

The Role Of Credit Ratings In The Financial System

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Table Of Contents

I. Introduction

II. The Role Of Credit Ratings

III. What Credit Ratings Are

IV. Misuses Of Ratings And Other Challenges To Fulfilling Their Role

V. Conclusion — Better Understanding Yields Stronger Markets

Notes

References

The Role Of Credit Ratings In The Financial System

I. Introduction

1. Despite their ubiquity in the financial markets, credit ratings are often misunderstood. Confusion about what credit ratings are, and the role they play in the financial system, has sometimes led to their misuse and prevented them from fulfilling their true role: that is, to help close the information gap between lenders and borrowers by providing independent opinions of creditworthiness.⁽¹⁾ Here, we attempt to alleviate misunderstanding by addressing these issues distinctly, in both practical and theoretical terms.

II. The Role Of Credit Ratings

A. Reducing information asymmetry

2. One way to describe the role of credit ratings is in terms of how information, or the lack of it, affects the actions of participants in financial markets. In short, credit ratings can help reduce the knowledge gap, or "information asymmetry," between borrowers (issuers) and lenders (investors). The essential subject matter of this information asymmetry is a borrower's creditworthiness. A borrower knows its own creditworthiness better than a lender does. And because creditworthiness is not a directly observable attribute, a lender generally has to estimate it from attributes that are observable, using various approaches. One is to perform its own analysis; another is to use credit ratings from independent rating agencies; and another is to use information and analysis provided by third parties or other analysts. Using multiple approaches will likely permit a lender to be more confident about its conclusions, especially if the approaches lead to the same result.
3. **1. *Creampuffs and lemons.*** The concept of asymmetric information is well established in economic theory. Profs. George Akerlof, Michael Spence, and Joseph Stiglitz shared the 2001 Nobel Prize in Economics for their work on markets with asymmetric information. Akerlof explained the concept using the highly illustrative example of the used-car market (Akerlof, 1970), which we paraphrase here.
4. Posit that every car is either good (a "creampuff") or bad (a "lemon"). The buyer of a new car doesn't know before his purchase whether the car is a creampuff or a lemon. Rather, he gains that knowledge after owning the car for a sufficient period of time (say, a year).
5. Now suppose that the owner of a creampuff wants to sell his car, and that a used creampuff is really worth \$10,000, while a used lemon is worth only \$2,000. The owner knows that his car is a creampuff, but potential buyers do not. As such, potential buyers, concerned that the car could be a lemon, will be unwilling to pay \$10,000 for it. If there is a chance that the car could be either a creampuff or a lemon, buyers might be willing to pay some price between \$2,000 and \$10,000. However, buyers will also figure out that sellers will be reluctant to sell creampuffs if they can't realize what the cars are worth, which means that most or all of the used cars offered for sale will be lemons. Accordingly, buyers will likely refuse to pay more than \$2,000 for a used car. Thus, the seller of a used creampuff would likely be unable to get a buyer to pay the fair price. The whole problem boils down to information asymmetry between the seller and the buyer: The seller knows whether the car is a lemon or a creampuff, while the buyer lacks that knowledge.

6. One commentator (Tuch, 2010) concisely summarized the "lemons" problem, as follows:
7. "Unable to distinguish between high-quality products and low-quality products ('lemons'), buyers will offer the same (discounted) price for both. High-quality products will not be offered for sale, effectively being driven out of the market by lemons. The market may even collapse."
8. A simple theoretical application of the lemons principle in credit markets might go as follows: Lenders, in the role of potential used-car buyers, would be unable to distinguish high-risk borrowers (lemons) from low-risk borrowers (creampuffs). Therefore, a lender would charge all borrowers the same rate of interest: the one necessary to cover the risk of lending to a high-risk borrower. Just like the seller of a creampuff could expect to sell his car only for the price of a lemon, a low-risk borrower would have to pay the same interest rate as a high-risk one. In such a situation, the volume of borrowing by low-risk borrowers would suffer, and lenders would misallocate productive resources away from low-risk borrowers. This suggests that economic output would be suboptimal.
9. **2. Credit ratings help close the information gap.** In the real world, of course, this problem is one of gradations, rather than absolutes. A real-world lender has some ability to distinguish between high-risk and low-risk borrowers, but that ability is imperfect. Although the lender may be able to correctly characterize potential borrowers most of the time, it will inevitably mischaracterize some. In addition, borrowers' riskiness spans a continuum; there are not merely two categories. Although a lender can adjust the interest rates it charges based on its assessments of borrowers' riskiness, these adjustments may be suboptimal because the assessments may be imprecise or inaccurate.
10. Enter credit ratings. By combining credit ratings with its own analysis, a lender can potentially better distinguish among borrowers of different creditworthiness. By using ratings as an independent, unbiased "second opinion," the lender may be able to more accurately map the interest rates it charges to the true riskiness of the borrowers. The overall result should be a superior allocation of limited capital to productive uses.
11. Interestingly, in his 1970 article, Akerlof used credit markets as an example of the lemon principle in operation, with a focus on credit markets in less-developed countries. Akerlof concluded the article by noting that markets develop responses to "counteract the effects of uncertainty." He identifies four types of responses: guarantees, brand-name goods, chains (such as restaurant and hotel chains), and licensing of service providers, such as doctors, lawyers, and barbers.
12. More recently, other scholars have highlighted the role of credit ratings in reducing information asymmetry. For example, researchers at the Bank of England recently stated:
13. "Rating agencies originally emerged to assist dispersed investors in monitoring issuers in the debt capital markets. By assigning an objective measure of credit quality to debt issues, based on independent analysis of issuer-supplied financial information, CRAs can help to reduce information asymmetries between investors and borrowers. This can widen market participation and contribute to deeper, more liquid markets." (Deb et al., 2011, p. 3)
14. Likewise, a noted legal scholar described the credit rating agencies' activities in terms of information asymmetry, as follows:
15. "The debt-rating agency is in this sense a solution to the classic 'market for lemons' problem. In principle, given the prospect of fraud and default, an issuer will be forced to pay the interest rate applicable to the average quality issuer unless it can credibly signal its superior credit to the market. ... Such a market and inefficient average cost pricing typically arise when the individual competitor cannot credibly distinguish its product from the herd of similar products." (Coffee, 2006, p. 309, n. 20)

16. Over the years, various other commentators—mostly from academic or policy orientations—have observed that the role of credit ratings is to address information asymmetry in credit markets. Examples include Partnoy (1999), White (2001), Schwarcz (2002), Carron et al. (2003), Bank for International Settlements (2005), Fulghieri et al. (2010), Opp et al. (2011), Rousseau (2011), and Kiff et al. (2012). However, most of them simply make the point in passing and do not pursue it to any depth, and some reach conclusions or policy recommendations that appear to imply a different type of role entirely. For the most part, they focus greater attention on the mechanics of how credit rating agencies operate day-to-day than on the actual role of credit ratings in the decision-making processes of investors and issuers.

B. Improving market function and efficiency

17. Another way to describe the role of credit ratings is in terms of "market efficiency." This description focuses on how credit ratings contribute to the operation of markets, rather than on how they affect specific market participants in specific transactions. Essentially, credit ratings reduce the ability of one investor to outperform another by making better judgments about creditworthiness. In this view, ratings act as an equalizer in the fixed-income capital markets, helping to put investors on more equal footing. Various commentators, including Schwarcz (2002), Carron et al. (2003), Opp (2011), Deb et al. (2011), and Rousseau (2011), have recognized credit ratings' efficiency-enhancing role. Ultimately, though, the "market efficiency" description and the "asymmetric information" description amount to the same thing. The mechanism through which credit ratings improve market efficiency is by reducing information asymmetries.

C. How credit ratings fulfill their role

18. Credit ratings fulfill their role in the markets in several ways. The most obvious is by serving as an unbiased, independent "second opinion" that an investor can use to confirm or refute his or her own analysis. Beyond that ideal case, however, credit ratings may also mitigate information asymmetry in some less obvious ways.
19. For example, some institutional investors include credit ratings in their investment policies for fixed-income investments. Such an investment policy does not delve into the nuances of different kinds of bonds, but rather uses credit ratings as screens to disqualify securities that exceed a maximum threshold of credit risk. In such cases, the credit rating is a necessary—but not, in itself, sufficient—condition for investing in a given security. The investor is using credit ratings to screen securities before conducting its own analysis and before examining research and analysis from other outside sources. In such a case, credit ratings mitigate information asymmetry in two ways. First, by providing the screen that helps the institution to apply its analytical resources most effectively, and second, by supplying an unbiased, independent "second opinion" of the security's creditworthiness.
20. In many cases, when an issuer obtains a credit rating on its own securities, it is trying to send investors a signal about its creditworthiness. In the context of the used-car example, the issuer wants to signal that it is not a "lemon." By reducing uncertainty about its creditworthiness, an issuer may achieve lower costs of borrowing than it would otherwise have.

D. Implications of the role, and how regulatory use of credit ratings can distort it

21. Rating agencies' role in the market is significant, but it is also specialized and somewhat limited. The main flow of information in the capital markets is from issuers to investors. A secondary flow of information comes from exchanges, data vendors, and trading desks in the form of prices and trading flows. Rating agencies provide a third source of additional information consisting of independent credit opinions. Credit ratings can contribute to an investor's decision-making process, but they are not a substitute for the investor's own analysis or for information

from other sources.

22. Some market participants, however, perceive a larger role for credit ratings, in the form of promoting financial stability or preventing asset bubbles and financial crises. They assert that credit ratings can cause or exacerbate a bubble or a crisis. Examples include Arezki et al. (2011), Coffee (2010), Deb et al. (2011), He et al. (2011), and Kiff et al. (2012). White (2009) and others have argued that decades of regulatory use elevated credit ratings to a point of amplified significance, giving them the "force of law." That point, however, ignores or misconstrues the true role of credit ratings, focusing rather on distortions of their role that regulatory or other unintended uses have caused.
23. The regulatory use of credit ratings (and certain practices described in Part IV) can produce unintended effects. These can include distorting the decision-making processes of market participants and causing them to deemphasize or misunderstand the information that ratings actually provide. Such distortions, in turn, can contribute to or exacerbate an asset bubble or a financial crisis.
24. The regulatory use of private-sector gatekeepers—including rating agencies—rests on the notion that using gatekeepers helps to reduce improper behavior among the market's primary participants (issuers and investors). This assumption, in turn, relies on the premise that a gatekeeper actually can influence the behavior of an issuer's management (Tuch, 2010). Only when regulatory use distorts and amplifies a gatekeeper's role does its influence start to overshadow the other motivations and considerations of the primary market participants.
25. Policymakers around the globe have come to understand this mechanism and to respond appropriately. For example, Section 939A of the Dodd-Frank Act directs U.S. regulatory agencies to eliminate or minimize their use of credit ratings. The European Union has also proposed legislation that includes a similar provision.
26. When used as intended—as independent "second opinions" to help investors make investment decisions—credit ratings have no special ability to prevent or to cause asset bubbles or financial crises. Indeed, rating agencies are no more able than other participants in the capital markets to predict (much less prevent) financial bubbles or adverse macroeconomic trends.

III. What Credit Ratings Are

27. Credit rating symbols convey information. More specifically, they convey forward-looking, summary opinions about a borrower's or a security's creditworthiness. They summarize the conclusions of a rating agency's credit analysis, which its analysts explain more fully in a published report. Credit rating symbols are valuable because they provide summary opinions about creditworthiness—a complex, multidimensional phenomenon—using simple, one-dimensional rating scales. The challenge for a rating agency is to ensure that its methodology properly weights the diverse factors that contribute to a security's creditworthiness in a way that is useful to investors.(2)
28. A look at the origins of credit ratings reveals much about their fundamental nature. Rating agencies developed as information businesses. There was a knowledge gap between borrowers and investors, and rating agencies seized the opportunity to create and publish information about the creditworthiness of major borrowers. Investors used this information—in the form of credit opinions—to help make decisions. So essentially, rating agencies developed as a response to asymmetric information.
29. From a slightly different perspective, credit ratings are a specialized type of securities research, similar to what independent securities analysts and analysts at sell-side firms produce. Like such research, credit ratings embody

forward-looking opinions designed to contribute to an investor's decision-making process. However, instead of providing opinions about the overall investment merit of specific securities or types of securities (which embodies many different dimensions, including creditworthiness), a credit rating addresses creditworthiness only. Accordingly, credit rating agencies operate only in the fixed-income arena, while securities analysts cover the entire landscape of the capital markets.

30. Another similarity between credit ratings and research by securities analysts is that both rating agencies and securities research departments establish their own analytic methodologies. Although different securities analysts use many of the same financial ratios when they analyze companies, there is no standardization in how they weight the various ratios and qualitative factors that inform a final recommendation. Likewise, rating agencies as a group do not follow a single set of methodologies when they analyze credits. There are, in fact, many reasonable approaches to analyzing credit. Each rating agency chooses the methodology it thinks is best, drawing on its own credit research and decades of observations.
31. Another similarity between credit ratings and other third-party research is that rating agencies and research departments each have distinct definitions for their nomenclature for recommendations. For example, some sell-side research departments use simple three-step systems (e.g., buy, hold, sell), while others choose systems with more gradations (Fuchita & Litan, 2006, p. 144). Likewise, each rating agency defines the meanings of its rating symbols, which are the vocabulary through which it communicates a summary of its analysis on a given credit. Indeed, there is some evidence that different rating agencies calibrate their rating scales somewhat differently (Cantor & Packer, 1994).
32. The market can gain enormous value from the range of approaches and methodologies in use among securities analysts and rating agencies. This diversity offers investors multiple points of view to consider when making investment decisions. A single point of view would be less helpful.
33. Credit ratings can be compared to a host of other types of opinion products as well (see the table below, which compares key attributes of some selected rating systems). Some rating systems are forward-looking and aim to help users make decisions. Others are purely "historical" and don't offer any practical use. Some use a pass/fail system, while others offer graduated scales. Some reflect measures in absolute terms, while others give relative rankings. Some are multidimensional, with a conclusion that draws from a variety of factors, while others measure a single factor only. Finally, some have narrow, specialized applications, while others have broader uses. Against this backdrop, credit ratings from the major rating agencies (i) are forward-looking, with an aim to support decision-making, (ii) use graduated scales, (iii) provide relative rankings, (iv) reflect multiple factors that may influence creditworthiness, and (v) are designed specifically to address creditworthiness and no other investment considerations.

Table 1

Key Attributes Of Selected Rating Systems						
	For decisions	Forward-looking	Graduated scale or pass/fail	Absolute or relative	Single factor or multiple factors	Narrow or broad use
Rating agency credit ratings	Y	Y	G	R	M	N
Consumer Reports product quality ratings based on independent testing and consumer surveys	Y	Y	G	R	M	B

Table 1

Key Attributes Of Selected Rating Systems (cont.)						
J.D. Power and Associates product quality ratings based on consumer satisfaction surveys (four-step scale from 2 to 5)*	Y	N	G	R	M	B
Gasoline octane ratings (87, 91, 93)	Y	N	P/F	A	S	N
Underwriters Laboratories (product safety certifications)	Y	N	P/F	A	M	N
MPAA movie ratings for age suitability (G, PG, PG-13, R, NC17)	Y	N	G	A	M	N
Roger Ebert's movie ratings (0 to 4 stars)	Y	N	G	A	M	B
FICO® consumer credit ratings (estimating relative risk of serious delinquency over 2 years)	Y	Y	G	R	M	B
National Baseball Hall of Fame (inducts players who have had "exceptional careers")	N	N	P/F	A	M	n.a.
Value Line® Timeliness Ranking System that projects stock performance over a 6- to 12-month time horizon (5-step scale)	Y	Y	G	A	M	B
Morningstar Ratings™ of mutual funds based on historical performance (1 to 5 stars)	Y	N	G	A	M	B
Emporis ranking of the world's tallest buildings	N	N	G	A	S	n.a.

*J.D. Power and Associates is an affiliate of Standard & Poor's.

34. As the table shows, rating systems appear in many different contexts beyond creditworthiness. Some relate to investments, but many apply to other things. In addition, real-world rating systems differ in multiple ways, reflecting the various purposes for which each system was designed.

IV. Misuses Of Ratings And Other Challenges To Fulfilling Their Role

A. Rating shopping

35. In certain cases, an issuer may actually use ratings to increase information asymmetry. This occurs when an issuer engages in "rating shopping," or chooses the rating agency that will assign the highest rating or that has the most lax criteria for achieving a desired rating. Rating shopping rarely involves corporate, sovereign, and municipal bonds, but it is common among securitization issues. Its impact is greatest when one rating agency's criteria are more lax than its competitors'. Unless investors demand multiple ratings, certain issuers will tend to use only ratings from the agency with the most lenient standards.
36. Rating shopping hinders the ability of ratings to fulfill their role of reducing information asymmetry. Historically, rating agencies countered rating shopping by publishing unsolicited ratings. Although unsolicited ratings on securitizations were out of fashion for a number of years, recent public policy support for unsolicited ratings—as reflected in the motivation underlying SEC Rule 17g-5—suggests a push to preserve or enhance the continuing ability of credit ratings to improve market function by reducing information asymmetry.

B. Regulatory use of ratings

37. As we discussed above (in Part II, Section D), regulatory use of ratings is another challenge to credit ratings' ability to perform their true role. In some instances, regulators have used credit ratings as a way to "outsource" part of

their regulatory functions—for instance, by tying securities disclosure regulations, legal investment standards, or bank capital standards to credit ratings. When a regulation uses credit ratings in such a way, issuers or investors may also end up using ratings for purposes other than understanding credit risk. They may deemphasize (or entirely ignore) the ratings' actual purpose. In addition, when regulators use credit ratings to outsource regulatory functions, there is a tendency to treat the ratings as generic, rather than as differentiated products (i.e., to treat ratings from different rating agencies as if they mean the same thing). Such misuse encourages the simplistic and incorrect view that ratings from different rating agencies are substitutes rather than complements. Fortunately, recent policy initiatives in both the U.S. and Europe point toward declining regulatory use of ratings in the future. Ideally, regulations should neither require investors to use ratings nor restrict whether and how investors use them.

C. Substituting ratings for independent analysis

38. Credit ratings may also have difficulty fulfilling their true role if investors use them as a substitute for (rather than as a complement to) their own analysis. Investors who use credit ratings as a complete substitute for their own analysis are expecting the ratings to deliver more than they possibly can. Creditworthiness is just one dimension of overall investment merit, and responsible investment decisions need to consider all relevant factors. Depending on the particular circumstances of a potential investment, such factors may include:

- the risk-free rate,
- interest rate risk—the level and shape of yield curves,
- optionality—the presence of embedded options in a security,
- creditworthiness,
- liquidity,
- the cash flow structure—amortizing, bullet maturity, etc.,
- structural complexity (analytic difficulty/uncertainty),
- taxability of interest,
- market technicals (supply and demand), and
- general economic and business conditions and trends.

39. In addition, with respect to complex structured instruments, understanding the credit dimension alone requires much more than simply noting the credit ratings. It requires understanding the analysis behind the credit ratings and understanding the differences of opinion that can result from competing analytic approaches. As complexity increases, so does the likelihood of different results from different analytic methodologies. Thus, the "misuse" of ratings as a full substitute for an investor's own analysis can produce the unintended result of effectively increasing information asymmetry by causing an investor to assume that he knows more than he really does.

D. Misinterpretation and mischaracterization of ratings

40. A fourth factor that sometimes hinders the ability of credit ratings to reduce information asymmetries is misinterpretation and mischaracterization of the ratings. A common example is when a market participant uses credit ratings to ascribe mathematical properties, such as specific default probabilities or loss expectations, to the subject securities. Most rating agencies do not define their ratings in mathematical terms. Standard & Poor's has repeatedly emphasized that its rating system indicates a rank ordering of creditworthiness and that actual default frequencies for all rating categories should be expected to rise and fall with changes in economic conditions (Adelson et al., 2009). When users misinterpret or mischaracterize credit ratings, the ratings can increase rather than reduce information asymmetry by creating faulty assumptions and flawed decisions.

V. Conclusion — Better Understanding Yields Stronger Markets

41. The real role of credit ratings in the financial system is to improve the functioning of markets by reducing information asymmetry between issuers and borrowers who need funding and the investors and lenders who can provide it. Credit ratings thus can help make markets more efficient by putting all lenders and investors on more equal footing, thereby minimizing variations in returns that can arise from differences in the ability to make sound credit judgments.
42. Ratings are a type of information, in the form of independent opinions about the creditworthiness of issuers and securities. They fulfill their role by adding to the mix of information that investors and lenders can use when analyzing and trading securities. Moreover, rating agencies sometimes differ in their assessments of a given issuer or security, either because they calibrate their rating scales differently or ascribe greater or lesser weight to different factors in their analyses. This is a natural result of the inherently complex nature of credit analysis—it is not a simple task with a single valid approach, and seasoned professionals looking at the same facts may reasonably come to different conclusions. Accordingly, the greatest reductions in information asymmetry come from the presence of multiple ratings on a given issuer or security, in combination with other sources of information and independent analysis.
43. Misuses of ratings—including "rating shopping" by issuers, the regulatory use of ratings, and the use of ratings as a substitute for an investor's own analysis—have all contributed to distortions of a credit rating's true role. Indeed, in extreme cases, those activities can cause ratings to increase (rather than reduce) information asymmetry. And when such misuses are widespread, the market may fail to realize the full value that credit ratings can offer. Unsolicited ratings are the credit rating industry's primary response to rating shopping, and Rule 17g-5 indicates growing regulatory support for unsolicited ratings, at least in the U.S. The hope is that greater understanding of what credit ratings really are and what they aim to do can benefit all market participants and create a stronger, more efficient financial system.

Notes

- 1) For a discussion of rating agency independence, see Sweeney (2009).
- 2) Rating agencies (and other credit professionals) hold differing views of what constitutes "creditworthiness" or "credit quality." In broad terms, each explains its view in the definitions of its rating symbols. For an explanation of how Standard & Poor's defines creditworthiness, see Standard & Poor's rating definitions and Adelson et al. (2009).

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