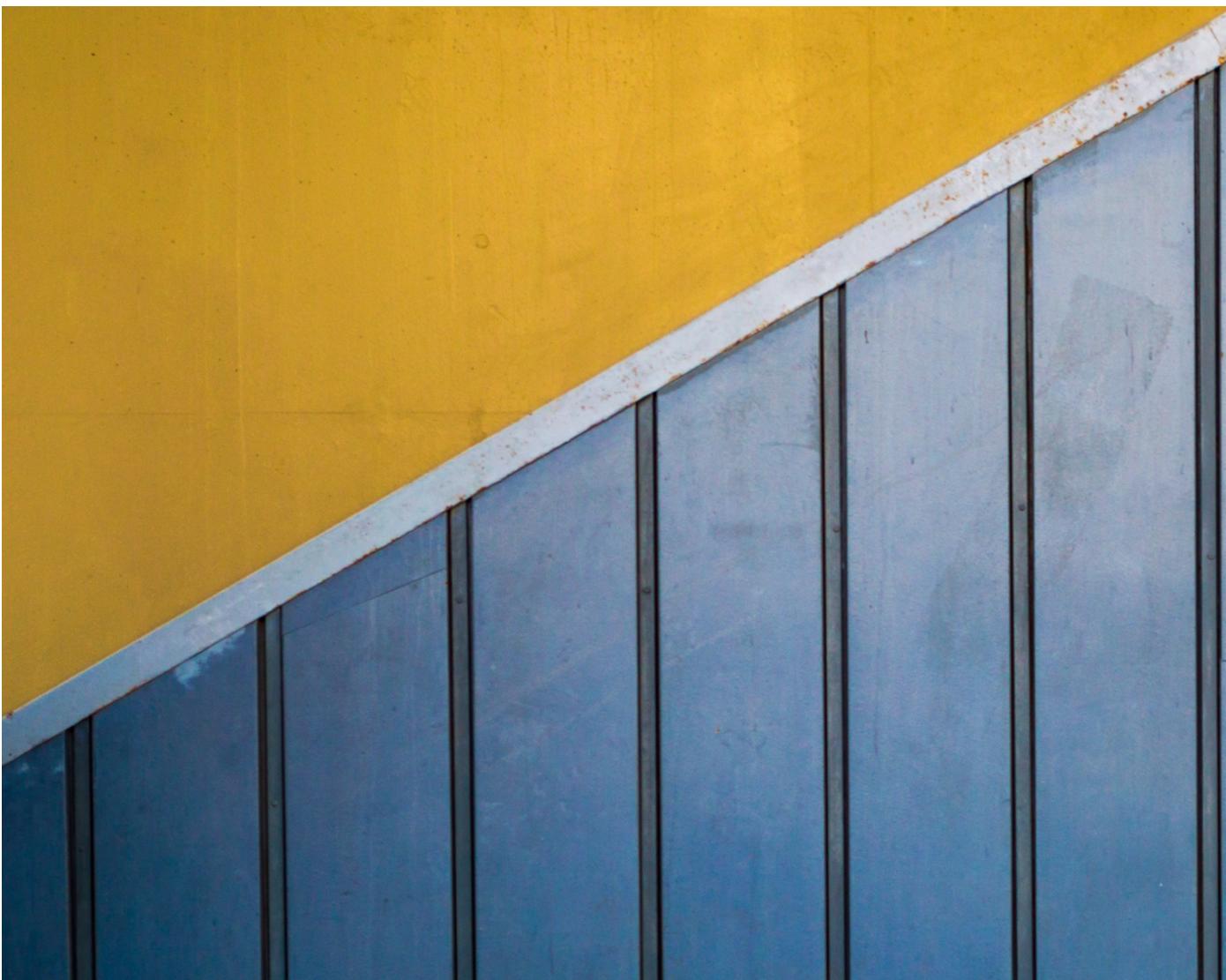


Guide to Credit Rating Essentials

What are credit ratings and how do they work?



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About this guide

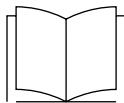
This guide is designed to provide an understanding of what credit ratings are and how they work.

This guide:

- Helps explain what credit ratings are and are not, who uses them and how they may be useful to the capital markets.
- Provides an overview of different business models and methodologies used by different ratings agencies.
- Describes generally how S&P Global Ratings form ratings opinions about issuers and individual debt issues, monitors and adjusts its ratings.

Credit ratings are a tool, among others, that investors can use when making decisions about purchasing bonds and other fixed income investments. Ratings help foster the development and smooth functioning of capital markets; capital allows people to start and grow businesses, cities and states to build highways and hospitals, and manufacturers to build factories and create jobs. Ratings express independent opinions on creditworthiness, using a common terminology that may help investors make more informed investment decisions.

S&P Global Ratings is a leading provider of independent credit ratings and analysis, offering a combination of global perspective with local insight. We update and refine our processes, from time to time, to align with new developments in the marketplace, enabling us to offer insightful opinions that help market participants make more informed investment decisions.



If you would like to learn more about credit ratings, additional information is available at [**spglobal.com/UnderstandingRatings**](http://spglobal.com/UnderstandingRatings)

What Are Credit Ratings

Credit ratings are opinions about credit risk. Our ratings express the agency's opinion about the ability and willingness of an issuer, such as a corporation or state or city government, to meet its financial obligations in full and on time.

Credit ratings can also speak to the credit quality of an individual debt issue, such as a corporate or municipal bond, and the relative likelihood that the issue may default.

Ratings are provided by credit rating agencies which specialize in evaluating credit risk. In addition to international credit rating agencies, such as S&P Global Ratings, there are regional and niche rating agencies that tend to specialize in a geographical region or industry.

Each agency applies its own methodology in measuring creditworthiness and uses a specific rating scale to publish its ratings opinions. Typically, ratings are expressed as letter grades that range, for example, from 'AAA' to 'D' to communicate the agency's opinion of relative level of credit risk.

Credit Ratings Are Forward Looking

As part of its ratings analysis, S&P Global Ratings evaluates available current and historical information and assesses the potential impact of foreseeable future events. For example, in rating a corporation as an issuer of debt, the agency may factor in anticipated ups and downs in the business cycle that may affect the corporation's creditworthiness. While the forward looking opinions of rating agencies can be of use to investors and market participants who are making long or short-term investment and business decisions, credit ratings are not a guarantee that an investment will pay out or that it will not default.

Credit Ratings Do Not Indicate Investment Merit

While investors may use credit ratings in making investment decisions, our ratings are not indications of investment merit. In other words, the ratings are not buy, sell, or hold recommendations, or a measure of asset value. Nor are they intended to signal the suitability of an investment. They speak to one aspect of an investment decision—credit quality—and, in some cases, may also address what investors can expect to recover in the event of default.

In evaluating an investment, investors should consider, in addition to credit quality, the current make-up of their portfolios, their investment strategy and time horizon, their tolerance for risk, and an estimation of the security's relative value in comparison to other securities they might choose. By way of analogy, while reputation for dependability may be an important consideration in buying a car, it is not the sole criterion on which drivers normally base their purchase decisions.

Credit Ratings Are Not Absolute Measures of Default Probability

Since there are future events and developments that cannot be foreseen, the assignment of credit ratings is not an exact science. For this reason, S&P Global Ratings opinions are not intended as guarantees of credit quality or as exact measures of the probability that a particular issuer or particular debt issue will default.

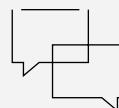
Instead, ratings express relative opinions about the creditworthiness of an issuer or credit quality of an individual debt issue, from strongest to weakest, within a universe of credit risk.

For example, a corporate bond that is rated 'AA' is viewed by the rating agency as having a higher credit quality than a corporate bond with a 'BBB' rating. But the 'AA' rating isn't a guarantee that it will not default, only that, in the agency's opinion, it is less likely to default than the 'BBB' bond.

A Matter of Opinion

Our ratings opinions are based on analysis by experienced professionals who evaluate and interpret information received from issuers and other available sources to form a considered opinion.

Unlike other types of opinions, such as, for example, those provided by doctors or lawyers, credit ratings opinions are not intended to be a prognosis or recommendation. Instead, they are primarily intended to provide investors and market participants with information about the relative credit risk of issuers and individual debt issues that the agency rates.



S&P Global Ratings public credit ratings opinions are disseminated broadly and free of charge to recipients all over the world on standardandpoors.com

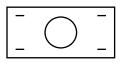
Why Are Credit Ratings Useful

Credit ratings may play a useful role in enabling corporations and governments to raise money in the capital markets. Instead of taking a loan from a bank, these entities sometimes borrow money directly from investors by issuing bonds or notes. Investors purchase these debt securities, such as municipal bonds, expecting to receive interest plus the return of their principal, either when the bond matures or as periodic payments.

Credit ratings may facilitate the process of issuing and purchasing bonds and other debt issues by providing an efficient, widely recognized, and long-standing measure of relative credit risk. Credit ratings are assigned to issuers and debt securities as well as bank loans. Investors and other market participants may use the ratings as a screening device to match the relative credit risk of an issuer or individual debt issue with their own risk tolerance or credit risk guidelines in making investment and business decisions.

For instance, in considering the purchase of a municipal bond, an investor may check to see whether the bond's credit rating is in keeping with the level of credit risk he or she is willing to assume.

At the same time, credit ratings may be used:

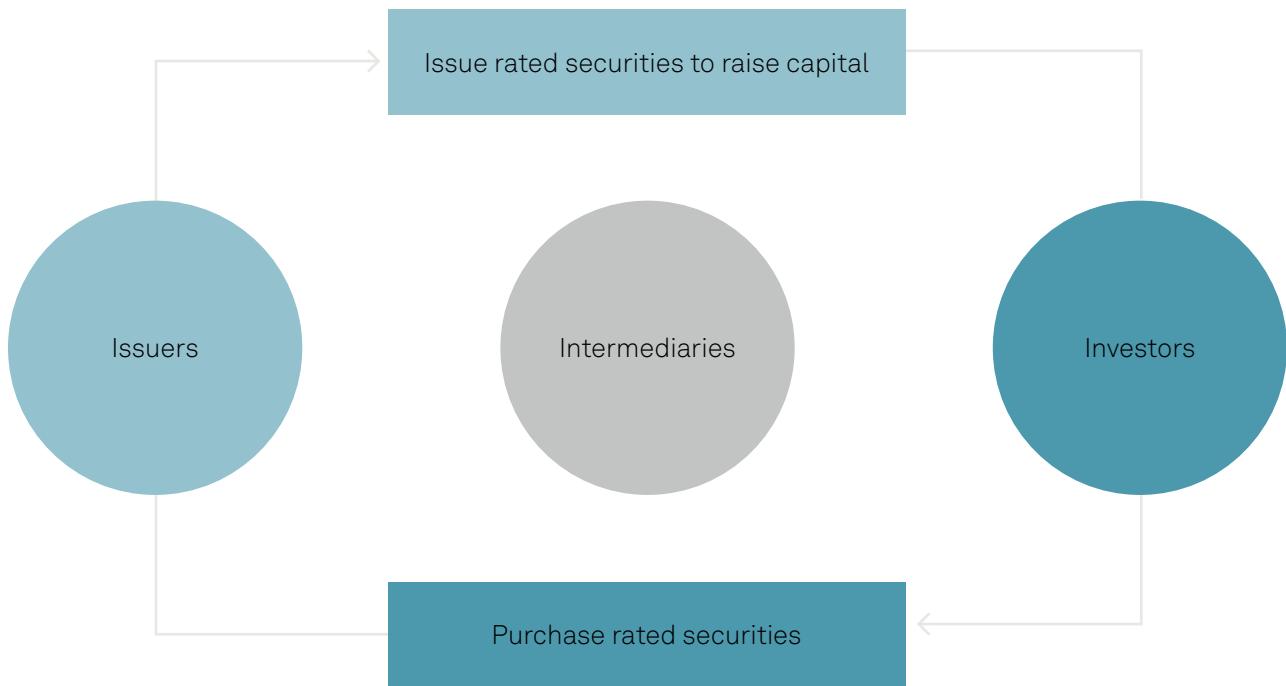


By corporations to help them raise money for expansion and/or research and development.



By states, cities, and other municipalities to fund public projects.

Raising Capital Through Rated Securities



Who Uses Credit Ratings

Investors

Investors most often use credit ratings to help assess credit risk and to compare different issuers and debt issues when making investment decisions and managing their portfolios. Individual investors, for example, may use credit ratings in evaluating the purchase of a municipal or corporate bond from a risk tolerance perspective.

Institutional investors, including mutual funds, pension funds, banks, and insurance companies, often use credit ratings to supplement their own credit analysis of specific debt issues. In addition, institutional investors may use credit ratings to establish thresholds for credit risk and investment guidelines.

A rating may be used as an indication of credit quality, but investors should consider a variety of factors, including their own analysis.

Intermediaries

Investment bankers help to facilitate the flow of capital from investors to issuers. They may use credit ratings to benchmark the relative credit risk of different debt issues, as well as to set the initial pricing for individual debt issues they structure and to help determine the interest rate these issues will pay.

Investment bankers may look to a rating agency's criteria when seeking to understand that rating agency's approach toward rating different debt issues or different tiers of debt.

Investment bankers may also serve as arrangers of debt issues. In this capacity, they may establish special purpose entities that package assets, such as retail mortgages and student loans, into securities or structured finance instruments, which they then market to investors.

Issuers

Issuers, including corporations, financial institutions, national governments, states, cities and municipalities, use credit ratings to provide independent views of their creditworthiness and the credit quality of their debt issues.

Issuers may also use credit ratings to help communicate the relative credit quality of debt issues, thereby expanding the universe of investors. In addition, credit ratings may help them anticipate the interest rate to be offered on their new debt issues.

As a general rule, the more creditworthy an issuer or an issue is, the lower the interest rate the issuer would typically have to pay to attract investors. The reverse is also true: an issuer with lower creditworthiness will typically pay a higher interest rate to offset the greater credit risk assumed by investors.

Businesses and Financial Institutions

Businesses and financial institutions, especially those involved in credit-sensitive transactions, may use credit ratings to assess counterparty risk, which is the potential risk that a party to an agreement may not fulfill its financial obligations.

For example, in deciding whether to lend money to a particular organization or in selecting a company that will guarantee the repayment of a debt issue in the event of default, a business may wish to consider the counterparty risk.

A credit rating agency's opinion of counterparty risk can therefore help businesses analyze their credit exposure to financial firms that have agreed to assume certain financial obligations and to evaluate the viability of potential partnerships and other business relationships.

Credit Rating Agencies

Some credit rating agencies, including major global agencies like S&P Global Ratings, are publishing and information companies that specialize in analyzing the credit risk of issuers and individual debt issues. They formulate and disseminate ratings opinions that are used by investors and other market participants who may consider credit risk in making their investment and business decisions. In part because rating agencies are not directly involved in capital market transactions, they have come to be viewed by both investors and issuers as impartial, independent providers of opinions on credit risk.

Rating Methodologies

In forming their opinions of credit risk, rating agencies typically use analysts or mathematical models, or a combination of the two.

Model driven ratings. A small number of credit rating agencies focus almost exclusively on quantitative data, which they incorporate into a mathematical model. For example, an agency using this approach to assess the creditworthiness of a bank or other financial institution might evaluate that entity's asset quality, funding, and profitability based primarily on data from the institution's public financial statements and regulatory filings.

Analyst driven ratings. In rating a corporation or municipality, agencies using the analyst driven approach generally assign an analyst, often in conjunction with a team of specialists, to take the lead in evaluating the entity's creditworthiness. Typically, analysts obtain information from published reports, as well as from interviews and discussions with the issuer's management. They use that information and apply their analytical judgment to assess the entity's financial condition, operating performance, policies, and risk management strategies.

Raising Capital Through Rated Securities



How Agencies Are Paid for Their Services

Agencies typically receive payment for their services either from the issuer that requests the rating or from subscribers who receive the published ratings and related credit reports.

Issuer-pay model. Under the issuer-pay model, rating agencies charge issuers a fee for providing a ratings opinion. In conducting their analysis, agencies may obtain information from issuers that might not otherwise be available to the public and factor this information into their ratings opinion. Since the rating agency does not rely solely on subscribers for fees, it can publish current ratings broadly to the public free of charge.

Subscription model. Credit rating agencies that use a subscription model charge investors and other market participants a fee for access to the agency's ratings. Critics point out that, like the issuer-pay model, this model has the potential for conflicts of interest since the entities paying for the rating, in this case investors, may attempt to influence the ratings opinion.

Critics of this model also point out that the ratings are available only to paying subscribers. These tend to be large institutional investors, leaving out smaller investors, including individual investors. In addition, rating agencies using the subscription model may have more limited access to issuers. Information from management can be helpful when providing forward looking ratings.



Managing Potential Conflicts of Interest

S&P Global Ratings has taken a number of steps to protect against potential conflicts of interest when paid by issuers.

These measures include, for example, a clear separation of function between those who negotiate the business terms for the ratings assignment and the analysts who conduct the credit analysis and provide the ratings opinions. This separation is similar in concept to the way newspapers distinguish their editorial and advertising sales functions, since they report on companies from which they may also collect advertising fees.

Another safeguard is the committee process that limits the influence any single person can have on S&P Global Ratings opinions. The role of the committee is to review and assess the analyst's recommendation for a new rating or a ratings change as well as to provide additional perspectives and checks and balances regarding adherence to the agency's ratings criteria. S&P Global Ratings client business managers, who respond to issuers' ratings requests and deal with commercial matters such as pricing, contract negotiations, and maintaining client relationships, do not participate or vote in rating committees.

Also to manage potential conflicts of interest, S&P Global Ratings establishes clearly defined policies and procedures, and makes its rating criteria transparent and freely available.

The ABCs of Rating Scales

S&P Global Ratings credit rating symbols provide a simple, efficient way to communicate creditworthiness and credit quality.

Our global rating scale provides a benchmark for evaluating the relative credit risk of issuers and issues worldwide.

General Summary of the Opinions Reflected by Our Ratings

Investment Grade

AAA	Extremely strong capacity to meet financial commitments. Highest rating.
AA	Very strong capacity to meet financial commitments.
A	Strong capacity to meet financial commitments, but somewhat susceptible to adverse economic conditions and changes in circumstances.
BBB	Adequate capacity to meet financial commitments, but more subject to adverse economic conditions.
BBB-	Considered lowest investment-grade by market participants.

Speculative Grade

BB+	Considered highest speculative-grade by market participants.
BB	Less vulnerable in the near-term but faces major ongoing uncertainties to adverse business, financial and economic conditions.
B	More vulnerable to adverse business, financial and economic conditions but currently has the capacity to meet financial commitments.
CCC	Currently vulnerable and dependent on favorable business, financial and economic conditions to meet financial commitments.
CC	Highly vulnerable; default has not yet occurred, but is expected to be a virtual certainty.
C	Currently highly vulnerable to non-payment, and ultimate recovery is expected to be lower than that of higher rated obligations.
D	Payment default on a financial commitment or breach of an imputed promise; also used when a bankruptcy petition has been filed or similar action taken.

Ratings from 'AA' to 'CCC' may be modified by the addition of a plus (+) or minus (-) sign to show relative standing within the major rating categories.



For a complete list of our Ratings Definitions, including issuer credit ratings as well as a related article on Understanding our Ratings Definitions, please go to spglobal.com/UnderstandingRatings

Investment- And Speculative-grade Debt

The term "investment-grade" historically referred to bonds and other debt securities that bank regulators and market participants viewed as suitable investments for financial institutions. Now the term is broadly used to describe issuers and issues with relatively high levels of creditworthiness and credit quality. In contrast, the term "non-investment-grade," or "speculative-grade," generally refers to debt securities where the issuer currently has the ability to repay but faces significant uncertainties, such as adverse business or financial circumstances that could affect credit risk.

In S&P Global Ratings long-term rating scale, issuers and debt issues that receive a rating of 'BBB-' or above are generally considered by regulators and market participants to be "investment-grade," while those that receive a rating lower than 'BBB-' are generally considered to be "speculative-grade."

Rating Issuers and Issues

Credit rating agencies assign ratings to issuers, such as corporations and governments, as well as to specific debt issues, such as bonds, notes, and other debt securities.

Rating an Issuer

To assess the creditworthiness of an issuer, S&P Global Ratings evaluates the issuer's ability and willingness to repay its obligations in accordance with the terms of those obligations.

To form its ratings opinions, S&P Global Ratings reviews a broad range of financial and business attributes that may influence the issuer's prompt repayment.

The specific risk factors that are analyzed depend in part on the type of issuer. For example, the credit analysis of a corporate issuer typically considers many financial and non-financial factors, including key performance indicators, economic, regulatory, and geopolitical influences, management and corporate governance attributes, and competitive position. In rating a sovereign or national government, the analysis may concentrate on fiscal and economic performance, monetary stability and the effectiveness of the government's institutions.

For high-grade credit ratings, S&P Global Ratings considers the anticipated ups and downs of the business cycle, including industry-specific and broad economic factors. The length and effects of business cycles can vary greatly, however, making their impact on credit quality difficult to predict with precision. In the case of higher risk, more volatile speculative-grade ratings, S&P Global Ratings factors in greater vulnerability to down business cycles.

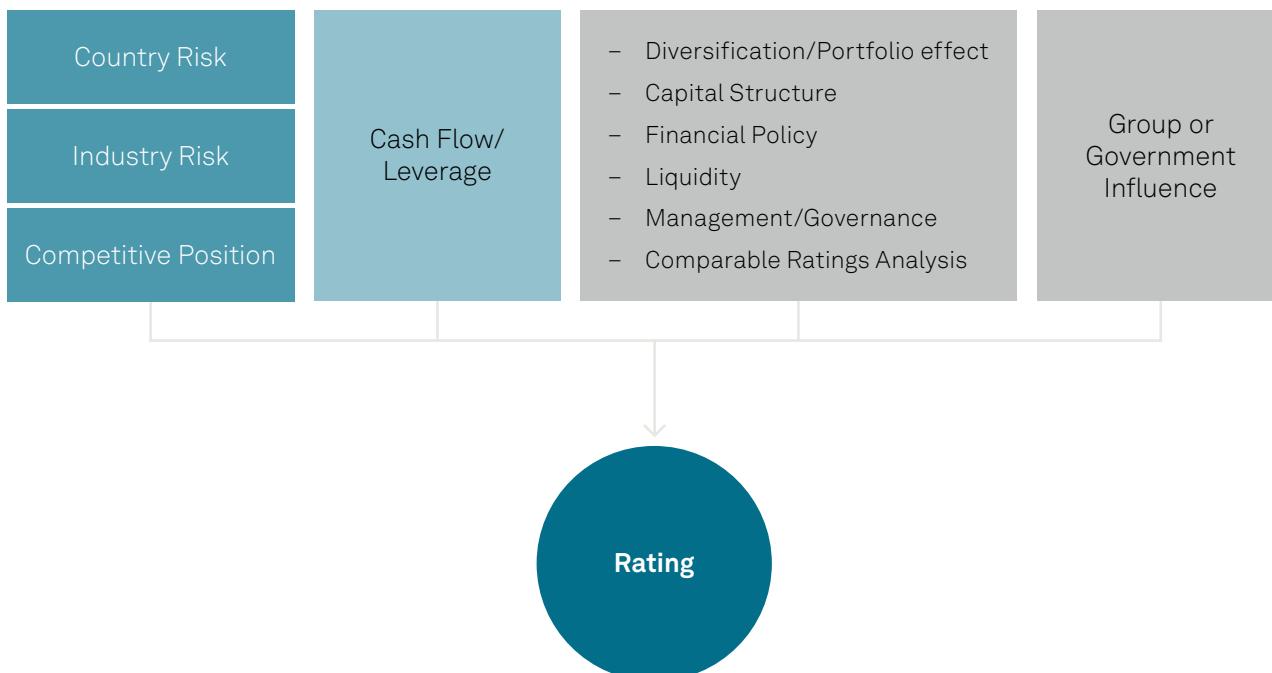
Rating an Issue

In rating an individual debt issue, such as a corporate or municipal bond, S&P Global Ratings typically uses, among other things, information from the issuer and other sources to evaluate the credit quality of the issue and the likelihood of default. In the case of bonds issued by corporations or municipalities, rating agencies typically begin with an evaluation of the creditworthiness of the issuer before assessing the credit quality of a specific debt issue.

In analyzing debt issues, for example, S&P Global Ratings analysts evaluate, among other things:

- The terms and conditions of the debt security and, if relevant, its legal structure.
- The relative seniority of the issue with regard to the issuer's other debt issues and priority of repayment in the event of default.
- The existence of external support or credit enhancements, such as letters of credit, guarantees, insurance, and collateral. These protections can provide a cushion that limits the potential credit risks associated with a particular issue.

Raising Capital Through Rated Securities



Recovery of Investment After Default

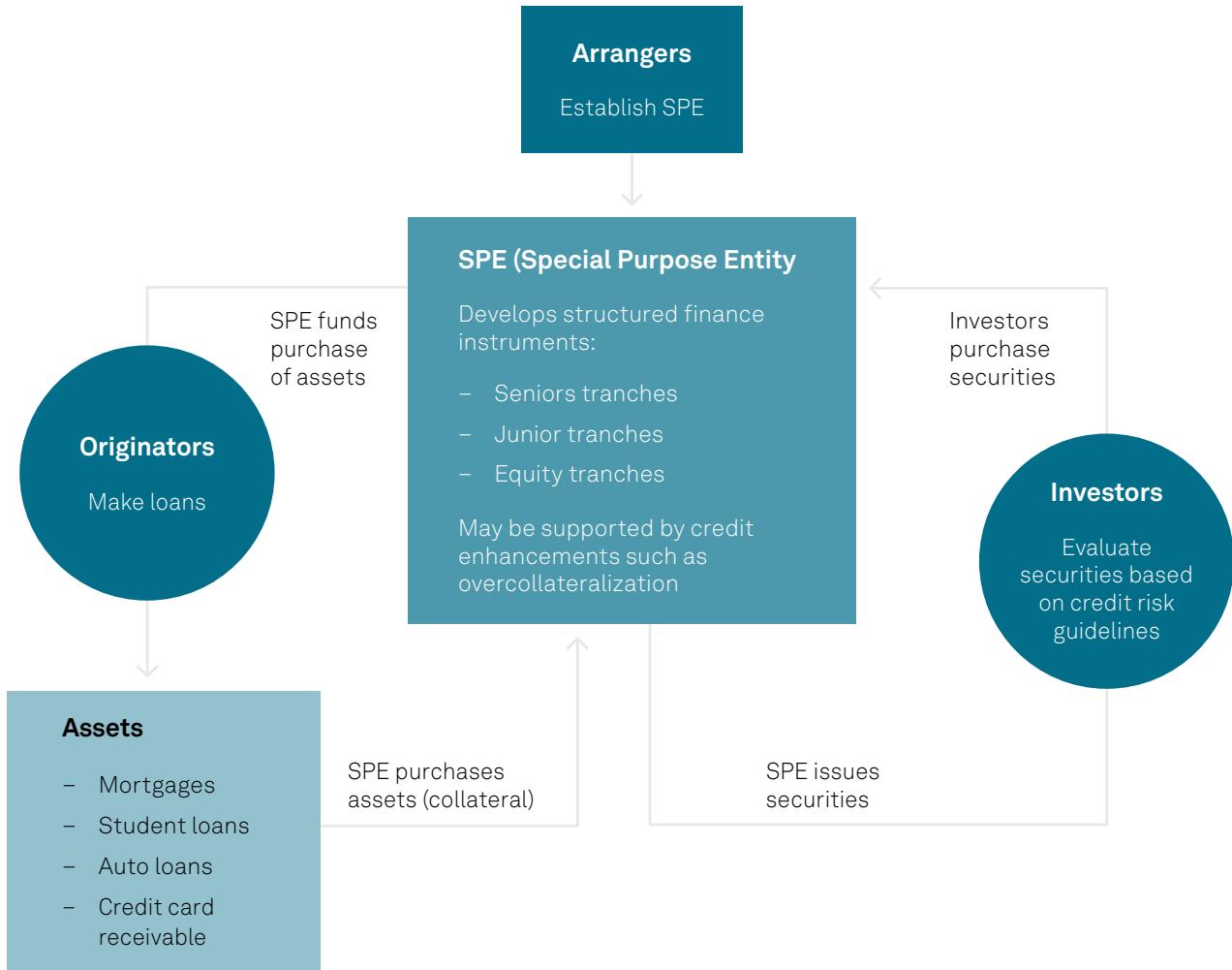
Credit rating agencies may also assess recovery, which is the likelihood that investors will recoup the unpaid portion of their principal in the event of default. Some agencies incorporate recovery as a rating factor in evaluating the credit quality of an issue, particularly in the case of non-investment-grade debt. Other agencies, such as S&P Global Ratings, issue recovery ratings in addition to rating specific debt issues. S&P Global Ratings may also consider recovery ratings in adjusting the credit rating of a debt issue up or down in relation to the credit rating assigned to the issuer.

Rating Structured Finance Instruments

A structured finance instrument is a particular type of debt issue created through a process known as securitization. In essence, securitization involves pooling individual financial assets, such as mortgage or auto loans, and creating, or structuring, separate debt securities that are sold to investors to fund the purchase of these assets.

The creation of structured finance instruments, such as residential mortgage-backed securities (RMBS), asset-backed securities (ABS), and collateralized debt obligations (CDOs), typically involves three parties: an originator, an arranger, and a special purpose entity or SPE, that issues the securities.

Structured Finance Instruments



Stratifying a pool of undifferentiated risk into multiple classes of bonds with varying levels of seniority is called “tranching”. Investors who purchase the senior tranche, which generally has the highest quality debt from a credit perspective and the lowest interest rate, are the first to be repaid from the cash flow of the underlying assets. Holders of the next-lower tranche, which typically pays a somewhat higher interest rate, are paid second, and so forth. Investors who purchase the lowest tranche generally have the potential to earn the highest interest rate, but they also tend to assume the highest risk.

In forming its opinion of a structured finance instrument, S&P Global Ratings evaluates, among other things, the potential risks posed by the instrument's legal structure and the credit quality of the assets the SPE holds. S&P Global Ratings also considers the anticipated cash flow of these underlying assets and any credit enhancements that provide protection against default.

Surveillance: Tracking Credit Quality

As part of its ratings analysis, S&P Global Ratings evaluates available current and historical information and assesses the potential impact of foreseeable future events. For example, in rating a corporation as an issuer of debt, the agency may factor in anticipated ups and downs in the business cycle that may affect the corporation's creditworthiness. While the forward looking opinions of rating agencies can be of use to investors and market participants who are making long or short-term investment and business decisions, credit ratings are not a guarantee that an investment will pay out or that it will not default.

Credit Ratings Do Not Indicate Investment Merit

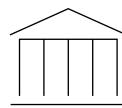
Agencies typically track developments that might affect the credit risk of an issuer or individual debt issue for which an agency has provided a ratings opinion. In the case of S&P Global Ratings, the goal of this surveillance is to keep the rating current by identifying issues that may result in either an upgrade or a downgrade.

In conducting its surveillance, S&P Global Ratings may consider many factors, including, for example, changes in the business climate or credit markets, new technology or competition that may hurt an issuer's earnings or projected revenues, issuer performance, and regulatory changes.

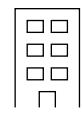
The frequency and extent of surveillance typically depends on specific risk considerations for an individual issuer or issue, or an entire group of rated entities or debt issues. In its surveillance of a corporate issuer's ratings, for example, S&P Global Ratings may schedule periodic meetings with a company to allow management to:

- Apprise agency analysts of any changes in the company's plans.
- Discuss new developments that may affect prior expectations of credit risk.
- Identify and evaluate other factors or assumptions that may affect the agency's opinion of the issuer's creditworthiness.

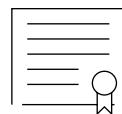
As a result of its surveillance analysis, an agency may adjust the credit rating of an issuer or issue to signify its view of a higher or lower level of relative credit risk.



The **originator** is generally a bank, lender, or a financial intermediary who either makes loans to individuals or other borrowers, or purchases the loans from other originators.



The **arranger**, which may also be the originator, typically an investment bank or other financial services company, securitizes the underlying loans as marketable debt instruments.



The **special purpose entity (SPE)**, generally created by the arranger, finances the purchase of the underlying assets by selling debt instruments to investors. The investors are repaid with the cash flow from the underlying loans or other assets owned by the SPE.

Why Credit Ratings Change

The reasons for ratings adjustments vary, and may be broadly related to overall shifts in the economy or business environment or more narrowly focused on circumstances affecting a specific industry, entity, or individual debt issue.

In some cases, changes in the business climate can affect the credit risk of a wide array of issuers and securities. For instance, new competition or technology, beyond what might have been expected and factored into the ratings, may hurt a company's expected earnings performance, which could lead to one or more rating downgrades over time. Growing or shrinking debt burdens, hefty capital spending requirements, and regulatory changes may also trigger ratings changes.

While some risk factors tend to affect all issuers—an example would be growing inflation that affects interest rate levels and the cost of capital—other risk factors may pertain only to a narrow group of issuers and debt issues. For instance, the creditworthiness of a state or municipality may be impacted by population shifts or lower incomes of taxpayers, which reduce tax receipts and ability to repay debt.

Expressions of Change: Outlook and Creditwatch

If S&P Global Ratings anticipates that a credit rating may change in the coming 6 to 24 months, it may issue an updated ratings outlook indicating whether the possible change is likely to be "positive," "negative," "stable," or "developing" (meaning it's uncertain whether a rating might go up or down).

Or, if events or circumstances occur that may affect a credit rating in the near term, usually within 90 days, S&P Global Ratings may place the rating on CreditWatch. Typically, an updated outlook or CreditWatch from S&P Global Ratings includes a rationale for the potential change and the extent of the change, up or down, that may occur. However, updating a ratings outlook or placing a rating on CreditWatch does not mean a ratings change is inevitable.

If S&P Global Ratings has all the information available to warrant a ratings change, it may upgrade or downgrade the rating immediately, without placing the rating on CreditWatch or changing its outlook, to reflect these circumstances and its current opinion of relative credit risk.

When Ratings Change

Credit rating adjustments may play a role in how the market perceives a particular issuer or individual debt issue. Sometimes, for example, a downgrade by a rating agency may change the market's perception of the credit risk of a debt security which, combined with other factors, may lead to a change in the price of that security.

Market prices continually fluctuate as investors reach their own conclusions about the security's shifting credit quality and investment merit. While ratings changes may affect investor perception, credit ratings constitute just one of many factors that the marketplace should consider when evaluating debt securities.



S&P Global Ratings Rating Performance as Measured by Default & Transition Studies

- S&P Global Ratings default & transition studies have historically shown a strong correlation between higher ratings and lower default rates, and between lower ratings and higher default rates.
- These studies have shown that when looking across multiple economic cycles, higher ratings have tended to change less frequently, while lower ratings have been more volatile.
- The studies also have shown that among defaulting issuers or securities, the period of deteriorating creditworthiness before default was usually shorter for lower ratings.
- The overall consistency of ratings performance demonstrated by these default and credit rating transition studies has helped to establish our ratings as useful benchmarks of relative credit risk.
- As a result of their broad perspective, performance studies are one of the tools that S&P Global Ratings uses to refine and recalibrate ratings criteria so that ratings perform as intended.

To learn more about ratings performance, visit spglobal.com/UnderstandingRatings

Agency Studies of Defaults and Ratings Changes

To measure the performance of its credit ratings, S&P Global Ratings conducts studies to track default rates and transitions, which is how much a rating has changed, up or down, over a certain period of time. Agencies use these studies to refine and evolve their analytic methods in forming their ratings opinions.

Transition rates can also be helpful to investors and credit professionals because they show the relative stability and volatility of credit ratings. For example, investors who are obligated to purchase only highly rated securities and are looking for some indication of stability may review the history of rating transitions and defaults as part of their investment research.

How We Communicate Credit Ratings

S&P Global Ratings makes its public credit ratings, criteria, and research available in a number of ways, including:

- Press releases
- Websites
- Newsletters
- S&P Global Ratings hosted events and webcasts
- Participation in industry and credit events
- Direct contact with market participants

For more information about the benefits of credit ratings, please contact Mark Rosenwinkel at mark.rosenwinkel@spglobal.com

To receive our newsletters, please visit spglobal.com/ratings/en/register

Websites

spglobal.com/UnderstandingRatings

capitaliq.com

ratings360.com

ratingsdirect.com

About S&P Global Ratings

At S&P Global Ratings, our analyst-driven credit ratings, research, and sustainable finance opinions provide critical insights that are essential to translating complexity into clarity so market participants can uncover opportunities and make decisions with conviction. By bringing transparency to the market through high-quality independent opinions on creditworthiness, we enable growth across a wide variety of organizations, including businesses, governments, and institutions.

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