC) began designating credit rating agencies as "Nationally Recognized Statistical Rating Organizations" (NRSROs). Financial institutions could satisfy certain regulations — for example, about how much capital they must have — by holding assets with high NRSRO ratings.[2]

The 2007-09 financial crisis raised questions about that practice. The widespread use of credit ratings in regulation created perverse incentives. Some companies used credit ratings to replace their own evaluation of securities. Some financial institutions preferred highly rated securities that carried a low capital charge and fewer restrictions. As a result, credit rating agencies had an incentive to inflate ratings to expand their business. These incentives contributed to an undercapitalized and fragile financial system.

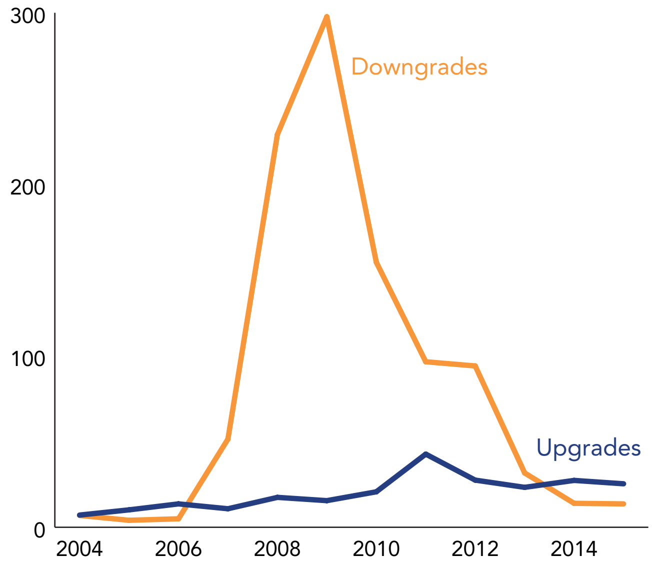
This brief reviews the use of credit ratings in financial regulation. It then reviews the actions regulators took after the crisis to reduce reliance on credit ratings. Finally, it explores the challenges of the alternatives currently in use.

The role of credit ratings in the financial system is complex. This brief looks only at what regulators have done to comply with the Dodd-Frank Act mandate to remove references to credit ratings in financial regulation. It does not address other parts of the law relevant to NRSROs. For example, the Dodd-Frank Act also contains provisions regarding credit rating agency regulation, rating agencies' business models, and legal liability for inaccurate credit ratings.

2007-09 Crisis and Regulatory Reliance on Credit Ratings

Credit ratings were essential to the financial crisis. First, rating agencies were key enablers in the creation of mortgage-backed securities (MBS) and more complex securities based on them, including collateralized debt obligations. Banks sold these securities in tranches, or classes, of varying risk. Each tranche received a different rating based on credit rating agency models. Without ratings, it would have been difficult for banks to issue the securities because certain investors wouldn't have been

Figure 1. Rating Changes in Structured Mortgage Securities (thousands)



Note: Rating changes include collateralized mortgage obligations, asset-backed securities, commercial mortgage-backed securities, and collateralized debt obligations by Standard & Poor's Ratings Services, Moody's Investors Service, and Fitch Ratings Inc.
Source: Bloomberg L.P.

able to purchase them, due to regulations or their own investment standards.

By early 2007, it became clear that mortgage defaults would be more widespread than anticipated by the NRSROs' models. In July 2007, the rating agencies began a series of massive downgrades of structured securities linked to mortgages (see **Figure 1**). The downgrades were unprecedented. The agencies also downgraded some securities from high investment grade to junk in a short time. The downgrades set off fire sales in structured securities and a run in related liabilities, such as asset-backed commercial paper.

Inflated ratings

Researchers Adam Ashcraft, Paul Goldsmith-Pinkham, and James Vickery looked at credit ratings for MBS from 2001 to 2007. They focused on MBS that contained nontraditional and lower-quality subprime mortgages. The researchers found a decline in credit rating standards from early 2005 to mid-2007.[3] In effect, ratings on some securities were inflated relative to credit risk during this period.

The use of credit ratings in financial regulation may explain some of the incentives for inflation. Some studies suggest that the regulatory relief that NRSRO ratings can provide influences investors' decisions. Darren Kisgen and Philip Strahan looked at DBRS Limited, which was designated as an NRSRO in 2003. They found that after the designation, the products DBRS rated rose in value when DBRS ratings were higher than ratings by other NRSROs and when the ratings reduced regulatory requirements.[4] This result suggests that regulatory benefits from NRSRO ratings can boost demand for some securities.

Two other researchers studied what happened after regulators lowered the capital requirements in 2002 for bank holdings of highly rated commercial MBS, or CMBS. Richard Stanton and Nancy Wallace found a material drop in the spread between highly rated CMBS and their corporate-bond equivalents. In other words, the market prices of these securities rose relative to the prices of similar corporate bonds. No similar market reaction was evident for lower-rated CMBS. Also, rating agencies upgraded CMBS at a much faster rate than comparable residential MBS for which ratings-based capital requirements had not been changed. The results suggest two conclusions. First, the agencies appear to have factored lower capital requirements into their rating decisions. Second, those rating upgrades then increased demand for the securities.[5]

A Moody's executive had identified potential incentive problems arising from regulators' use of ratings years earlier.[6] Thomas McGuire, then executive vice president of Moody's, said in 1995, "By using securities ratings as a tool of regulation, governments fundamentally change the nature of the product agencies sell. Issuers then pay rating fees to purchase, not credibility with the investor community, but a license from a government."

Regulatory arbitrage

Credit ratings in regulation also created incentives for regulatory arbitrage. Regulatory arbitrage refers to measures that companies may take to comply with the letter, but not the spirit, of a regulation, to reduce their compliance costs. Banks could reduce their capital requirements by buying protection from highly rated counterparties. For instance, a bank was required to hold relatively little capital against a security insured by a AAA-rated insurer.[7] American International Group, Inc.

(AIG) and insurance companies that guarantee bonds, known as monolines, effectively sold their high credit ratings to help banks lower their capital requirements. In its 2007 financial statement, AIG said it had sold $379 billion in credit default swaps to financial institutions "for the purpose of providing them with regulatory capital relief rather than risk mitigation."[8]

This transfer of risk became catastrophic when the securities and their insurers came under stress. Credit ratings of monoline insurers and AIG were downgraded when structured mortgage products collapsed. AIG received government assistance before its credit rating could be further downgraded to junk status.

The Dodd-Frank Act: Ending Reliance on Credit Ratings for Regulation

Section 939A of the Dodd-Frank Act requires federal regulators to remove references to NRSRO credit ratings and find alternatives.[9] Since then, regulators have rewritten most rules relying on NRSRO ratings. Regulators replaced credit ratings with three types of alternatives: definitions, regulatory models, and third-party classifications (see **Figure 2**).

Figure 2. Regulators Introduced Three Types of Alternatives for Credit Ratings

Alternative	Market Participant	Regulation Type
Definitions	Banks Broker-Dealers Money Market Mutual Funds	Asset restrictions
	Banks	Capital requirements when setting criteria for eligible guarantors and collateral
Regulatory Models	Banks	Capital requirements for structured products
Third-Party Classification	Banks	Capital requirements for sovereign and depository institution debt
	Insurance Companies	Capital requirements for residential mortgage-backed securities and commercial mortgage-backed securities

Source: Author's analysis

Definitions

Defining creditworthiness for certain securities is the most widely used alternative to credit ratings in financial regulation since the Dodd-Frank Act. This approach has three key features. First, regulated entities must determine the securities they hold meet the new regulatory definitions (see **Figure 3**). Prudential regulators have the discretion to accept or reject these justifications. Second, regulators provide guidance about factors they will consider in reviewing firms' determinations. Third, credit ratings still can be used, but regulated entities must justify their use.

Regulatory models

In the second approach, bank regulators give companies models to use in place of credit ratings. For example, federal bank regulators use two models to replace credit ratings in setting capital requirements for securitized products.[10] The first model is the Simplified Supervisory Formula Approach (SSFA). The SSFA model has a formula that includes the risk weights[11] of the securitization's underlying assets and the percent of the securitization pool that has been delinquent for 90 days or more. The formula also includes the relative risk of the tranche compared to other tranches in the deal structure and whether the securitization is a re-securitization.

The second model is the gross-up approach. Regulators permit this approach only for smaller banks with limited trading activity. The gross-up model takes into account a securitized product's tranche position to determine risk weight.

Both models set a minimum risk weight of 20 percent. To reduce the potential for gaming, a bank must pick one model and apply it to all securitization exposures.

Third-party classification

In the third approach, regulators use third parties other than rating agencies to set credit standards. For example, federal bank regulators now use country risk assessments provided by the Organization for Economic Co-operation and Development (OECD) to set capital requirements for sovereign and depository institution debt.

Figure 3. Regulatory Definitions of Creditworthiness

Regulator	Definition of Creditworthy Securities	Date Issued
Office of the Comptroller of the Currency	"An issuer has an adequate capacity to meet financial commitments if the risk of default by the obligor is low and the full and timely repayment of principal and interest is expected."	June 13, 2012
Securities and Exchange Commission	"With a remaining maturity of 397 calendar days or less that the fund's board of directors determines presents minimal credit risks to the fund…"	Sept. 25, 2015
National Credit Union Administration	"An investment grade security is one where the credit union determines that the issuer has an adequate capacity to meet all financial commitments under the security for the projected life of the asset or exposure, even under adverse economic conditions."	Dec. 13, 2012
Office of the Comptroller of the Currency and Federal Reserve	"… investment grade means that the entity to which the banking organization is exposed through a loan or security, or the reference entity with respect to a credit derivative, has adequate capacity to meet financial commitments for the projected life of the asset or exposure."	Oct. 11, 2013
Employee Benefits Security Administration (Department of Labor)	"… the requirements for creditworthiness under section 6(a)(5)(A)(iv)(I) would be satisfied if the board of directors or members of the BIDCO (or a delegate thereof) determines that the debt security is: (a) subject to no greater than moderate credit risk and (b) sufficiently liquid that the security can be sold at or near its carrying value within a reasonably short period of time."	June 21, 2013

Sources: Final Rule, Federal Register 77, No. 114, June 13, 2012; Final Rule, Federal Register 80, no. 186, Sept. 25, 2015; Final Rule, Federal Register 77, no. 240, Dec. 13, 2012; Final Rule, Federal Register 78, no. 198, Oct. 11, 2013; Proposed Rule, Federal Register 78, no. 120, June 21, 2013

State insurance regulators turned to other service providers to set capital requirements for insurers' holdings of MBS. In 2009, the National Association of Insurance Commissioners (NAIC) hired Pacific Investment Management Company, LLC (PIMCO) to model cash flows from residential MBS based on NAIC's specifications.[12] In 2010, the NAIC hired BlackRock, Inc. to model cash flows for commercial MBS.[13] PIMCO and BlackRock are large asset management companies. Both use MBS data to calculate an intrinsic value that is compared to the balance sheet value. Next, an NAIC designation is assigned. That designation replaces ratings to determine adequate capital levels for insurance companies. State insurance regulators acting through the NAIC Valuation of Securities (E) Task Force decide parameters for the scenarios modeled each year. In 2015, BlackRock became the sole vendor to the NAIC for both residential and commercial MBS.[14]

NAIC continues to use credit ratings, when they exist, to set capital requirements for other insurers for fixed income products. When an NRSRO rating does not exist, NAIC investment analysts evaluate credit quality and assign an NAIC designation. State insurance regulators may require a fixed income security filed with an NRSRO rating to be reviewed by NAIC investment analysts if questions or concerns exist.

Challenges and Concerns

The three alternative approaches to credit ratings bring potential challenges and concerns.

Definitions

There are two primary concerns with the definition-based approach. The first is the discretion it gives to companies and their regulators. For this approach to succeed, companies and their regulators must be able to properly identify the risks in different securities. Companies have a strong incentive to overstate the quality of their assets to reduce their regulatory requirements.

A second concern is the loss of granularity for analyzing different levels of credit risk. For example, the previous Basel II bank capital rules put corporate bonds into four risk buckets.[15] There is only one bucket under the Basel III rules as implemented by U.S. regulators. This loss of granularity can incentivize a financial institution to take more risk because it gets no regulatory benefits from holding safer securities.

The loss of granularity could be inherent in the definition-based approach. For instance, the National Credit Union Administration differentiates levels of credit risk with the phrases "adequate capacity" and "very strong capacity." The distinction may not be clear to regulated companies. At a 2011 Congressional hearing, a representative of the Office of the Comptroller of the Currency highlighted this challenge. David K. Wilson, then the agency's chief national bank examiner, said, "[I]t is hard to come up with definitions that provide [the] level of granularity to put risk weights into buckets like the Basel accord did."[16]

Regulatory models

Using regulatory models to set capital requirements also has challenges. A regulatory model can be inaccurate and incorrectly categorize the riskiness of securities. Market participants also have a strong incentive to game these models, as they did with rating agency models in the lead-up to the crisis.[17]

These concerns could be addressed by reviewing and updating models. Regulators and independent third parties could regularly review and report how market participants are meeting the requirements of the models. They could suggest and implement remedies to enhance these models when they identify weaknesses — a complicated task.

For example, the lack of forward-looking indicators in the SSFA model could be a concern. Delinquent loans cause the model to require more capital, but only after payments are missed. The model could be more forward-looking if it included indicators such as local unemployment rates and housing prices that could predict future delinquencies.

Third-party classification

Like rating agencies, third parties that help set credit standards may face incentive problems. Regulators may need to consider a third party's funding, incentive structures, and competitive pressures. For example, regulators could regularly review the firewalls in place to ensure a third party is not using information it gains from its role as a service provider to support its other businesses, such as asset management.

Finally, it is important to ensure a third party is measuring credit risk. OECD Country Risk Classifications used for implementing the Basel III capital standards are designed to measure a different risk than the rating agencies measure. According to the OECD, "The country risk classifications **are not** sovereign risk classifications and should not, therefore, be compared with the sovereign risk classifications of private credit rating agencies." [Emphasis in original.][18]

Conclusion

Financial regulators have relied on credit rating agencies for decades. This reliance can lead to perverse incentives. Rating agencies may inflate ratings to reduce the burden for regulated companies. The financial crisis illustrated the potential risks from these incentives.

The Dodd-Frank Act called for eliminating credit ratings from federal financial regulation and substituting alternative standards of creditworthiness. Regulators responded by replacing credit ratings with alternative approaches. Those alternatives include the use of definitions, regulatory models, and evaluation by third parties. However, all these alternatives come with challenges. In addition, the new regulatory framework could promote the growth of new types of services that are similar to rating agencies but subject to less stringent supervision.

Endnotes

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[2] See Richard Sylla, "A Historical Primer on the Business of Credit Ratings," prepared for the World Bank conference, The Role of Credit Reporting Systems in the International Economy, March 1-2, 2001 (available at www1.worldbank.org/finance/assets/images/Historical_Primer.pdf, accessed March 4, 2016).

[3] See Adam Ashcraft, Paul Goldsmith-Pinkham, and James Vickery, "MBS Ratings and the Mortgage Credit Boom," Federal Reserve Bank of New York Staff Report no. 449, May 2010 (available at www.newyorkfed.org/medialibrary/media/research/staff_reports/sr449.pdf, accessed March 4, 2016).

[4] See Darren J. Kisgen and Philip E. Strahan, "Do Regulations Based on Credit Ratings Affect a Firm's Cost of Capital?" *The Review of Financial Studies* 23, no. 12 (December 2010), 4324–4347.

[5] See Richard Stanton and Nancy Wallace, "CMBS Subordination, Ratings Inflation, and Regulatory-Capital Arbitrage," working paper, University of California Berkeley Fisher Center for Real Estate & Urban Economics, Dec. 14, 2012 (available at http://escholarship.org/uc/item/6dj7p4dg#page-1, accessed March 4, 2016).

[6] See Thomas McGuire, "Ratings in Regulation: A Petition to the Gorillas," speech at the Securities and Exchange Commission's fifth annual International Institute for Securities Market Development, June 1995.

[7] See Viral Acharya, Thomas Cooley, Matthew Richardson, and Ingo Walter, *Regulating Wall Street: The Dodd-Frank Act and the New Architecture of Global Finance,* 2011.

[8] See Form 10-K, American International Group, Dec. 31, 2007 (available at www.aig.com/Chartis/internet/US/en/2007-10k_tcm3171-440886.pdf, accessed March 4, 2016).

[9] See U.S. Congress, *Dodd-Frank Wall Street Reform and Consumer Protection Act,* Public Law 111-203 Washington: U.S. Government Printing Office, July 21, 2010, 61.

[10] See Department of the Treasury, Office of the Comptroller of the Currency, and the Federal Reserve System, "Regulatory Capital Rules: Regulatory Capital, Implementation of Basel III, Capital Adequacy, Transition Provisions, Prompt Corrective Action, Standardized Approach for Risk-weighted Assets, Market Discipline and Disclosure Requirements, Advanced Approaches Risk-Based Capital Rule, and Market Risk Capital Rule," final rule, Federal Register 78, no. 198, Oct. 11, 2013 (available at https://federalregister.gov/a/2013-21653, accessed April 6, 2016); Federal Deposit Insurance Corporation, "Regulatory Capital Rules: Regulatory Capital, Implementation of Basel III, Capital Adequacy, Transition Provisions, Prompt Corrective Action, Standardized Approach for Risk-weighted Assets, Market Discipline and Disclosure Requirements, Advanced Approaches Risk-Based Capital Rule, and Market Risk Capital Rule," interim final rule, Federal Register 78, no. 175, Sept. 10, 2013 (available at https://federalregister.gov/a/2013-20536, accessed April 6, 2016); Federal Deposit Insurance Corporation, "Regulatory Capital Rules: Regulatory Capital, Implementation of Basel III, Capital Adequacy, Transition Provisions, Prompt Corrective Action, Standardized Approach for Risk-weighted Assets, Market Discipline and Disclosure Requirements, Advanced Approaches Risk-Based Capital Rule, and Market Risk Capital Rule," final rule, Federal Register 79, no. 71, April 14, 2014 (available at https://federalregister.gov/a/2014-08259, accessed April 6, 2016).

[11] Risk-based capital standards use risk weights based on the risks of different classes of assets. An asset with a 20 percent risk weight, for example, would require 20 percent as much capital as an asset with a 100 percent risk weight.

[12] See National Association of Insurance Commissioners, "NAIC Selects PIMCO to Model Residential Mortgage-Backed Securities," press release, Nov. 17, 2009 (available at www.naic.org/Releases/2009_docs/pimco_rmbs.htm, accessed March 4, 2016).

[13] See National Association of Insurance Commissioners, "NAIC Selects BlackRock Solutions to Model Commercial Mortgage-Backed Securities," press release, Sept. 2, 2010 (available at www.naic.org/Releases/2010_docs/naic_selects_blackrock_solutions_to_model_cmbs.htm, accessed March 4, 2016).

[14] See National Association of Insurance Commissioners, "NAIC Names BlackRock Solutions as Vendor for RMBS and CMBS Financial Modeling," press release, Aug. 17, 2015 (available at www.naic.org/Releases/2015_docs/naic_names_blackrock_solutions_as_vendor_for_rmbs_and_cmbs_financial_modeling.htm, accessed March 4, 2016).

[15] See Bank for International Settlements, "International Convergence of Capital Measurement and Capital Standards: A Revised Framework Comprehensive Version," June 2006 (available at www.bis.org/publ/bcbs128.pdf, accessed March 4, 2016).

[16] See U.S. House of Representatives Subcommittee on Oversight and Investigations, "Oversight of Credit Rating Agencies Post-Dodd-Frank," 112nd Cong., 1st Sess., July 27, 2011 (available at financialservices.house.gov/uploadedfiles/112-51.pdf, accessed March 4, 2016).

[17] See Gretchen Morgenson and Louise Story, "Rating Agency Data Aided Wall Street in Deals," *New York Times,* April 23, 2010 (available at www.nytimes.com/2010/04/24/business/24rating.html, accessed March 4, 2016).

[18] See Organisation for Economic Co-operation and Development, "Country Risk Classification," Oct. 30, 2015 (available at www.oecd.org/tad/xcred/crc.htm, accessed March 4, 2016).