

Credit Ratings and Rating Agencies

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Summary and Keywords

Credit rating agencies have developed as an information intermediary in the credit market because there are very large numbers of bonds outstanding with many different features. The Securities Industry and Financial Markets Association reports over \$20 trillion of corporate bonds, mortgaged-backed securities, and asset-backed securities in the United States. The vast size of the bond markets, the number of different bond issues, and the complexity of these securities result in a massive amount of information for potential investors to evaluate. The magnitude of the information creates the need for independent companies to provide objective evaluations of the ability of bond issuers to pay their contractually binding obligations. The result is credit rating agencies (CRAs), private companies that monitor debt securities/issuers and provide information to investors about the potential default risk of individual bond issues and issuing firms.

Rating agencies provide ratings for many types of debt instruments including corporate bonds, debt instruments backed by assets such as mortgages (mortgage-backed securities), short-term debt of corporations, municipal government debt, and debt issued by central governments (sovereign bonds).

The three largest rating agencies are Moody's, Standard & Poor's, and Fitch. These agencies provide ratings that are indicators of the relative probability of default. Bonds with the highest rating of AAA have very low probabilities of default and consequently the yields on these bonds are relatively low. As the ratings decline, the probability of default increases and the bond yields increase.

Ratings are important to institutional investors such as insurance companies, pension funds, and mutual funds. These large investors are often restricted to purchasing exclusively or primarily bonds in the highest rating categories. Consequently, the highest ratings are usually called investment grade. The lower ratings are usually designated as high-yield or "junk bonds."

There is a controversy about the possibility of inflated ratings. Since issuers pay rating agencies for providing ratings, there may be an incentive for the rating agencies to provide inflated ratings in exchange for fees. In the U.S. corporate bond market, at least two and often three agencies provide ratings. Multiple ratings make it difficult for one rating

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agency to provide inflated ratings. Rating agencies are regulated by the Securities and Exchange Commission to ensure that agencies follow reasonable procedures.

Keywords: bonds, fixed income securities, credit ratings, credit rating agencies, bond ratings, default risk, mortgage-backed securities, junk bonds, NRSRO

Development of the Ratings Industry

The credit rating industry was launched by John Moody, who first rated U.S. railroad bonds in 1909 and corporate bonds in the following year. Poor's Publishing Company and Standard Statistics Company were founded in 1916 and 1922, respectively; the two companies merged in 1941 to form Standard and Poor's (S&P). Fitch Publishing Company issued its first rating in 1924 (Cantor & Packer, 1995). The three large credit rating agencies (CRAs) (Moody's, S&P, and Fitch) account for more than 95% of the credit rating market shares currently (SEC, 2020). In addition to the Big Three CRAs, there are other smaller CRAs in the United States and a number of CRAs in other countries. Some CRAs may focus on a specific segment of the debt market. An example is AM Best Company, which specializes in insurance companies.

Credit Rating Symbols and Interpretation

Credit ratings are alphanumeric symbols assigned by the CRAs to individual bonds and firms as indicators of relative default probabilities. Table 1 reports the long-term, and Table 2 the short-term, rating symbols used by the Big Three CRAs. For the long-term ratings, S&P and Fitch use capital letters; Moody's uses a capital letter followed by lower-case letters. In addition, each of the rating agencies provides sub-ratings or notches to divide the letter ratings into finer categories. For example, the rating A is divided into A+, A, and A- using the S&P's notation. Bonds with ratings of AAA are forecast by the CRAs to have the lowest probability of default, or highest credit quality. As the ratings decrease to AA, A, BBB, BB, B, and so forth, the probability of default increases.

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Table 1. Long-Term Rating Symbols and Interpretation

	Moody's	Fitch and S&P	Interpretation
Investment-Grade Ratings	Aaa	AAA	Highest Quality
	Aa1	AA+	
	Aa2	AA	
	Aa3	AA–	
	A1	A+	Strong Payment Capacity
	A2	A	
	A3	A–	
	Baa1	BBB+	Adequate Payment Capacity
	Baa2	BBB	
	Baa3	BBB–	
Speculative or Junk Ratings	Ba1	BB+	Likely to Fulfill Obligations; Ongoing Uncertainty
	Ba2	BB	
	Ba3	BB–	
	B1	B+	High-Risk Obligations
	B2	B	
	B3	B–	
	Caa1	CCC+	Current Vulnerability to Default
	Caa2	CCC	
	Caa3	CCC–	

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	Ca	CC	In Bankruptcy or Default or Other
	C	C	
		D	In Default

There are various types of credit ratings. Issue or instrument ratings are assigned to individual debt securities and measure their relative default risks. Issuer or obligor ratings are given to business entities and measure their abilities to meet financial obligations. Different debt instruments by the same issuer do not necessarily have the same issue ratings. The issue ratings can differ from the issuer rating. For example, subordinate (junior) bonds generally have lower issue ratings than their unsubordinated (senior) brethren.

Short-term ratings are broadly classified into two groups: prime ratings and non-prime ratings. Short-term debt securities and firms with prime ratings generally have low default risks and acceptable to superior abilities to meet short-term financial obligations. Non-prime ratings indicate major ongoing uncertainties or current vulnerability to default or in default.

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Table 2. Short-Term Rating Symbols and Interpretation

	Moody's	S&P	Fitch	Interpretation
Prime Ratings	P-1	A-1	F-1	Superior ability to repay short-term debt obligations
	P-2	A-2	F-2	Strong ability to repay short-term debt obligations
	P-3	A-3	F-3	Acceptable ability to repay short-term debt obligations
Non-Prime Ratings	NP	B	B	Major ongoing uncertainty
		C	C	Currently vulnerable to nonpayment
		D	D	In default

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Credit rating agencies use the same alphanumerical symbols for different rating types and strive to make them comparable, that is, debt instruments or entities of the same rating symbol should have similar relative default rates. With credit ratings as a common and consistent measure of default risk, investors can easily evaluate and compare different types of debt instruments, for example, corporate bonds and mortgage-backed securities (MBS). Empirical studies, however, find that different types of ratings are not always comparable (Cornaggia, Cornaggia, & Xia, 2016).

Credit Ratings, Default Rates, and Bond Yields

Major credit rating agencies provide historical statistics on the relation between ratings and default rates. For example, Figure 1 reports the historical average cumulative default rates of corporate issues by S&P ratings over various investment horizons.

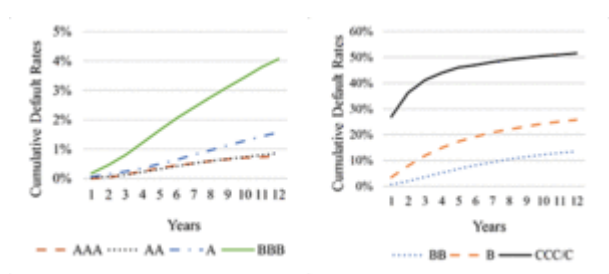


Figure 1. Average corporate cumulative default rates by S&P ratings (1981–2018).

Source: 2018 S&P Annual Global Corporate Default and Rating Transition Study.

Figure 1 clearly shows that default rates increase as ratings decline from AAA to C and are much higher for ratings below BBB. This figure shows credit ratings effectively differentiate debt instruments based on their credit risk on average. The historical average cumulative default rates for AAA, AA, A, and BBB rated bonds a decade after initial issuance do not exceed 4%. Since bonds with AAA, AA, A, and BBB have relatively low default rates, they are typically called investment-grade bonds and are considered to be suitable for prudent investments. On the other hand, bonds with ratings below BBB have much higher average 10-year cumulative default rates, ranging from 10 to 50%. Due to their substantially higher default risks, bonds with ratings below BBB are considered speculative in nature and are often called speculative bonds or junk bonds.

Investors typically demand higher yields on speculative bonds to compensate for the higher credit risks. Consequently, the speculative bonds are also known as high-yield bonds. Figure 2 presents the Barclays U.S. Aggregate Bond Index Yields by different rating categories from 1995 to 2017. While the bond yields fluctuate significantly over the two decades, lower rated bonds consistently have higher yields than highly rated bonds. The yield differences between the speculative bonds (with BB, B, and CCC ratings) and invest-

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ment-grade bonds are markedly higher. Notice that the differences in the yields to maturity vary considerably over time.

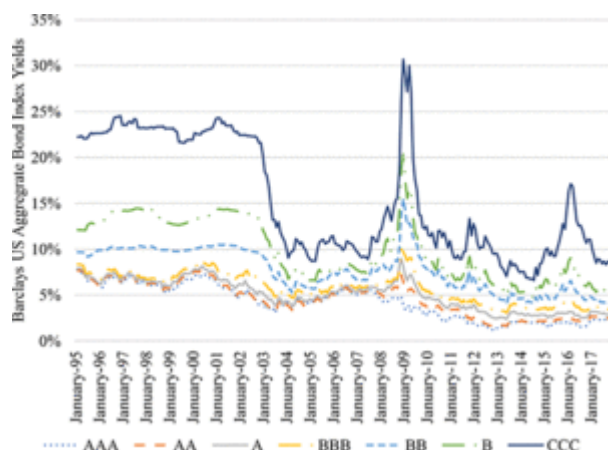


Figure 2. Barclays U.S. aggregate bond index yields by ratings (1995–2017).

Determinants of Default Risk

As shown earlier, credit ratings are highly correlated with default rates, suggesting they contain relevant information about default risk. While CRAs do not reveal the exact procedure and information used to derive ratings, statistical studies have shown that publicly available accounting and market information are major determinants of credit ratings and can explain a significant amount of variation in credit ratings (Blume, Lim, & MacKinlay, 1998; Kaplan & Urwitz, 1979). Corporate bond ratings are highly correlated with the following: interest coverage ratios, operating profit margin, long-term debt ratio, total debt ratios, firm size, equity beta, and equity idiosyncratic risk. Intuitively, firms with higher interest coverage ratios, higher operating profit margins, lower long-term and total debt ratios, larger firm size, and lower equity beta and idiosyncratic risk have higher credit ratings. The specific features of bond issues will also affect the credit ratings. For example, a common practice by CRAs is to rate subordinate bonds one or two notches below the senior bonds by the same issuer.

Empirical research shows that credit ratings contain and reflect publicly available information on credit risk (Kraft, 2015A, 2015B). Another question is whether credit ratings contain non-public information. To test for private information content of credit ratings, a number of research papers have examined market reactions to credit rating changes (Goh & Ederington, 1993; Hand, Holthausen, & Leftwich, 1992; Kliger & Sarig, 2000). If credit rating changes contain new information not available to the public, there should be a change in bond and/or stock prices at the time of the rating change. While the empirical evidence is mixed, most studies document significant abnormal bond/equity returns in response to rating changes. In addition, there have been stronger market reactions to rating changes after the passage of Regulation Fair Disclosure, further supporting the view of private information content of credit ratings (Jorion, Zhu, & Shi, 2005).

Split Ratings

In the corporate bond market, virtually all public bond issues are rated by Moody's and S&P. About 40% of all public bond issues are also rated by Fitch. The three rating agencies do not always agree on the rating for a particular bond issue. Moody's and S&P disagree with each other about 50% of the time at the notch level, for example A versus A- (Livingston, Wei, & Zhou, 2010). Fitch ratings disagree with both Moody's and S&P about 30% of the time. In addition, split ratings often persist over time. They do not necessarily converge.

The disagreements between the three rating agencies suggest that providing ratings is an imprecise task. Rational rating agencies may provide different ratings with the same information. The range of rational ratings for a particular opaque bond issue may cover several different rating categories. The reason is that information about firms may be opaque, that is, hard to interpret or ambiguous. For companies with relatively opaque information, rational credit rating agencies can have different ratings for the same issue, resulting in split ratings (Livingston, Naranjo, & Zhou, 2007; Morgan, 2002). For companies with transparent information, the range of rational ratings is much narrower and split ratings are less likely to occur. If the range of rational ratings is extremely narrow, all the rating agencies will tend to agree on the rating.

Junk Bonds

Bonds with lower ratings (i.e., BBB- and below) are called high-yield (junk) bonds. There are two types of high-yield bonds; "fallen angels" and "original-issue." "Fallen angels" are bonds originally issued with higher ratings, which have declined as the firm has fallen on hard times. Until the 1970s, most high-yield bonds were fallen angels.

In the Great Depression of the 1930s, there were many defaults on bonds. Although a number of the bonds had insurance against default, the defaults were so extensive that the insurance companies failed. Following this deluge of defaults, the market for original-issue junk bonds essentially disappeared.

In the 1970s, "original-issue" high-yield bonds reappeared. Michael Milken was the main catalyst in reviving this market in the 1970s. Since original-issue junk bonds are primarily issued by small risky firms, between the 1930s and 1970s these firms had to rely on bank financing as a major source of funds.

The role of original-issue high-yield bonds has been controversial. Traditionally, the market for investment-grade public debt has been restricted to larger firms. Smaller firms have been forced to finance with bank debt, or possibly private placements of debt. Original-issue high-yield debt has opened up a new source of funds to many smaller and high-risk firms. In one view, high-yield debt has been a stimulus to economic expansion because firms were removed from the straitjacket of highly restrictive bank loans. In the opposing view, high-yield debt issuers escaped the close monitoring function provided by

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commercial banks and consequently suffer from unwise financing and investment decisions.

Several authors have argued that the junk bond market was monopolized by the underwriter firm of Drexel, Burnham, and Lambert under the direction of Michael Milken.¹ In this view, Milken was able to sell junk bonds at unfair yields and at high underwriter fees. The evidence shows the bond yields were lower and underwriter fees are higher on junk bonds issued by Drexel. After Drexel went bankrupt in the early 1990s, the underwriter fees for original-issue high-yield bonds dropped dramatically, suggesting that Drexel's very large market share of over 50% of high-yield bond issues kept underwriter fees quite high. When Drexel exited, there apparently was more competition between bond underwriters and their fees for high-yield bond issues declined significantly.

Rating Changes and Transitions

Credit rating agencies regularly review the creditworthiness of debt instruments and the financial strength of the debt issuers. Credit ratings are updated when necessary. The credit rating review can result in three possible outcomes: rating upgrade, rating downgrade, or confirmation of existing rating. In addition to rating reviews, many CRAs also provide early warnings of potential future rating changes in the form of a rating outlook and CreditWatch. A rating outlook assesses the potential direction of future rating changes in the intermediate term, typically six months to two years. A positive (negative) rating outlook suggests that a rating may be raised (lowered). A stable rating outlook means that a rating change is not expected. CreditWatch, on the other hand, indicates potential rating change in the near term. However, a CreditWatch is not necessarily followed by an actual rating change, nor are all rating changes preceded by a CreditWatch.

While credit rating reviews and rating changes keep the ratings updated and reflect the changes in credit risk of the underlying debt instruments or obligors, CRAs strive for rating stability to avoid short-term reversal of rating changes. As a result, most CRAs adopt the through-the-cycle rating model.² Under the through-the-cycle model, credit ratings are designed to gauge the credit risk based on a worst-case, or bottom of the credit cycle, scenario. Thus, the credit ratings should not fluctuate over the course of the credit or business cycle. Empirical studies suggest a trade-off between rating stability and rating default predictive power: more stable ratings have less predictive power.

Credit rating agencies disclose aggregate rating change data through the use of rating transition matrices. A rating transition matrix reports the number of bonds/issuers in each rating category at the beginning of a period, and the percentages of the bonds/issuers that migrate to (stay in) a different (the same) rating category, get paid off, or default by the end of the time period. For example, Table 3 is the Moody's three-year rating transition matrix for corporate bond issuers from 2014–2016. At the beginning of 2014, 375 corporate bond issuers were rated Baa3 by Moody's. By the end of 2016, 18% were upgraded to Baa2, 38% remained at Baa3, and 8% were downgraded to Ba1, and so forth. Moreover, 1% of these corporate bond issuers defaulted, 12% paid off their bonds, and

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4% were no longer rated by Moody's. Typically, CRAs disclose one-year, three-year, and 10-year rating transition matrices. Historical data on rating transitions and default rates provide investors a gauge of the performance of credit ratings and estimates of rating upgrade/downgrade probabilities.

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Table 3. Moody's Three-Year Rating Transition Matrix for Corporate Bond Issuers From 2014-2016

	N o	A a a	A a 1	A a 2	A a 3	A 1	A 2	A 3	B a a 1	B a a 2	B a a 3	B a 1	B a 2	B a 3	B 1	B 2	B 3	C a a 1	C a a 2	C a a 3	C a	C	D e f .	P O	W D
A a a	1 5	8 7 %	7 %		7 %																				
A a 1	2 7		3 3 %	3 7 %	2 6 %																				4 %
A a 2	2 0			5 0 %	3 0 %	1 0 %																		5 %	5 %
A a 3	7 5			9 %	6 7 %	1 6 %		1 %																5 %	1 %
A 1	1 4 5			9 %	2 %	5 6 %	9 %	9 %	1 %	6 %			1 %											6 %	3 %

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A 2	1 5 8						1 1 %	6 3 %	1 3 %	8 %															3 %	3 %	
A 3	2 8 9							1 4 %	5 3 %	1 4 %	4 %	2 %													1 0 %	2 %	
B a a 1	3 7 4							2 %	1 7 %	4 7 %	1 3 %	6 %	3 %	1 %		1 %	1 %								9 %	1 %	
B a a 2	4 1 7 2								2 %	1 7 %	4 7 %	1 5 %	3 %	3 %	1 %			1 %							8 %	2 %	
B a a 3	3 7 5 3								1 %	5 %	1 8 %	3 8 %	8 %	6 %	2 %	2 %	1 %	1 %	1 %						1 %	1 2 %	4 %
B a 1	1 3 6								0 %		2 %	1 9 %	3 2 %	8 %	1 0 %	6 %	1 %	1 %	1 %	1 %					1 6 %	3 %	

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B a 2	1 1 4								1 %		1 %	9 %	1 3 %	2 9 %	1 1 %	6 %	4 %	1 %	2 %	1 %					4 %	1 9 %	1 %
B a 3	1 4 0			1 %								2 %	5 %	1 6 %	2 6 %	1 2 %	4 %	1 %	2 %	1 %	1 %	1 %			1 %	1 8 %	9 %
B 1	1 5 7											2 %	1 %	5 %	1 1 %	2 3 %	8 %	6 %	8 %	1 %	1 %	1 %			5 %	2 4 %	5 %
B 2	1 3 4											4 %		2 %	2 %	1 6 %	2 3 %	1 %	4 %	3 %	1 %	1 %			7 %	1 9 %	7 %
B 3	2 0 0											1 %	1 %	1 %	2 %	5 %	7 %	2 4 %	9 %	4 %	3 %	1 %			1 %	3 0 %	4 %
C a a 1	1 7 7 1													1 %	1 %	1 %	1 %	1 0 %	1 9 %	5 %	6 %	2 %			1 5 %	3 8 %	2 %

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C	8																1		3	7	2	1	6	2	1	2	4	3	
a	9																%		%	%	%	0	%	%	%	4	0		
a																													
2																													
C	2																			1		1	1	5		5	5	5	
a	1																		0		0	0	%		7	5			
a																			%		%	%							
3																													
C	1																							7		5	2	1	
a	4																							%		0	9	4	
C	4																									5		5	
																										0		0	
																										%		0	

Source: Moody’s 2017 Form NRSRO, Exhibit 1.

Rating Agency Fees

Most credit rating agencies charge bond issuers fees for providing credit ratings. A few CRAs, for example Egan-Jones Ratings Company, adopt an investor-pay model and sell information about ratings to prospective investors. Under the issuer-pay model, CRAs may charge a rating fee per bond issue, or per issuing company. The per issue fee is typically based on the face value of the bond issue and it can vary significantly depending on the complexity and the size of bond issuance and the types of ratings. S&P discloses that its per issue fee can be up to 12 basis points of the bond par value, with a minimum fee of \$110,000. Fitch's per issue fee ranges from \$1000 to \$750,000. For bond issuers that frequently issue bonds, the CRAs typically charge a per issuer fee that covers all bond issues by the same issuing firm. Fitch has disclosed that its annual per issuer fee varies from \$10,000 to \$1,500,000. Under the issuer-pay model, the credit ratings are generally available for investors, free of charge. However, CRAs may charge fees to investors for detailed credit rating reports and other premium services.

Under the investor-pay model, CRAs make their ratings available to investors who subscribe to their services for a fee. For example, Egan-Jones charges an annual fee of \$10,000 for its rating data service. In practice, most institutional bond investors either subscribe to the information services of the three large CRAs or subscribe to an information service such as Bloomberg or Reuters (who purchase information from the CRAs).

While most ratings are requested and paid for either by issuers or investors, the Big Three CRAs may issue unsolicited ratings based on publicly available information without compensation. In disclosing the unsolicited ratings, the CRAs typically use a special notation to inform investors of the solicited nature of the ratings. The unsolicited ratings help to mitigate the problem of rating shopping, where issuing firms approach multiple CRAs and pay for the highest ratings without disclosing potentially lower ratings by other CRAs. In practice, unsolicited ratings account for a very small share of the market. Most issuers choose to solicit and pay for ratings. Paying for a rating gives the issuer the opportunity to discuss the firm's prospects and possibly divulge private information, in the hope of gaining a more favorable rating (Fulghieri, Strobl, & Xia, 2014).³

Ratings on Asset-Backed Securities

Prior to the 1980s, most credit ratings were for securities issued by an individual company. Since then, a very large number of *asset-backed* securities have been issued. The majority have been mortgage-backed securities in which individual home mortgages are pooled and sold as a package to investors.

Originally, mortgage-backed securities were pass-through securities. Each investor in the pass-through receives a proportional share of the interest, scheduled amortization, and prepayments. These mortgage-backed securities were typically guaranteed against de-

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fault by one of several government entities including the Federal Housing Administration (FHA), Government National Mortgage Association (GNMA), Veterans Administration (VA), or private insurers. The default insurance made these securities essentially default free and eliminated the importance of a default rating. They were very much like U.S. Treasury securities with the exception that mortgaged-backed securities had scheduled amortization and prepayments.

By the 1990s, many mortgaged-backed securities were issued without insurance against default. In addition, the original pass-through pools began to be divided into tranches or slices. A typical pattern was for the first tranche to receive prepayments and possibly even scheduled amortization before the other tranches. After the first tranche was fully repaid, the next tranches would be in line to receive the prepayments and amortization, and so on.

Mortgage-backed securities without default guarantees and with multiple tranches are substantially more complicated than pass-through securities with default guarantees. The ratings of the individual tranches will tend to vary substantially because the likely payment dates are variable and hard to predict. Typically, the most senior tranche will have a rating of AAA. The other tranches will have lower ratings.

The creation of a mortgage-backed security works in the following way. First, the mortgage is *originated*. A mortgage originator is a commercial bank, savings bank, or mortgage broker. A borrower approaches an originator. The originator can then grant a mortgage and receive a fee from the borrower. This fee is typically called a loan initiation fee or points. Then the mortgage is sold into a mortgage pool administered by an investment banking firm or the investment banking branch of a bank. The mortgage pool is then divided into tranches and ratings are solicited. The resulting tranches are sold to investors.

Before the 1980s, the large majority of mortgage loans were to prime borrowers and were held until maturity by the issuing commercial bank or savings institution. By the 1990s, the large majority of home mortgage loans were sold into mortgage pools that were purchased by investors. This securitization process allowed lending banks to remove mortgages from their balance sheet rapidly. The originators became less interested in the repayment likelihood and more interested in making large numbers of mortgage loans in order to maximize the total origination fees earned.

In the housing boom in the United States from the late 1990s through 2007, many higher risk mortgages were issued. Previously, mortgages were largely restricted to *prime* borrowers, that is, borrowers with a verifiable income, a substantial down payment, and a relatively high credit score. During the boom, many mortgages were issued to borrowers missing one of these three characteristics of good creditworthiness. So-called *subprime* mortgages were issued to borrowers who did not meet any of these three characteristics of good creditworthiness. These subprime borrowers were, hence, more likely to default. When the boom ended, large numbers of mortgage tranches defaulted, especially those composed of subprime mortgages.

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In an ideal market, the default ratings of mortgage-backed security tranches should reflect the relative default probabilities. However, the default rates on many mortgage-backed securities were much higher than implied by the ratings. In retrospect, the rating agencies appear to have misrepresented the default risk of many mortgage-backed securities and gave inflated ratings (see Griffin & Tang, 2012 for evidence). However, the errors in ratings for mortgage-backed securities may have been to some extent the results of the large shock from the financial crisis of 2007–2009. Subsequently, the U.S. government fined both Moody's and Standard & Poor's rating agencies heavily for failing to provide appropriate levels of ratings on mortgage-backed securities.

Other types of assets have been pooled and sold as *asset-backed* securities. One example would be car loans. But many other types of assets have been securitized and sold to various types of investors.

Regulatory Reliance on Credit Ratings

Since the 1930s, financial institutions have been restricted in their ability to invest in high-yield bonds, effectively bestowing on the rating agencies some unofficial regulatory power. For example, insurance companies and pension funds are either prohibited or permitted only limited quantities of purchases of bonds with ratings of BB, B, and CCC+. In addition, many mutual funds and exchange traded funds are not allowed to purchase those low-rated bonds. Thus, the decision to give a below investment-grade rating limits the number of potential buyers. With the use of ratings for regulation of financial institutions, CRAs are no longer pure information providers (Opp, Opp, & Harris, 2013).

The regulatory effect of credit rating on bond yields has been widely discussed. For example, several research papers suggest that third ratings by Fitch make a difference at the breakpoint between investment-grade and junk bonds (Bongaerts, Cremers, & Goetzmann, 2012; Jewell & Livingston, 1999; Kisgen & Strahan, 2010).

Regulation of Credit Rating Agencies

Originally, credit rating agencies played the role of information providers. Then the Securities and Exchange Commission (SEC) introduced a new designation (Nationally Recognized Statistical Rating Organization, or NRSRO), and now accepts only ratings from CRAs with NRSRO designation. However, the SEC did not formally establish criteria for being designated as an NRSRO until the passage of the Credit Rating Agency Reform Act of 2006. Subsequently, the SEC approved seven CRAs for NRSRO status in the United States.

The Credit Rating Agency Reform Act authorized the SEC to formally regulate the credit rating industry. The Dodd–Frank Act further established the Office of Credit Ratings (OCR) within the SEC. In the following years, the SEC adopted a series of rules (SEC Rules 17g-1 to 17g-10) to implement the requirements of the two Acts. Under the Credit

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Rating Agency Reform Act, the SEC is required to submit an annual report to Congress on (a) its rule-making and supervisory activities with regard to NRSROs, and (b) the industry's current state in terms of competition, transparency, and conflicts of interest.

The following discussion summarizes the most important rules and requirements of credit rating agencies with regard to (a) disclosure, (b) conflicts of interest, (c) promotion of competition, (d) examination, and (e) regulatory use of credit ratings.⁴

Disclosures

To increase transparency and facilitate rating performance evaluation, NRSROs are required to annually file Form NRSRO with the SEC. Important disclosures contained in the NRSRO form include (a) credit rating performance statistics, (b) rating procedures and methodologies, (c) organizational structure, (d) potential conflicts of interest as well as policies and procedures to address them, (e) audited financial statements and revenue, and (f) credit analyst compensation. The credit rating performance statistics include one-year, three-year, and 10-year rating transition and default matrices. In addition to summary rating performance statistics, NRSROs are also required to disclose the complete history of all rating actions (initiations, upgrades, downgrades, rating watches, and outlooks) taken since June 2012 and regularly update this information on their websites.

Conflicts of Interest

Critics and regulators are concerned about conflicts of interest in the rating industry (Bolton, Freixas, & Schapiro, 2012). First, as noted earlier, the issuer-pay model used by most CRAs may present an incentive to sacrifice rating quality for revenue and market share. In addition, there are potential conflicts of interest at the credit analyst level since credit analysts may be inclined to provide generous ratings to prospective future employers.⁵ To mitigate potential conflicts of interest, the SEC adopted rules that prohibit or restrict certain practices or business models, including (a) prohibitions of security ownership by analysts who participate in ratings, (b) restrictions on officer/director positions at rated entities, (c) disclosures of unusual business relationships and special personal relationships, (d) restrictions on gifts, (e) restrictions on analyst compensation, (f) prohibitions of affiliation with underwriters or issuers, (g) prohibitions of ancillary service provisions, (h) safeguards against large subscriber influences, and (i) provisions on issuer-pay model related conflicts.

Promotion of Competition

One of the most important steps in promoting competition is the formalization of the NRSRO registration process. In 2007, in implementing the Credit Rating Agency Reform Act, the SEC finalized Rule 17g-1, which (a) creates a registration process with required information from an applicant, (b) specifies a time frame (i.e., 90 days) for the SEC application review, and (c) stipulates specific reasons for application denial. A CRA can apply for NRSRO status in several or all five asset classes (corporate, financial institution, in-

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insurance, government securities, and asset-backed securities). The required application information includes the mandatory disclosures noted earlier. An application can be denied on one of two grounds: (a) the applicant does not have adequate financial and managerial resources, or (b) the applicant or a person associated with it committed any act that would have led to suspension or revocation of the NRSRO status. The purpose of the streamlined and transparent application process is to lower the regulatory barriers to entry.

In addition, the SEC imposed an “equal access” requirement in 2009 under which an NRSRO hired to issue an initial rating on an asset-backed product must share with other NRSROs information it receives from the issuer.⁶ The intent of the “equal access” requirement is to encourage unsolicited ratings by other NRSROs and hence more competition.

SEC Examination

An important part of the credit rating industry supervision is the annual examination of NRSROs by the SEC’s Office of Credit Ratings. The examinations are performed to (a) check for compliance, (b) monitor internal controls, policies, and procedures, and (c) encourage remedial actions. Specifically, examinations include a review of eight areas: (a) adherence to policies, procedures, and methodologies, (b) management of conflicts of interest, (c) implementation of ethics policies, (d) internal supervisory controls, (e) governance, (f) compliance officer activities, (g) complaints, and (h) post-employment. Potential violations or noncompliance with applicable rules and laws may be referred to the SEC Enforcement Division for further investigation. In addition, the SEC is required to summarize major findings in a public report of its annual examination.

Removal of Regulatory Use of Credit Ratings

The Dodd–Frank Act requires removal of references to credit ratings in federal safe-and-sound financial regulations. Following the passage of the Act, regulators (including the SEC) have rewritten most rules that referenced credit ratings to adopt alternative credit risk measures. In certain cases, credit ratings can still be referenced if the regulated entities can justify their usage. The National Association of Insurance Commissioners (NAIC), as of 2010, has also eliminated its reliance on credit ratings for residential and commercial mortgage-backed securities but continues to rely on rating agencies for other asset classes.

Controversial Issues

The role of the credit rating agencies in the financial system has been the topic of considerable discussion and controversy. Most of the controversy focuses on the following two subjects.

The Issuer-Pay Model and Conflicts of Interest

Critics argue that the issuer-pay model creates conflicts of interest: CRAs may have incentives to assign unrealistically high, or inflated, ratings to gain market shares and increase their profits. In a recent legal action against S&P, the SEC charged that “Standard & Poor’s elevated its own financial interests above investors’ by loosening its rating criteria to obtain business.”

Defenders of the issuer-pay model point out that a CRA that consistently gives unrealistically high ratings will lose credibility. In turn, bond investors will pay no attention to the ratings of this CRA and future issuers will lose the incentive to pay more for an unrealistically high rating. Indeed, CRAs maintain that the conflicts of interest are well contained because rating agencies would not sacrifice their long-term reputational capital for short-term profits and market share. S&P claims that “our reputation and our track record are the core of our business” (Tillman, 2007). A key question is whether concerns for reputation are effective in mitigating conflicts of interest and moral hazard problems. The existing literature has mixed findings.

Lack of Competition

One particular concern about the U.S. credit rating industry is its oligopolistic industry structure: the Big Three dominate the market. Without sufficient competition, an incumbent rating agency may fail to distinguish between different issuers of bonds, but pool them into the same rating category.

The existence of multiple rating agencies may also allow the issuing firm opportunities to “shop” for ratings in order to obtain more favorable ratings. Becker and Milbourn (2011) find higher S&P ratings for industries with larger proportions of Fitch ratings, suggesting that a higher market share by Fitch ratings motivates Standard & Poor’s to raise its ratings.

Another concern with the oligopolistic power of CRAs is potentially downward-biased unsolicited ratings. Critics argue that oligopolistic CRAs can force some issuers, who otherwise would not want to acquire a rating, to pay for a rating by threatening an unjustifiably low unsolicited rating. The 1993 lawsuit of Jefferson County School District against Moody’s over an unsolicited rating illustrates the potential market power of oligopolists. Indeed, Poon (2003) empirically documents downward bias in unsolicited ratings. Fulghieri, Strobl, and Xia (2014) demonstrate, through a rational expectation model, that the threat of unsolicited ratings enables CRAs to extract higher fees and that lower unsolicited ratings enhance the CRA’s reputation.

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Notes:

(1.) See Livingston and Williams (2007) for a discussion of the role of Drexel in the junk bond market.

(2.) In contrast, most banks adopt a point-in-time approach in their internal rating and credit analysis. The point-in-time approach assesses the borrower's credit risk based on the current condition or the most likely future condition.

(3.) Regulation Fair Disclosure (Reg FD) prohibits U.S. public firms from disclosing non-public information to selective investors/intermediaries. However, Reg FD makes an exception for non-public information disclosure to credit rating agencies. However, at the request of the Dodd-Frank Act, the SEC removed the exception from the Reg FD in 2010.

(4.) We do not trace each rule and requirement to its legislative origin nor track the evolution of the SEC rules but instead outline the current outstanding rules.

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(5.) For example, Cornaggia, Cornaggia, and Xia (2016) identify a “revolving-door” conflict, where credit analysts inflate their future employers’ ratings. Bai (2010) examines different types of conflicts of interest in the credit rating industry.

(6.) See the SEC Rule 17g-5(a).

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