Subscription Information
Hong Kong (852) 2533-3535
London (44) 20-7847-7425
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CORPORATE RATINGS CRITERIA

Dear Readers,

This Internet version of *Corporate Ratings Criteria* is updated and modified for changes in criteria as they occur. Similarly, statistics such as key ratio medians are brought up to date.

Standard & Poor's criteria publications represent our endeavor to convey the thought processes and methodologies employed in determining Standard & Poor's ratings. They describe both the quantitative and qualitative aspects of the analysis. We believe that our rating product has the most value if users appreciate all that has gone into producing the letter symbols.

Bear in mind, though, that a rating is, in the end, an opinion. The rating experience is as much an art as it is a science.

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Standard & Poor's
A Division of The McGraw-Hill Companies

Published by Standard & Poor's, a division of The McGraw-Hill Companies. Executive offices: 1221 Avenue of the Americas, New York, N.Y. 10020. Editorial offices: 55 Water Street, New York, NY 10041. ISSN 1097-1025. Subscriber services: (212) 438-2000.

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Introduction

Standard & Poor's Role in the Financial Markets

Standard & Poor's traces its history back to 1860. Today it is the leading credit rating organization and a major publisher of financial information and research services on U.S. and foreign corporate and municipal debt obligations. Standard & Poor's was an independent, publicly owned corporation until 1966, when all of its common stock was acquired by McGraw-Hill Inc., a major publishing company. Standard & Poor's Ratings Services is now a business unit of McGraw-Hill. In matters of credit analysis and ratings, Standard & Poor's operates entirely independently of McGraw-Hill. Standard & Poor's Capital Markets, Funds Services, Investment Services, and Research Services are the other units of McGraw-Hill's financial services businesses. They provide investment, financial and trading information, data, and analyses—including on equity securities—but operate separately from the ratings group.

Standard & Poor's now rates more than $11 trillion in bonds and other financial obligations of obligors in more than 50 countries. Standard & Poor's rates and monitors developments pertaining to these issues and issuers from an office network based in 19 world financial centers.

Despite the changing environment, Standard & Poor's core values remain the same—to provide high-quality, objective, value-added analytical information to the world's financial markets.

What is Standard & Poor's?

Standard & Poor's is an organization of professionals that provides analytical services and operates under the basic principles of:

- Independence,
- Objectivity,
- Credibility, and
- Disclosure.

Standard & Poor's operates with no government mandate and is independent of any investment banking firm, bank, or similar organization.

Standard & Poor's recognition as a rating agency ultimately depends on investors' willingness to accept its judgment. Standard & Poor's believes it is important that all users of its ratings understand how it arrives at the ratings, and it regularly publishes ratings definitions and detailed reports on ratings criteria and methodology.

Credit ratings

Standard & Poor's began rating the debt of corporate and government issuers more than 75 years ago. Since then, credit rating criteria and methodology have grown in sophistication and have kept pace with the introduction of new financial products. For example, Standard & Poor's was the first major rating agency to assess the credit quality of, and assign credit ratings to, the claims-paying ability of insurance companies (1971), financial guarantees (1971), mortgage-backed bonds (1975), mutual funds (1983), and asset-backed securities (1985).

A credit rating is Standard & Poor's opinion of the general creditworthiness of an obligor, or the creditworthiness of an obligor with respect to a particular debt security or other financial obligation, based on relevant risk factors. A rating does not constitute a recommendation to purchase, sell, or hold a particular security. In addition, a rating does not comment on the suitability of an investment for a particular investor.

Standard & Poor's credit ratings and symbols originally applied to debt securities. As described below, Standard & Poor's has developed credit ratings that may apply to an issuer's general creditworthiness or to a specific financial obligation. Standard & Poor's has historically maintained separate and well-established rating scales for long-term and short-term instruments. (A separate scale for preferred stock was integrated with the debt scale in February 1999.)

Over the years, these credit ratings have achieved wide investor acceptance as easily

usable tools for differentiating credit quality, because a Standard & Poor's credit rating is judged by the market to be reliable and credible.

Long-term credit ratings are divided into several categories ranging from 'AAA', reflecting the strongest credit quality, to 'D', reflecting the lowest. Long-term 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.

A short-term credit rating is an assessment of the credit quality of an issuer with respect to an instrument considered short term in the relevant market. Short-term ratings range from 'A-1' for the highest-quality obligations to 'D' for the lowest. The 'A-1' rating may also be modified by a plus sign to distinguish the strongest credits in that category.

Issue-specific credit ratings

A Standard & Poor's issue credit rating is a current opinion of the creditworthiness of an obligor with respect to a specific financial obligation, a specific class of financial obligations, or a specific financial program. This opinion may reflect the creditworthiness of guarantors, insurers or other forms of credit enhancement on the obligation and takes into account statutory and regulatory preferences.

On a global basis, Standard & Poor's issue credit-rating criteria have long identified the added country risk factors that give external debt a higher default probability than domestic obligations. In 1992, Standard & Poor's revised its criteria to define external versus domestic obligations by currency instead of by market of issuance. This led to the adoption of the local currency/foreign currency nomenclatures for issue credit ratings. *(See page 33.)* As rating coverage has now expanded to a growing range of emerging-market countries, the analysis of political, economic, and monetary risk factors are even more important.

In 1994, Standard & Poor's initiated a symbol to be added to an issue credit rating when the instrument could have significant noncredit risk. The symbol 'r' is added to such instruments as mortgage interest-only strips, inverse floaters, and instruments that pay principal at maturity based on a nonfixed source, such as a currency or stock index. The symbol is intended to alert investors to non-

ISSUE-SPECIFIC CREDIT RATINGS

Long-term ratings

- Notes, note programs, certificate of deposit programs, syndicated bank loans, bonds and debentures ('AA', 'AA'...'D'); shelf registrations (preliminary)
  - Debt types:
    - Equipment trust certificates
    - Secured
    - Senior unsecured
    - Subordinated
    - Junior subordinated
- Preferred stock and deferrable payment debt.

Municipal note ratings (tenor: less than three years) ('SP-1+', 'SP-1'...'SP-3')

Short-term ratings ('A-1+', 'A-1'...'D')

- Commercial paper
- Put bonds/demand bonds
- Certificate of deposit programs

ISSUER CREDIT RATINGS

Long-term ratings and short-term ratings

- Corporate credit ratings
- Counterparty ratings
- Sovereign credit ratings

OTHER RATING PRODUCTS

- Mutual Bond Fund Credit Quality Ratings ('AAAf'...'CCCf')
- Money Market Fund Safety Ratings ('AAAm'...'BBBm')
- Mutual Bond and Managed Fund Risk Ratings ('aaa', 'aa',...'ccc')
- Financial strength ratings for insurance companies (also, pi ratings based on quantitative model)
- Ratings estimates
- National scale credit ratings
- Credit outsourcing
- Rating evaluation service (RES)

credit risks and emphasizes that an issue credit rating addresses only the credit quality of the obligation.

Issuer credit ratings

In response to a need for rating evaluations on a company when there is no public debt outstanding, Standard & Poor's provides an issuer (also called counterparty) credit rating—an opinion of the obligor's overall capacity to meet its financial obligations. This opinion focuses on the obligor's capacity and willingness to meet its financial commitments as they come due. The opinion is not specific to any particular financial obligation, as it does not take into account the specific nature or provisions of any particular obligation. Issuer credit ratings do not take into account statutory or regulatory preferences, nor do they take into account the creditworthiness of guarantors, insurers, or other forms of credit enhancement that may pertain for a specific obligation. Counterparty ratings, corporate credit ratings, and sovereign credit ratings are all forms of issuer credit ratings.

Since a corporate credit rating provides an overall assessment of the creditworthiness of a company, it is used for a variety of financial and commercial purposes, such as negotiating long-term leases or minimizing the need for a letter of credit for vendors.

If the credit rating is not assigned in conjunction with a rated public financing, the company can choose to make its rating public or to keep it confidential.

Rating process

Standard & Poor's provides a rating only when there is adequate information available to form a credible opinion and only after applicable quantitative, qualitative, and legal analyses are performed.

The analytical framework is divided into several categories to ensure salient qualitative and quantitative issues are considered. For example, with industrial companies the qualitative categories are oriented to business analysis, such as the firm's competitiveness within its industry and the caliber of management; the quantitative categories relate to financial analysis.

The rating process is not limited to an examination of various financial measures. Proper assessment of credit quality for an industrial company includes a thorough review of business fundamentals, including industry prospects for growth and vulnerability to technological change, labor unrest, or regulatory actions. In the public finance sector, this involves an evaluation of the basic underlying economic strength of the public entity, as well as the effectiveness of the governing process to address problems. In financial institutions, the reputation of the bank or company may have an impact on the future financial performance and the ability of the institution to repay its obligations.

Standard & Poor's assembles a team of analysts with appropriate expertise to review information pertinent to the rating. A lead analyst is responsible for the conduct of the rating process. Several of the members of the analytical team meet with management of the organization to review, in detail, key factors that have an impact on the rating, including operating and financial plans and management policies. The meeting also helps analysts develop the qualitative assessment of management itself, an important factor in the rating decision.

(An exception to these procedures is made in the case of public information ratings. A public information credit rating is a local currency credit rating identified by the "pi" subscript and based on an analysis of the obligor's published financial information, as well as additional information in the public domain. Public Information ratings are not ordinarily modified with "+" or "-" designations and are not assigned outlooks. Ratings with a "pi" subscript are reviewed annually based on a new year's financial statements, but may be reviewed on an interim basis if a major event that may affect an issuer's credit quality occurs. At present, "pi" ratings are provided only on Standard & Poor's global scale.)

Following this review and discussion, a rating committee meeting is convened. At the meeting, the committee discusses the lead analyst's recommendation and the pertinent facts supporting the rating. Finally, the committee votes on the recommendation.

The issuer is subsequently notified of the rating and the major considerations supporting it. A rating can be appealed prior to its publication, if meaningful new or additional information is to be presented by the issuer. Obviously, there is no guarantee that any new information will alter the rating committee's decision.

Once a final rating is assigned, it is disseminated to the public through the news media, except for ratings where the company has publication rights, such as traditional private placements. (Most 144A transactions are viewed as public deals.) In addition, in most markets outside the U.S.—where ratings are assigned only on request—the company can choose to make its rating public or to keep it confidential. Confidential ratings are disclosed by Standard & Poor's only to parties that are designated by the rated entity. After a public rating is released to the media by Standard & Poor's, it is published in *CreditWeek* or another Standard & Poor's publication with the rationale and other commentary.

Surveillance and review

All public ratings are monitored on an ongoing basis, including review of new financial or economic developments. It is typical to schedule annual review meetings with management, even in the absence of the issuance of new obligations. Surveillance also enables analysts to stay abreast of current developments, discuss potential problem areas, and be apprised of any changes in the issuer's plans.

As a result of the surveillance process, it is sometimes necessary to change a rating. When this occurs, the analyst undertakes a review, which may lead to a CreditWatch listing. This is followed by a comprehensive analysis, including, if warranted, a meeting with management, and a presentation to the rating committee. The rating committee evaluates the circumstances, arrives at a rating decision, notifies the issuer, and entertains an appeal, if one is made. After this process, the rating change or affirmation is announced.

Issuers' use of ratings

It is commonplace for companies to structure financing transactions to reflect rating criteria so they qualify for higher ratings. However, the actual structuring of a given issue is the function and responsibility of an issuer and its advisors. Standard & Poor's will react to a proposed financing, publish and interpret its criteria for a type of issue, and outline the rating implications for an issuer, underwriter, bond counsel, or financial advisor, but it does not function as an investment banker or financial advisor. Adoption of such a role ultimately would impair the objectivity and credibility that are vital to Standard & Poor's continued performance as an independent rating agency.

Standard & Poor's guidance is also sought on credit quality issues that might affect the rating opinion. For example, companies solicit Standard & Poor's view on hybrid preferred stock, the monetization of assets, or other innovative financing techniques before putting these into practice. Nor is it uncommon for debt issuers to undertake specific and sometimes significant actions for the sake of maintaining their ratings. For example, one large company faced a downgrade of its 'A-1' commercial paper rating because of growing component of short-term, floating-rate debt. To keep its rating, the company chose to restructure its debt maturity schedule in a way consistent with Standard & Poor's view of what was prudent.

(In 1998, Standard & Poor's formalized its ratings advisory role under the name Rating Evaluation Service (RES). Standard & Poor's will analyze the potential credit impact of alternative strategic initiatives, establish a definitive rating outcome for each, and share these with management. This service entails an engagement letter from the company with respect to a specific plan or multiple plans.)

Many companies go one step further and incorporate specific rating objectives as corporate goals. Indeed, possessing an 'A' rating, or at least an investment-grade rating, affords companies a measure of flexibility and is worthwhile as part of an overall financial strategy. Beyond that, Standard & Poor's does not encourage companies to manage themselves with an eye toward a specific rating. The more appropriate approach is to operate for the good of the business as management sees it and to let the rating follow. Ironically, managing for a very high rating can sometimes be inconsistent with the company's ultimate best interests, if it means being overly conservative and forgoing opportunities.

Rating Definitions

A Standard & Poor's *issue* credit rating is a current opinion of the creditworthiness of an obligor with respect to a specific financial obligation, a specific class of financial obligations, or a specific financial program (such as medium-term note programs and commercial paper programs.) It takes into consideration the creditworthiness of guarantors, insurers, or other forms of credit enhancement on the obligation and takes into account the currency in which the obligation is denominated. The issue credit rating is not a recommendation to purchase, sell, or hold a financial obligation, inasmuch as it does not comment as to market price or suitability for a particular investor.

Issue credit ratings are based on information furnished by the obligors or obtained by Standard & Poor's from other sources it considers reliable. Standard & Poor's does not perform an audit in connection with any credit rating and may, on occasion, rely on unaudited financial information. Credit ratings may be changed, suspended, or withdrawn as a result of changes in, or unavailability of, such information.

Issue credit ratings can be either long term or short term. Short-term ratings are assigned to those obligations considered short term in the relevant market. In the U.S., for example, that means obligations with an original maturity of no more than 365 days—including commercial paper. Short-term ratings are also used to indicate the creditworthiness of an obligor with respect to put features on long-term obligations. The result is a dual rating, in which the short-term rating addresses the put feature in addition to the usual long-term rating.

Medium-term notes are assigned long-term ratings. Medium-term notes' ratings, until recently, pertained to the program established to sell these notes. There was no review of individual notes, and, accordingly, the rating did not apply to specific notes (with certain exceptions). As of spring 2000, Standard and Poor's routinely assigns ratings to individual drawdowns with a value of $25 million or above.

Issue and *issuer* credit ratings use the identical symbols. The definitions closely correspond to each other, since the issue rating definitions are expressed in terms of default risk, which refers to likelihood of payment—the capacity *and* willingness of the obligor to meet its financial commitment on an obligation in accordance with the terms of the obligation. However, issue credit ratings also take into account the protection afforded by, and relative position of, the obligation in the event of bankruptcy, reorganization, or other arrangement under the laws of bankruptcy and other laws affecting creditors' rights.

Junior obligations are typically rated lower than the issuer credit rating, to reflect the lower priority in bankruptcy, as noted above. (Such differentiation applies when an entity has both senior and subordinated obligations, secured and unsecured obligations, operating company and holding company obligations, or preferred stock.) Debt that provides excellent prospects for ultimate recovery (such as secured debt) is often rated higher than the issuer credit rating. *(See pages 59-85.)* Accordingly, in the cases of junior debt and secured debt, the rating may not conform exactly with the category definition.

Long-term credit ratings

'AAA' An obligation rated 'AAA' has the highest rating assigned by Standard & Poor's. The obligor's capacity to meet its financial commitment on the obligation is extremely strong.

'AA' An obligation rated 'AA' differs from the highest rated obligations only to a small degree. The obligor's capacity to meet its financial commitment on the obligation is very strong.

'A' An obligation rated 'A' is somewhat more susceptible to the adverse effects of changes in circumstances and economic condi-

tions than obligations in higher rated categories. However, the obligor's capacity to meet its financial commitment on the obligation is still strong.

'BBB' An obligation rated 'BBB' exhibits adequate protection parameters. However, adverse economic conditions or changing circumstances are more likely to lead to a weakened capacity of the obligor to meet its financial commitment on the obligation.

Obligations rated 'BB', 'B', 'CCC', 'CC', and 'C' are regarded as having significant speculative characteristics. 'BB' indicates the least degree of speculation and 'C' the highest. While such obligations will likely have some quality and protective characteristics, these may be outweighed by large uncertainties or major exposures to adverse conditions.

'BB' An obligation rated 'BB' is less vulnerable to nonpayment than other speculative issues. However, it faces major ongoing uncertainties or exposure to adverse business, financial, or economic conditions that could lead to the obligor's inadequate capacity to meet its financial commitment on the obligation.

'B' An obligation rated 'B' is more vulnerable to nonpayment than obligations rated 'BB', but the obligor currently has the capacity to meet its financial commitment on the obligation. Adverse business, financial, or economic conditions will likely impair the obligor's capacity or willingness to meet its financial commitment on the obligation.

'CCC' An obligation rated 'CCC' is currently vulnerable to nonpayment, and is dependent upon favorable business, financial, and economic conditions for the obligor to meet its financial commitment on the obligation. In the event of adverse business, financial, or economic conditions, the obligor is not likely to have the capacity to meet its financial commitment on the obligation.

'CC' An obligation rated 'CC' is currently highly vulnerable to nonpayment.

'C' The 'C' rating may be used to cover a situation where a bankruptcy petition has been filed or similar action has been taken but payments on this obligation are being continued. 'C' is also used for a preferred stock that is in arrears (as well as for junior debt of issuers rated 'CCC-' and 'CC').

'D' The 'D' rating, unlike other ratings, is not prospective; rather, it is used only where a default has actually occurred—and not where a default is only expected. Standard & Poor's changes ratings to 'D':

- On the day an interest and/or principal payment is due and is not paid. An exception is made if there is a grace period and Standard & Poor's believes that a payment will be made, in which case the rating can be maintained;
- Upon voluntary bankruptcy filing or similar action. An exception is made if Standard & Poor's expects that debt service payments will continue to be made on a specific issue. In the absence of a payment default or bankruptcy filing, a technical default (i.e., covenant violation) is not sufficient for assigning a 'D' rating;
- Upon the completion of a tender or exchange offer, whereby some or all of an issue is either repurchased for an amount of cash or replaced by other securities having a total value that is clearly less than par;
- In the case of preferred stock or deferrable payment securities, upon nonpayment of the dividend or deferral of the interest payment.

With respect to issuer credit ratings (that is, corporate credit ratings, counterparty ratings, and sovereign ratings), failure to pay a financial obligation—rated *or* unrated—leads to a rating of either 'D' or 'SD'. In the ordinary case, an issuer's distress leads to general default, and the rating is 'D'. 'SD' is assigned when an issuer can be expected to default selectively, that is, continue to pay certain issues or classes of obligations while not paying others. In the corporate context, selective default might apply when a company conducts a coercive exchange with respect to one or some issues, while intending to honor its obligations with regard to other issues. (In fact, it is not unusual for a company to launch such an offer precisely with such a strategy—to restructure part of its debt in order to keep the company solvent.)

Nonpayment of a financial obligation subject to a bona fide commercial dispute or a missed preferred stock dividend does not cause the *issuer* credit rating to be changed.

Plus (+) or minus(-): The 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.

r Use of the "r" was largely discontinued as of July 2000.

Short-term credit ratings

'A-1' A short-term obligation rated 'A-1' is rated in the highest category by Standard & Poor's. The obligor's capacity to meet its financial commitment on the obligation is strong. Within this category, certain obligations are designated with a plus sign (+). This indicates that the obligor's capacity to meet its financial commitment on these obligations is extremely strong.

'A-2' A short-term obligation rated 'A-2' is somewhat more susceptible to the adverse effects of changes in circumstances and economic conditions than obligations in higher rating categories. However, the obligor's capacity to meet its financial commitment on the obligation is satisfactory.

'A-3' A short-term obligation rated 'A-3' exhibits adequate protection parameters. However, adverse economic conditions or changing circumstances are more likely to lead to a weakened capacity of the obligor to meet its financial commitment on the obligation.

'B' A short-term obligation rated 'B' is regarded as having significant speculative characteristics. The obligor currently has the capacity to meet its financial commitment on the obligation; however, it faces major ongoing uncertainties that could lead to the obligor's inadequate capacity to meet its financial commitment on the obligation.

'C' A short-term obligation rated 'C' is currently vulnerable to nonpayment and is dependent upon favorable business, financial, and economic conditions for the obligor to meet its financial commitment on the obligation.

'D' See definition of 'D' under Long-term Ratings.

Investment and speculative grades

The term "investment grade" was originally used by various regulatory bodies to connote obligations eligible for investment by institutions such as banks, insurance companies, and savings and loan associations. Over time, this term gained widespread usage throughout the investment community. Issues rated in the four highest categories, 'AAA', 'AA', 'A', 'BBB', generally are recognized as being investment grade. Debt rated 'BB' or below generally is referred to as speculative grade. The term "junk bond" is merely a more irreverent expression for this category of more risky debt. Neither term indicates which securities Standard & Poor's deems worthy of investment, as an investor with a particular risk preference may appropriately invest in securities that are not investment grade.

Ratings continue as a factor in many regulations, both in the U.S. and abroad, notably in Japan. For example, the Securities and Exchange Commission (SEC) requires investment-grade status in order to register debt on Form-3, which, in turn, is one way to offer debt via a Rule 415 shelf registration. The Federal Reserve Board allows members of the Federal Reserve System to invest in securities rated in the four highest categories, just as the Federal Home Loan Bank System permits federally chartered savings and loan associations to invest in corporate debt with those ratings, and the Department of Labor allows pension funds to invest in commercial paper rated in one of the three highest categories. In similar fashion, California regulates investments of municipalities and county treasurers; Illinois limits collateral acceptable for public deposits; and Vermont restricts investments of insurers and banks. The New York and Philadelphia Stock exchanges fix margin requirements for mortgage securities depending on their ratings, and the securities haircut for commercial paper, debt securities, and preferred stock that determines net capital requirements is also a function of the ratings assigned.

In some countries, investment regulation will refer to ratings on a national scale. (Standard & Poor's produces national scale ratings in several countries, including Mexico, Brazil, and Argentina.) These ratings are expressed with the traditional letter symbols, but the ratings definitions do not conform to those employed for the global scale. The rating definitions of each national scale and its correlation to global scale ratings are unique, so there is no basis for comparability across national scales.

CreditWatch and rating outlooks

A Standard & Poor's rating evaluates default risk over the life of a debt issue, incorporating an assessment of all future events to the extent they are known or can be anticipated. But Standard & Poor's also recognizes the potential for future performance to differ from initial expectations. Rating outlooks and CreditWatch listings address this possibility by focusing on the scenarios that could result in a rating change.

Ratings appear on CreditWatch when an event or deviation from an expected trend has occurred or is expected and additional information is necessary to take a rating action. For example, an issue is placed under such special surveillance as the result of mergers, recapitalizations, regulatory actions, or unanticipated operating developments. Such rating reviews normally are completed within 90 days, unless the outcome of a specific event is pending.

A listing does not mean a rating change is inevitable. However, in some cases, it *is* certain that a rating change will occur and only the magnitude of the change is unclear. In those instances—and generally wherever possible—the range of alternative ratings that could result is shown.

Rating changes can also occur without the issues appearing beforehand on CreditWatch. An issuer cannot automatically appeal a CreditWatch listing, but analysts are sensitive to issuer concerns and the fairness of the process.

A rating outlook is assigned to all long-term debt issues—except for structured finance—and also assesses potential for change. Outlooks have a longer time frame than CreditWatch listings and incorporate trends or risks with less certain implications for credit quality. An outlook is not necessarily a precursor of a rating change or a CreditWatch listing.

CreditWatch designations and outlooks may be "positive," which indicates a rating may be raised, or "negative," which indicates a rating may be lowered. "Developing" is used for those unusual situations in which future events are so unclear that the rating potentially may be raised or lowered. "Stable" is the outlook assigned when ratings are not likely to be changed, but it should not be confused with expected stability of the company's financial performance.

Rating Process

Most corporations approach Standard & Poor's to request a rating prior to sale or registration of a debt issue. That way, first-time issuers can receive an indication of what rating to expect. Issuers with rated debt outstanding also want to know in advance the impact on their ratings of the company's issuing additional debt. (In any event, as a matter of policy, *in the U. S.*, Standard & Poor's assigns and publishes ratings for all public corporate debt issues over $50 million—with or without a request from the issuer. Public transactions are those that are registered with the SEC, those with future registration rights, and other 144A deals that have broad distribution.)

In all instances, Standard & Poor's analytical staff will contact the issuer to elicit its cooperation. The analysts with the greatest relevant industry expertise are assigned to evaluate the credit and commence surveillance of the company. Standard & Poor's analysts concentrate on one or two industries, covering the entire spectrum of credits within those industries. (Such specialization allows accumulation of expertise and competitive information better than if junk-bond issuers were followed separately from high-grade issuers.) While one industry analyst takes the lead in following a given issuer and typically handles day-to-day contact, a team of experienced analysts is always assigned to the rating relationship with each issuer.

Meeting with management

A meeting with corporate management is an integral part of Standard & Poor's rating process. The purpose of such a meeting is to review in detail the company's key operating and financial plans, management policies, and other credit factors that have an impact on the rating. Management meetings are critical in helping to reach a balanced assessment of a company's circumstances and prospects.

Participation. The company typically is represented by its chief financial officer. The chief executive officer usually participates when strategic issues are reviewed (which is usually the case at the initial rating assignment). Operating executives often present detailed information regarding business segments.

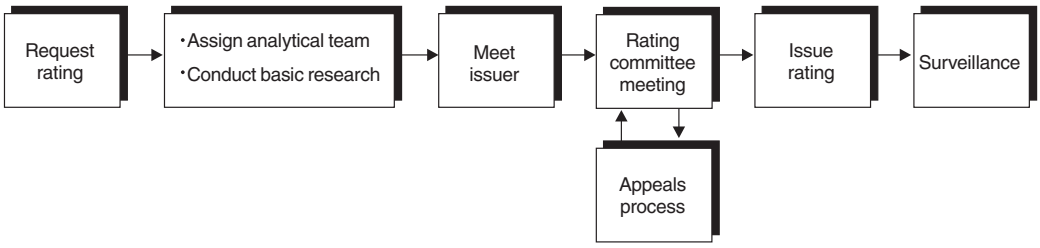
Outside advisors may be helpful in preparing an effective presentation. Their use is neither encouraged nor discouraged by Standard & Poor's: it is entirely up to management whether advisors assist in the preparation for meetings and whether they attend the meetings.

Scheduling. Management meetings are usually scheduled at least several weeks in advance, to assure mutual availability of the appropriate participants and to allow adequate preparation time for the Standard & Poor's analysts. In addition, if a rating is being sought for a pending issuance, it is to the issuer's advantage to allow about three weeks following a meeting for Standard & Poor's to complete its review process. More time may be needed in certain cases, for example, if extensive review of documentation is necessary. However, where special circumstances exist and a quick turnaround is needed, Standard & Poor's will endeavor to meet the requirements of the marketplace.

Facility tours. Touring major facilities can be very helpful for Standard & Poor's in gaining an understanding of a company's business. However, this is generally not critical. Given the time constraints that typically arise in the initial rating exercise, arranging facility tours may not be feasible. As discussed below, such tours may well be a useful part of the subsequent surveillance process.

Preparing for meetings. Corporate management should feel free to contact its designated Standard & Poor's analyst for guidance in advance of the meeting regarding the particular areas that will be emphasized in the analytic process. Published ratings criteria, as well as industry commentary and articles on peer companies from *CreditWeek*, may also be helpful to

Standard & Poor's debt rating process



management in appreciating the analytic perspective. However, Standard & Poor's prefers not to provide detailed, written lists of questions, since these tend to constrain spontaneity and artificially limit the scope of the meeting.

Well in advance of the meeting, the company should submit background materials (ideally, several sets), including:

- five years of audited annual financial statements;
- the last several interim financial statements;
- narrative descriptions of operations and products; and
- if available, a draft registration statement or offering memorandum, or equivalent.

Apart from company-specific material, relevant industry information may also be useful.

While not mandatory, written presentations by management often provide a valuable framework for the discussion. Such presentations typically mirror the format of the meeting discussion, as outlined below. Where a written presentation is prepared, it is particularly useful for Standard & Poor's analytical team to be afforded the opportunity to review it in advance of the meeting.

There is no need to try to anticipate all questions that might arise. If additional information is necessary to clarify specific points, it can be provided subsequent to the meeting. In any case, Standard & Poor's analysts generally will have follow-up questions that arise as the information covered at the management meeting is further analyzed.

Confidentiality. A substantial portion of the information set forth in company presentations is highly sensitive and is provided by the issuer to Standard & Poor's solely for the purpose of arriving at ratings. Such information is kept strictly confidential by the ratings group. Even if the assigned rating is subsequently made public, any rationales or other information that Standard & Poor's publishes about the company will refer only to publicly available corporate information. It is not to be used for any other purpose, nor by any third party, including other Standard & Poor's units. Standard & Poor's maintains a "Chinese Wall" between its rating activities and its equity information services.

Conduct of meeting. The following is an outline of the topics that Standard & Poor's typically expects issuers to address in a management meeting:

- the industry environment and prospects;
- an overview of major business segments, including operating statistics and comparisons with competitors and industry norms;
- management's financial polices and financial performance goals;
- distinctive accounting practices;
- management's projections, including income and cash flow statements and balance sheets, together with the underlying market and operating assumptions;
- capital spending plans; and
- financing alternatives and contingency plans.

It should be understood that Standard & Poor's ratings are not based on the issuer's financial projections or management's view of what the future may hold. Rather, ratings are based on Standard & Poor's own assessment of the firm's prospects. But management's financial projections are a valuable tool in the rating process, as they indicate management's plans, how management assesses the company's challenges, and how it intends to deal with problems. Projections also depict the company's financial strategy in terms of anticipated reliance on internal cash flow or outside funds, and they help articulate management's financial objectives and policies.

Management meetings with companies new to the rating process typically last two to four hours—or longer if the company's operations are particularly complex. If the issuer is domiciled in a country new to ratings or participates in a new industry, more time is usually required. When, in addition, there are major

accounting issues to be covered, meetings can last a full day or two.

Short, formal presentations by management may be useful to introduce areas for discussion. Standard & Poor's preference is for meetings to be largely informal, with ample time allowed for questions and responses. (At management meetings, as well as at all other times, Standard & Poor's welcomes the company's questions regarding its procedures, methodology, and analytical criteria.)

Rating committee

Shortly after the issuer meeting, a rating committee, normally consisting of five to seven voting members, is convened. A presentation is made by the industry analyst to the rating committee, which has been provided with appropriate financial statistics and comparative analysis. The presentation follows the methodology outlined in the next sections of this volume. Thus, it includes analysis of the nature of the company's business and its operating environment, evaluation of the company's strategic and financial management, financial analysis, and a rating recommendation. When a specific issue is to be rated, there is an additional discussion of the proposed issue and terms of the indenture.

Once the rating is determined, the company is notified of the rating and the major considerations supporting it. It is Standard & Poor's policy to allow the issuer to respond to the rating decision prior to its publication by presenting new or additional data. Standard & Poor's entertains appeals in the interest of having available the most information possible and, thereby, the most accurate ratings. In the case of a decision to change an extant rating, any appeal must be conducted as expeditiously as possible, i.e., with a day or two. The committee reconvenes to consider the new information. After notifying the company, the rating is disseminated in the media—or released to the company for dissemination in the case of private placements or corporate credit ratings.

In order to maintain the integrity and objectivity of the rating process, Standard & Poor's internal deliberations and the identities of persons who sat on a rating committee are kept confidential and are not disclosed to the issuer.

Surveillance

Corporate ratings on publicly distributed issues are monitored for at least one year. The company can then elect to pay Standard & Poor's to continue surveillance. Ratings assigned at the company's request have the option of surveillance, or being on a "point-in-time" basis.

Surveillance is performed by the same industry analysts who work on the assignment of the ratings. To facilitate surveillance, companies are requested to put the primary analyst on mailing lists to receive interim and annual financial statements and press releases.

The primary analyst is in periodic telephone contact with the company to discuss ongoing performance and developments. Where these vary significantly from expectations, or where a major, new financing transaction is planned, an update management meeting is appropriate. Also, Standard & Poor's encourages companies to discuss hypothetically—again, in strict confidence—transactions that are perhaps only being contemplated (e.g., acquisitions, new financings), and it endeavors to provide frank feedback about the potential ratings implications of such transactions.

In any event, management meetings are routinely scheduled at least annually. These meetings enable analysts to keep abreast of management's view of current developments, discuss business units that have performed differently from original expectations, and be apprised of changes in plans. As with initial management meetings, Standard & Poor's willingly provides guidance in advance regarding areas it believes warrant emphasis at the meeting. Typically, there is no need to dwell on basic information covered at the initial meeting. Apart from discussing revised projections, it is often helpful to revisit the prior projections and to discuss how actual performance varied, and why.

A significant and increasing proportion of meetings with company officials takes place on the company's premises. There are several reasons: to facilitate increased exposure to management personnel—particularly at the operating level, obtain a first-hand view of new or modernized facilities, and achieve a better understanding of the company by spending

more time reviewing the business units in depth. While Standard & Poor's actively encourages meetings on company premises, time and scheduling constraints on both sides dictate that arrangements for these meetings be made some time in advance.

Since the staff is organized by specialty, analysts typically meet each year with most major companies in their assigned area to discuss industry outlook, business strategy, and financial forecasts and policies. This way, competitors' forecasts of market demand can be compared with one another, and Standard & Poor's can assess implications of competitors' strategies for the entire industry. The analyst can judge management's relative optimism regarding market growth and relative aggressiveness in approaching the marketplace.

Importantly, the analyst compares business strategies and financial plans over time and seeks to understand how and why they changed. This exercise provides insights regarding management's abilities with respect to forecasting and implementing plans. By meeting with different managements over the course of a year and the same management year after year, analysts learn to distinguish between those with thoughtful, realistic agendas versus those with wishful approaches.

Management credibility is achieved when the record demonstrates that a company's actions are consistent with its plans and objectives. Once earned, credibility can help to support continuity of a particular rating level—because Standard & Poor's can rely on management to do what it says to restore creditworthiness when faced with financial stress or an important restructuring. The rating process benefits from the unique perspective on credibility gained by extensive evaluation of management plans and financial forecasts over many years.

Rating changes

As a result of the surveillance process, it sometimes becomes apparent that changing conditions require reconsideration of the outstanding debt rating. When this occurs, the analyst undertakes a preliminary review, which may lead to a CreditWatch listing. This is followed by a comprehensive analysis, communication with management, and a presentation to the rating committee. The rating committee evaluates the matter, arrives at a rating decision, and notifies the company—after which Standard & Poor's publishes the rating. The process is exactly the same as the rating of a new issue.

Reflecting this surveillance, the timing of rating changes depends neither on the sale of new debt issues nor on Standard & Poor's internal schedule for reviews.

Rating Methodology: Evaluating the Issuer

Industrials and Utilities

Standard & Poor's uses a format that divides the analytical task into several categories, providing a framework that ensures all salient issues are considered *(see box)*. For corporates, the first several categories are oriented to fundamental business analysis; the remainder relate to financial analysis. As further analytical discipline, each category is scored in the course of the ratings process, and there are also scores for the overall business risk profile and the overall financial risk profile. (Analytical groups choose various ways to express these scores: Some use letter symbols, while others prefer to use numerical scoring systems. For example, utilities scoring is from 1 to 10—with 1 representing the best. Companies with a strong business profile—typically, transmission/distribution utilities—are scored 1 through 4; those facing greater competitive threats—such as power generators—would wind up with an overall business profile score of 7 to 10.)

There are no formulae for combining scores to arrive at a rating conclusion. Bear in mind that ratings represent an art as much as a science. A rating is, in the end, an opinion. Indeed, it is critical to understand that the rating process is not limited to the examination of various financial measures. Proper assessment of debt protection levels requires a broader framework, involving a thorough review of business fundamentals, including judgments about the company's competitive position and evaluation of management and its strategies. Clearly, such judgments are highly subjective; indeed, subjectivity is at the heart of every rating.

At times, a rating decision may be influenced strongly by financial measures. At other times, business risk factors may dominate. If a firm is strong in one respect and weak in another, the rating will balance the different factors. Viewed differently, the degree of a firm's business risk sets the expectations for the financial risk it can afford at any rating level. The analysis of industry characteristics and how a firm is positioned to succeed in that environment establish the financial benchmarks used in the quantitative part of the analysis *(See Ratio Guidelines on pages 56-58)*.

CORPORATE CREDIT ANALYSIS FACTORS

Business Risk
- Industry Characteristics
- Competitive Position
  - (e.g.) Marketing
  - (e.g.) Technology
  - (e.g.) Efficiency
  - (e.g.) Regulation
- Management

Financial Risk
- Financial Characteristics
- Financial Policy
- Profitability
- Capital Structure
- Cash Flow Protection
- Financial Flexibility

Industry risk

Each rating analysis begins with an assessment of the company's environment. To determine the degree of operating risk facing a participant in a given business, Standard & Poor's analyzes the dynamics of that business. This analysis focuses on the strength of industry prospects, as well as the competitive factors affecting that industry.

The many factors assessed include industry prospects for growth, stability, or decline, and the pattern of business cycles *(see Cyclicality, page 41)*. It is critical to determine vulnerability to technological change, labor unrest, or regulatory interference. Industries that have long lead times or that require a fixed plant of a specialized nature face heightened risk. The

implications of increasing competition are obviously crucial. Standard & Poor's knowledge of investment plans of the major players in any industry offers a unique vantage point from which to assess competitive prospects.

While any particular profile category can be the overriding rating consideration, the industry risk assessment goes a long way toward setting the upper limit on the rating to which any participant in the industry can aspire. Specifically, it would be hard to imagine assigning 'AA' and 'AAA' debt ratings or 'A-1+' commercial paper ratings to companies with extensive participation in industries of above-average risk, regardless of how conservative their financial posture. Examples of these industries are integrated steel makers, tire and rubber companies, homebuilders, and most of the mining sector.

Conversely, some industries are regarded favorably. They are distinguished by such traits as steady demand growth, ability to maintain margins without impairing future prospects, flexibility in the timing of capital outlays, and moderate capital intensity. Industries possessing one or more of these attributes include manufacturers of branded consumer products, drug firms, and publishing and broadcasting. Again, high marks in this category do not translate into high ratings for all industry participants, but the cushion of strong industry fundamentals provides helpful support.

The industry risk assessment also sets the stage for analyzing specific company risk factors and establishing the priority of these factors in the overall evaluation. For example, if an industry is determined to be highly competitive, careful assessment of a firm's market position is stressed. If the industry has large capital requirements, examination of cash flow adequacy assumes major importance.

Keys to success

As part of the industry analysis, key rating factors are identified: the keys to success and areas of vulnerability. A company's rating is affected crucially by its ability to achieve success and avoid pitfalls in its business.

The nature of competition is, obviously, different for different industries. Competition can be based on price, quality of product, distribution capabilities, image, product differentiation, service, or some other factor. Competition may be on a national basis, as is the case with major appliances. In other industries, such as chemicals, competition is global, and in still others, such as cement, competition is strictly regional.

The basis for competition determines which factors are analyzed for a given company. The accompanying charts highlight factors that are considered critical for airlines and electricity companies and the specific considerations that determine a company's position in each.

For any particular company, one or more factors can hold special significance, even if that factor is not common to the industry. For example, the fact that a company has only one major production facility should certainly be regarded as an area of vulnerability. Similarly, reliance on one product creates risk, even if the product is highly successful. For example, one major pharmaceutical company has reaped a financial bonanza from just two medications. The firm's debt is reasonably highly rated, given its exceptional profits and cash flow—but it would be viewed still more favorably were it not for the dependence on only two drugs (which are, after all, subject to competition and patent expiration).

Diversification factors

When a company participates in more than one business, each segment is separately analyzed. A composite is formed from these building blocks, weighting each element according to its importance to the overall organization. The potential benefits of diversification, which may not be apparent from the additive approach, are then considered.

Obviously, the truly diversified company will not have a single business segment that is dominant. One major automobile company received much attention for diversifying into aerospace and computer processing. But it never became a diversified firm, since its success was still determined substantially by one line of business.

Limited credit will be given if the various lines of business react similarly to economic cycles. For example, diversification from nickel into copper cannot be expected to stabilize performance; similar risk factors are associated with both metals.

Most critical is a company's ability to manage diverse operations. Skills and practices needed to run a business differ greatly among industries, not to mention the challenge posed by participation in several different industries. For example, a number of old-line industrial firms rushed to diversify into financial services, only to find themselves saddled with

unfamiliar businesses they had difficulty managing.

Some firms have adopted a portfolio approach to their diverse holdings. The business of buying and selling businesses is different from running operations and is analyzed differently. The ever-changing character of the company's assets typically is viewed as a negative. On the other hand, there is often an offsetting advantage: greater flexibility in raising funds if each line of business is a discrete unit that can be sold off.

Size considerations

Standard & Poor's has no minimum size criterion for any given rating level. However, size usually provides a measure of diversification and often affects competitive issues. Obviously, the need to have a broad product line or a national marketing structure is a factor in many businesses and would be a rating consideration. In this sense, sheer mass is not important; demonstrable market advantage is. Small companies also can possess the competitive benefits of dominant market positions, although that is not common.

Market share analysis often provides important insights. However, large shares are not always synonymous with competitive advantage or industry dominance. For instance, if an industry has a number of large but comparable-size participants, none may have a particular advantage or disadvantage. Conversely, if an industry is highly fragmented, even the large firms may lack pricing leadership potential. The textile industry is an example.

Still, small companies are, almost by definition, more concentrated in terms of product, number of customers, or geography. In effect, they lack some elements of diversification that can benefit larger firms. To the extent that markets and regional economies change, a broader scope of business affords protection. This consideration is balanced against the performance and prospects of a given business. In addition, lack of financial flexibility is usually an important negative factor in the case of very small firms. Adverse developments that would simply be a setback for firms with greater resources could spell the end for companies with limited access to funds.

There is a controversial notion that small, growth companies represent a better credit risk than older, declining companies. While this is intuitively appealing to some, it ignores some important considerations. Large firms have substantial staying power, even if their businesses are troubled. Their constituencies—including large numbers of employees—can influence their fates. Banks' exposure to these firms may be quite extensive, creating a reluctance to abandon them. Moreover, such firms often have accumulated a lot of peripheral assets that can be sold. In contrast, the promise of small firms can fade very quickly and their minuscule equity bases will offer scant protection, especially given the high debt burden some companies deliberately assume.

Fast growth is often subject to poor execution, even if the idea is well conceived. There is also the risk of overambitiousness. Moreover, some firms tend to continue high-risk financial policies as they aggressively pursue ever greater objectives, limiting any credit-quality improvement. There is little evidence to suggest that growth companies initially receiving speculative-grade ratings have particular upgrade potential. Many more defaulted over time than achieved investment grade. Oil exploration, retail, and high technology firms have been especially vulnerable, even though their great potential was touted at the time they first came to market.

Management evaluation

Management is assessed for its role in determining operational success and also for its risk tolerance. The first aspect is incorporated in the competitive position analysis; the second is weighed as a financial policy factor.

Subjective judgments help determine each aspect of management evaluation. Opinions formed during the meetings with senior management are as important as management's track record. While a track record may seem to offer a more objective basis for evaluation, it often is difficult to determine how results should be attributed to management's skills. The analyst must decide to what extent they are the result of good management, devoid of management influence, or achieved despite management!

Plans and policies have to be judged for their realism. How they are implemented determines the view of management consistency and credibility. Stated policies often are not followed, and the ratings will reflect skepticism unless management has established credibility. Credibility can become a critical issue when a company is faced with stress or

RATING FACTORS FOR ELECTRIC UTILITIES

Transmission and Distribution Companies

Regulation

- The nature of the rate-making structure, e.g., performance-based vs. cost-of-service
- Authorized return on equity
- Timely and consistent rate treatment
- Status of restructuring, e.g., residual obligation to provide power, which entails the purchase of electricity for resale
- FERC's evolving rules for regional transmission of organizations, independent system operators, and for-profit transcos
- Incentives to maintain existing delivery assets and invest in new assets
- Nature of distributor support that retains the status of provider of last resort

Markets

- Economic and demographic characteristics, including size and growth rates, customer mix, industrial concentrations, and cyclical volatility
- Location

Operations

- Cost, reliability, and quality of service (usually measured against various benchmarks)
- Capacity utilization
- Projected capital improvements
- Nature of diversified business operations, if any

Competitiveness

- Alternative fuel sources, such as gas and self-generation
- Location of new generation
- Potential for bypass
- Rate Structure

Generation Companies

Regulation

- Status of restructuring, e.g., posture toward recovery of stranded costs
- Nature of regulatory scheme, e.g., price establishment through power exchange or economic dispatch vs. bilateral contracts
- Uncertainty concerning FERC's evolving rules for regional transmission organizations, independent system operators, and for-profit transcos, including independence and equal access

Markets

- Customer mix and diversity
- Generating capacity vs. demand
- Economic growth prospects

Operations

- Nature of generation, i.e., peaking, intermediate, or baseload
- Production inputs, including fuel costs, fuel diversity, and labor
- Level of physical and financial hedging sophistication
- Nature of supply contracts
- Efficiency measures, such as plant capacity and availability factors and heat rates
- Technology of plants
- Asset concentration within portfolio of generating units
- Construction risk
- Possibility of environmental legislation
- Diversity of fuel sources and types
- Marketing prowess
- Access to transmission

Competitiveness

- Relative costs of production, both total and variable
- Threat from new, low-cost entrants
- Alternatives to electricity, such as natural gas, technological innovations, and remote site applications, including fuel cells and microturbines
- Plants' importance to transmission and voltage support

RATING FACTORS FOR AIRLINES

Market Share

Share of industry traffic, measured by revenue passenger miles or revenue ton miles for airlines with significant freight operations

Share of industry capacity, measured by available seat miles or available ton miles

Trend of overall market share

Membership in global alliance: strength of partners and benefits for airline being rated, regulatory environment for alliance cooperation (e.g. "antitrust immunity"), extent of and potential for cooperation within alliance

Position in Specific Markets

Geographic position of airline's hubs for handling major traffic flows; position of competing hubs of other airlines

Share of enplanements and flights at hubs

Share at major origination and destination markets; economic and demographic growth prospects of those markets

Strength of competition at hubs and in major markets served

Barriers to entry/infrastructure constraints

- Gates
- Terminal space and other ground facilities
- Air traffic control; takeoff and landing slot restrictions

Position in international markets

- Growth prospects of markets
- Treaty and regulatory barriers to entry
- Strength of competition

Revenue Generation

Utilization of capacity, measured by "load factor" (revenue passenger miles divided by available seat miles)

Pricing

- Yield (passenger revenues divided by revenue passenger miles)
- Yield adjusted for average trip length (Airlines with shorter average trips tend to have higher yields.)

Unit revenues, measured by passenger revenue per available seat mile (yield times load factor)

Effectiveness of revenue management—maximizing revenues by managing trade-off between pricing and utilization

Service reputation; ranking in measures of customer satisfaction

Nonpassenger revenues: freight, sale of frequent flyer miles, services provided to other airlines

Cost Control

Operating cost per available seat mile

- Adjusted for average trip length
- Adjusted for use of operating leases and differing depreciation accounting

Labor

- Labor cost per available seat mile
- Structure of labor contracts; existence and nature of any "B-scales" (lower pay scales for recent hires)
- Flexibility of work rules; effect on productivity
- "Scope clauses" in pilot contracts; limits on outsourcing
- Status of union contracts and negotiations; possibility of strikes
- Labor relations and morale

Fuel costs and impact of potential fuel price hikes, given fuel efficiency of fleet and nature of routes flown; fuel price hedging

Commissions, marketing, and other operating expenses; extent of "electronic distribution"

Aircraft Fleet

Number and type of aircraft in relation to current and projected needs

Status of fleet modernization program

- Average age fleet; age weighted by seats
- Fleet "commonality" (standardization)
- Fuel efficiency of fleet
- Aircraft orders and options for future deliveries
- Ability under pilot contracts to operate regional jets, through airline or its regional partners

restructuring and the analyst must decide whether to rely on management to carry out plans for restoring creditworthiness.

Organizational considerations

Standard & Poor's evaluation is sensitive to potential organizational problems. These include situations where:

- There is significant organizational reliance on an individual, especially one who may be close to retirement;
- The finance function and finance considerations do not receive high organizational recognition;
- The transition from entrepreneurial or family-bound to professional management has yet to be accomplished;
- A relatively large number of changes occur within a short period;
- The relationship between organizational structure and management strategy is unclear;
- Shareholders impose constraints on management prerogatives.

Measuring performance and risk

Having evaluated the issuer's competitive position and operating environment, the analysis proceeds to several financial categories. To reiterate: the company's business-risk profile determines the level of financial risk appropriate for any rating category. Financial risk is portrayed largely through quantitative means, particularly by using financial ratios *(guidelines and medians for key ratios for U.S. companies are found on pages 54 and 57)*. Benchmarks vary greatly by industry, and several analytical adjustments typically are required to calculate ratios for an individual company. Cross-border comparisons require additional care, given the differences in accounting conventions and local financial systems *(see discussion on international rating issues starting on page 30)*.

Accounting quality

Ratings rely on audited data, and the rating process does not entail auditing a company's financial records. Analysis of the audited financials begins with a review of accounting quality. The purpose is to determine whether ratios and statistics derived from financial statements can be used accurately to measure a company's performance and position relative to both its peer group and the larger universe of industrial or utility companies. The rating process is very much one of comparisons, so it is important to have a common frame of reference.

Accounting issues to be reviewed include:

- Consolidation basis. U.S. GAAP now requires consolidation of even nonhomogeneous operations. For analytical purposes, it is critical to separate these and evaluate each type of business in its own right;
- Income recognition. For example, percentage of completion vs. completed contract in the construction industry;
- Depreciation methods and asset lives;
- Inventory pricing methods;
- Impact of purchase accounting and treatment of goodwill;
- Employee benefits *(see discussion on page 105)*; and
- Various off-balance-sheet liabilities, from leases and project finance to defeasance and receivable sales.

To the extent possible, analytical adjustments are made to better portray reality. Although it is not always possible to completely recast a company's financial statements, it is useful to have *some* notion of the extent performance or assets are overstated or understated. At the very least, the choice of accounting alternatives can be characterized as generally conservative or liberal.

Financial policy

Standard & Poor's attaches great importance to management's philosophies and policies involving financial risk. A surprising number of companies have not given this question serious thought, much less reached strong conclusions. For many others, debt leverage (calculated without any adjustment to reported figures) is the only focal point of such policy considerations. More sophisticated business managers have thoughtful policies that recognize cash-flow parameters and the interplay between business and financial risk.

Many firms that have set goals do not have the wherewithal, discipline, or management commitment to achieve these objectives. A company's leverage goals, for example, need to be viewed in the context of its past record and the financial dynamics affecting the business. If management states, as many do, that its goal is to operate with 35% debt-to-capital, Standard & Poor's factors that into its analysis *only* to the extent it appears plausible. For example, if a company has aggressive spending plans, that

35% goal would carry little weight, unless management has committed to a specific program of asset sales, equity sales, or other actions that in a given time period would produce the desired results.

Standard & Poor's does not encourage companies to manage themselves with an eye toward a specific rating. The more appropriate approach is to operate for the good of the business as management sees it, and let the rating follow. Certainly, prudence and credit quality should be among the most important considerations, but financial policy should be consistent with the needs of the business rather than an arbitrary constraint.

If opportunities are foregone merely to avoid financial risk, the firm is making poor strategic decisions. In fact, it may be sacrificing long-term credit quality for the facade of low risk in the near term. One financial article described a company that curtailed spending expressly "to become an 'A'-rated company." As a result, "...the company's business responded poorly to an increase in market demand. Needless to say, the sought-after 'A' rating continued to elude the company."

In any event, pursuit of the highest rating attainable is not necessarily in the company's best interests. 'AAA' may be the highest rating, but that does not suggest that it is the "best" rating. Typically, a company with virtually no financial risk is not optimal as far as meeting the needs of its various constituencies. An underleveraged firm is not minimizing its cost of capital, thereby depriving its owners of potentially greater value for their investment. In this light, a corporate objective of having its debt rated 'AAA' or 'AA' is at times suspect. Whatever a company's financial track record, an analyst must be skeptical if corporate goals are implicitly irrational. A firm's "conservative financial philosophy" must be consistent with the firm's overall goals and needs.

Profitability and coverage

Profit potential is a critical determinant of credit protection. A company that generates higher operating margins and returns on capital has a greater ability to generate equity capital internally, attract capital externally, and withstand business adversity. Earnings power ultimately attests to the value of the firm's assets as well.

The more significant measures of profitability are:

- Pretax preinterest return on capital;
- Operating income as a percentage of sales; and
- Earnings on business segment assets.

While the absolute levels of ratios are important, it is equally important to focus on trends and compare these ratios with those of competitors. Various industries follow different cycles and have different earnings characteristics. Therefore, what may be considered favorable for one business may be relatively poor for another. For example, the drug industry usually generates high operating margins and high returns on capital. Defense contractors generate low operating margins, but high returns on capital. The pipeline industry has high operating margins and low returns on capital. Comparisons with a company's peers influence Standard & Poor's perception of a firm's competitive strengths and pricing flexibility.

The analysis proceeds from historical performance to projected profitability. Because a rating is an assessment of the likelihood of timely payments in the future, the evaluation emphasizes future performance. However, the rating analysis does not attempt to forecast performance precisely or to pinpoint economic cycles. Rather, the forecast analysis considers variability of expected future performance based on a range of economic and competitive scenarios.

Particularly important today are management's plans for achieving earnings growth. Can existing businesses provide satisfactory growth, especially in a low-inflation environment, and to what extent are acquisitions or divestitures necessary to achieve corporate goals? At first glance, a mature, cash-generating company offers a great deal of bondholder protection, but Standard & Poor's assumes a corporation's central focus is to augment shareholder value over the long run. In this context, a lack of indicated earnings growth potential is considered a weakness. By itself this may hinder a company's ability to attract financial and human resources. Moreover, limited internal earnings growth opportunities may lead management to pursue growth externally, implying greater business and financial risks.

Earnings are also viewed in relation to a company's burden of fixed charges. Otherwise-strong performance can be affected detrimentally by aggressive debt financing, and the opposite also is true. The two primary fixed-charge coverage ratios are:

• Earnings before interest and taxes (EBIT) coverage of interest; and
• Earnings before interest and taxes and rent (EBITR) coverage of interest plus total rents.

If preferred stock is outstanding and material, coverage ratios are calculated both including and excluding preferred dividends, to reflect the company's discretion over paying the dividend when under stress. Similarly, if interest payments can be deferred (as in zero coupon debt, income bonds, or intercompany debt supporting subsidiary preferred stock) other adjustments to the calculation help capture the firm's flexibility in making payments.

To reflect more accurately the ongoing earnings power of the firm, reported profit figures are adjusted. These adjustments remove the effect of

• LIFO liquidations,
• Foreign-exchange gains and losses,
• Litigation reserves,
• Writedowns and other nonrecurring or extraordinary gains and losses, and
• Unremitted equity earnings of a subsidiary.

Similarly, there are numerous analytical adjustments to the interest amounts. Interest that has been capitalized is added back. An interest component is computed for debt-equivalents such as operating leases and receivable sales. Amounts may be subtracted to recognize the impact of borrowings in hyperinflationary environments or borrowings to support cash investments as part of a tax arbitrage strategy. And interest associated with finance operations is segregated in accordance with the methodology spelled out on page 103.

Capital structure/leverage and asset protection

Ratios employed by Standard & Poor's to capture the degree of leverage used by a company include:

• Total debt/total debt + equity;
• Total debt + off-balance-sheet liabilities/total debt + off-balance-sheet liabilities + equity; and
• Total debt/total debt + market value of equity.

Traditional measures focusing on long-term debt have lost much of their significance, since companies rely increasingly on short-term borrowings. It is now commonplace to find permanent layers of short-term debt, which finance not only seasonal working capital but also an ongoing portion of the asset base.

What is considered "debt" and "equity" for the purpose of ratio calculation is not always so simple. In the case of hybrid securities, the analysis is based on their features—*not* the accounting or the nomenclature *(see discussion of "equity credit" on page 89)*. Pension and retiree health obligations are similar to debt in many respects. Their treatment is explained on page 105.

Indeed, not all subtleties and complexities lend themselves to ratio analysis. Original issue discount debt, such as zero coupon debt, is included at the accreted value. However, since there is no sinking fund provision, the debt increases with time—creating a moving target. (The need, eventually, to refinance this growing amount represents another risk.) In the case of convertible debt, it is somewhat presumptuous to predict whether and when conversion will occur, making it difficult to reflect the real risk profile in ratio form.

A company's asset mix is a critical determinant of the appropriate leverage for a given level of risk. Assets with stable cash flow or market values justify greater use of debt financing than those with clouded marketability. For example, grain or tobacco inventory would be viewed positively, compared with apparel or electronics inventory; transportation equipment is viewed more favorably than other equipment, given its suitability for use by other companies.

Accordingly, if a firm operates different businesses, Standard & Poor's believes it is critical to analyze each type of business and asset class in its own right. While FASB and IAS now require consolidation of nonhomogenous business units, Standard & Poor's analyzes each separately. This is the basis for Standard & Poor's methodology for analyzing captive finance companies *(see page 102)*. Similarly, if a company holds significant amounts of excess cash or investments, ratios may be calculated on a "net debt" basis. This approach is used in the case of cash-rich pharmaceutical firms that enjoy tax arbitrage opportunities with respect to these cash holdings.

Asset valuation

Knowing the true values to assign a company's assets is key to the analysis. Leverage as reported in the financial statements is meaningless if assets are materially undervalued or overvalued relative to book value. Standard & Poor's considers the profitability of an asset as an appro-

priate basis for determining its economic value. Market values of a company's assets or independent asset appraisals can offer additional insights. However, there are shortcomings in these methods of valuation (just as there are with historical cost accounting) that prevent reliance on any single measure. Similarly, ratios using the market value of a company's equity in calculations of leverage are given limited weight as analytical tools. The stock market emphasizes growth prospects and has a short time horizon; it is influenced by changes in alternative investment opportunities and can be very volatile. A company's ability to service its debt is not affected directly by such factors.

The analytical challenge of which values to use is especially evident in the case of merged and acquired companies. Accounting standards allow the acquired company's assets and equity to be written up to reflect the acquisition price, but the revalued assets have the same earning power as before; they cannot support more debt just because a different number is used to record their value! Right after the transaction, the analysis can take these factors into account, but down the road the picture becomes muddied. Standard & Poor's attempts to normalize for purchase accounting, but the ability to relate to pre-acquisition financial statements and to make comparisons with peer companies is limited.

Presence of a material goodwill account indicates the impact of acquisitions and purchase accounting on a firm's equity base. Intangible assets are no less "valuable" than tangible ones. But comparisons are still distorted, since other companies cannot record their own valuable business intangibles, those that have been developed instead of acquired. This alone requires some analytical adjustment when measuring leverage. In addition, analysts are entitled to be more skeptical about earning prospects that rely on turnaround strategies or "synergistic" mergers.

Off-balance-sheet financing

Off-balance-sheet items factored into the leverage analysis include the following:

- Operating leases;
- Debt of joint ventures and unconsolidated subsidiaries;
- Guarantees;
- Take-or-pay contracts and obligations under throughput and deficiency agreements;
- Receivables that have been factored, transferred, or securitized; and
- Contingent liabilities, such as potential legal judgments or lawsuit settlements.

Various methodologies are used to determine the proper adjustment value for each off-balance-sheet item. In some cases, the adjustment is straightforward. For example, the amount of guaranteed debt can simply be added to the guarantor's liabilities. Other adjustments are more complex or less precise.

Nonrecourse debt of a joint venture may be attributed to the parent companies, especially if they have a strategic tie to the operation. The analysis may burden one parent with a disproportionate amount of the debt if that parent has the greater strategic interest or operating control or its ability to service the joint-venture debt is greater. Other considerations that affect a company's willingness to walk away from such debt—and other nonrecourse debt—include shared banking relationships and common country location. In some instances the debt may be so large in relation to the owner's investment that the incentives to support the debt are minimized. In virtually all cases, though, the parent would likely invest additional amounts before deciding to abandon the venture. Accordingly, adjustments would be made to reflect the owner's current and projected investment, even if the venture's debt were not added to the parent's balance sheet. *(See page 98.)*

In the case of contingencies, estimates are developed. Insurance coverage is estimated, and a present value is calculated if the payments will stretch over many years. The resulting amount is viewed as a corporate liability from an analytical perspective.

The sale or securitization of accounts receivable represents a form of off-balance-sheet financing. If used to supplant other debt, the impact on credit quality is neutral. (There can be some incremental benefit to the extent that the company has expanded access to capital, and this financing may be lower in cost. However, there may also be an offset in the higher cost of unsecured financing.) For ratio calculations, Standard & Poor's adds back the amount of receivables and a like amount of debt. This eliminates the distorting, cosmetic effect of utilizing an off-balance-sheet technique and allows better comparison with other firms that have chosen other avenues of financing. Similarly, if a firm

uses proceeds from receivables sales to invest in riskier assets—and not to reduce other debt—the adjustment will reveal an increase in financial risk.

The debt-equivalent value of operating leases is determined by calculating the present value of minimum operating lease obligations as reported in the annual report's footnotes. The lease amount beyond five years is assumed to mature at a rate approximating the minimum payment due in year five.

The variety of lease types may require the analyst to obtain additional information or use estimates to evaluate lease obligations. This is needed whenever lease terms are shorter than the assets' expected economic lives. For example, retailers report only the first period of a lease written with an initial period and several renewal options over a long term. Another limitation develops when a portion of the lease payment is contingent, e.g., a percentage of sales, as is often the case in the retailing industry.

(Traditionally, operating leases were recognized by the "factor method": annual lease expense is multiplied by a factor that reflects the average life of the company's leased assets. This method is an attempt to capitalize the asset, rather than just the use of the asset for the lease period. However, the method can overstate the asset to be capitalized by failing to recognize asset use over the course of the lease. It also is too arbitrary to be realistic.)

Preferred stock

Preferred stocks can qualify for treatment as equity or be viewed as debt—or something between debt and equity—depending on their features and the circumstances. The degree of equity credit for various preferreds is discussed on page 95. Preferred stocks that have a maturity receive diminishing equity credit as they progress toward maturity.

A preferred that the analyst believes will be eventually refinanced with debt is viewed as a debt-equivalent, not equity, all along. Auction preferreds, for example, are "perpetual" on the surface. However, they often represent merely a temporary debt alternative for companies that are not current taxpayers—until they once again can benefit from tax deductibility of interest expense. Moreover, the holders of these preferreds would pressure for a redemption in the event of a failed auction or even a rating downgrade.

Redeemable preferred stock issues may also be refinanced with debt once an issuer becomes a taxpayer. Preferreds that can be exchanged for debt at the company's option also may be viewed as debt in anticipation of the exchange. However, the analysis would also take into account any offsetting positives associated with the change in tax status. Often the trigger prompting an exchange or redemption would be improved profitability. Then, the added debt in the capital structure would not necessarily imply lower credit quality. The implications are different for many issuers that do not pay taxes for various other reasons, including availability of tax-loss carry-forwards or foreign tax credits. For them, a change in taxpaying status is not associated with better profitability, while the incentive to turn the preferred into debt is identical.

In the same vein, sinking fund preferreds are less equity-like. The sinking fund requirements themselves are of a fixed, debt-like nature. Moreover, they are usually met through debt issuance, which results in the sinking fund preferred being just the precursor of debt. It would be misleading to view sinking fund preferreds, particularly that portion coming due in the near to intermediate term, as equity, only to have each payment convert to debt on the sinking fund payment date. Accordingly, Standard & Poor's views at least the portion of the issuer's sinking fund preferreds due within the next five years as debt.

Cash flow adequacy

Interest or principal payments cannot be serviced out of earnings, which is just an accounting concept; payment has to be made with cash. Although there is usually a strong relationship between cash flow and profitability, many transactions and accounting entries affect one and not the other. Analysis of cash flow patterns can reveal a level of debt-servicing capability that is either stronger or weaker than might be apparent from earnings.

Cash flow analysis is the single most critical aspect of all credit rating decisions. It takes on added importance for speculative-grade issuers. While companies with investment-grade ratings generally have ready access to external cash to cover temporary shortfalls, junk-bond issuers lack this degree of flexibility and have fewer alternatives to internally generated cash for servicing debt.

Cash flow ratios

Ratios show the relationship of cash flow to debt and debt service, and also to the firm's needs. Since there are calls on cash other than repaying debt, it is important to know the extent to which those requirements will allow cash to be used for debt service or, alternatively, lead to greater need for borrowing.

Some of the specific ratios considered are:

- Funds from operations/total debt (adjusted for off-balance-sheet liabilities);
- EBITDA/interest;
- Free operating cash flow + interest/interest;
- Free operating cash flow + interest/interest + annual principal repayment obligation (debt service coverage);
- Total debt/discretionary cash flow (debt payback period);
- Funds from operations/capital spending requirements, and
- Capital expenditures/capital maintenance.

Where long-term viability is more assured (i.e., higher in the rating spectrum) there can be greater emphasis on the level of funds from operations and its relation to total debt burden. These measures clearly differentiate between levels of protection over time. Focusing on debt service coverage and free cash flow becomes more critical in the analysis of a weaker company. Speculative-grade issuers typically face near-term vulnerabilities, which are better measured by free cash flow ratios.

Interpretation of these ratios is not always simple; higher values can sometimes indicate problems rather than strength. A company serving a low-growth or declining market may exhibit relatively strong free cash flow, owing to minimal fixed and working capital needs. Growth companies, in comparison, often exhibit thin or even negative free cash flow because investment is needed to support growth. For the low-growth company, credit

MEASURING CASH FLOW

Discussions about cash flow often suffer from lack of uniform definition of terms. The table illustrates Standard & Poor's terminology with respect to specific cash flow concepts. At the top is the item from the funds flow statement usually labeled "funds from operations" (FFO) or "working capital from operations." This quantity is net income adjusted for depreciation and other noncash debits and credits factored into it. Back out the changes in working capital investment to arrive at "operating cash flow."

Next, capital expenditures and cash dividends are subtracted out to arrive at "free operating cash flow" and "discretionary cash flow," respectively. Finally, cost of acquisitions is subtracted from the running total, proceeds from asset disposals added, and other miscellaneous sources and uses of cash netted together. "Prefinancing cash flow" is the end result of these computations, which represents the extent to which company cash flow from all internal sources has been sufficient to cover all internal needs.

The bottom part of the table reconciles prefinancing cash flow to various categories of external financing and changes in the company's own cash balance. In the example, XYZ Inc. experienced a $35.7 million cash shortfall in year one, which had to be met with a combination of additional borrowings and a drawdown of its own cash.

Cash flow summary: XYZ Corp.

(Mil. $)	Year one	Year two
Funds from operations (FFO)	18.58	22.34
Dec. (inc.) in noncash current assets	(33.12)	1.05
Inc. (dec.) in nondebt current liabilities	15.07	(12.61)
Operating cash flow	0.52	10.78
(Capital expenditures)	(11.06)	(9.74)
Free operating cash flow	(10.53)	1.04
(Cash dividends)	(4.45)	(5.14)
Discretionary cash flow	(14.98)	(4.09)
(Acquisitions)	(21.00)	0.00
Asset disposals	0.73	0.23
Net other sources (uses) of cash	(0.44)	(0.09)
Prefinancing cash flow	(35.70)	(3.95)
Inc. (dec.) in short-term debt	23.00	0.00
Inc. (dec.) in long-term debt	6.12	13.02
Net sale (repurchase) of equity	0.32	(7.07)
Dec. (inc.) in cash and securities	6.25	(2.00)
	35.70	3.95

analysis weighs the positives of strong current cash flow against the danger that this high level of protection might not be sustainable. For the high-growth company, the problem is just the opposite: weighing the negatives of a current cash deficit against prospects of enhanced protection once current investment begins yielding cash benefits. There is no simple correlation between creditworthiness and the level of current cash flow.

The need for capital

Analysis of cash flow in relation to capital requirements begins with an examination of a company's capital needs, including both working and fixed capital. While this analysis is performed for all debt issuers, it is critically important for fixed capital-intensive firms and growth companies. Companies seeking working capital often are able to finance a significant portion of current assets through trade credit. However, rapidly growing companies typically experience a build-up in receivables and inventories that cannot be financed internally or through trade credit.

Improved working-capital management techniques have greatly reduced the investment that might otherwise have been required. This makes it difficult to base expectations on extrapolating recent trends. In any event, improved turnover experience would not be a reason to project continuation of such a trend to yet better levels.

Because Standard & Poor's evaluates companies as ongoing enterprises, the analysis assumes that firms will provide funds continually to maintain capital investments as modern, efficient assets. Cash flow adequacy is viewed from the standpoint of a company's ability to finance capital-maintenance requirements internally, as well as its ability to finance capital additions. It is difficult to quantify the requirements for capital maintenance unless data are provided by the company.

An important dimension of cash flow adequacy is the extent of a company's flexibility to alter the timing of its capital requirements. Expansions are typically discretionary. However, large plants with long lead times usually involve, somewhere along the way, a commitment to complete the project.

There are companies with cash flow adequate to the needs of the existing business, but that are known to be acquisition-minded. Their choice of acquisition as an avenue for growth means that this activity must also be anticipated in the credit analysis. Management's stated acquisition goals and past takeover bids, including those that were not consummated, provide a basis for judging prospects for future acquisitions.

Financial flexibility

The previous assessment of financial factors (profitability, capital structure, cash flow) are combined to arrive at an overall view of financial health. In addition, sundry considerations that do not fit in other categories are examined, including serious legal problems, lack of insurance coverage, or restrictive covenants in loan agreements that place the firm at the mercy of its bankers.

An analytical task covered at this point is the evaluation of a company's options under stress. The potential impact of various contingencies is considered, along with a firm's contingency plans. Access to various capital markets, affiliations with other entities, and ability to sell assets are important factors.

Flexibility can be jeopardized when a firm is overly reliant on bank borrowings or commercial paper. Reliance on commercial paper without adequate backup facilities is a big negative. An unusually short maturity schedule for long-term debt and limited-life preferred stock also is a negative. Access to various capital markets can then become an important factor. In general, a company's experience with different financial instruments and capital markets gives management alternatives if conditions in a particular financial market suddenly sour. Company size and its financing needs can play a role in whether it can raise funds in the public debt markets. Similarly, a firm's role in the national economy—and this is particularly true outside the U.S.—can enhance its access to bank and public funds.

Access to the common stock market may be primarily a question of management's willingness to accept dilution of earnings per share, rather than a question of whether funds are available. (However, in some countries, including Japan and Germany, equity markets may not be so accessible.) When a new common stock offering is projected as part of a company's financing plan, Standard & Poor's

tries to measure management's commitment to this plan, and its sensitivity to changes in share price.

As going concerns, companies should not be expected to repay debt by liquidating operations. Clearly, there is little benefit in selling natural resource properties or manufacturing facilities if these must be replaced in a few years. Nonetheless, a company's ability to generate cash through asset disposals enhances its financial flexibility.

Pension obligations, environmental liabilities, and serious legal problems restrict flexibility, apart from the obligations' direct financial implications. A large pension burden can hinder a company's ability to sell assets, because potential buyers will be reluctant to assume the liability, or to close excess, inefficient, and costly manufacturing facilities, which might require the immediate recognition of future pension obligations and result in a charge to equity.

When there is a major lawsuit against the firm, suppliers or customers may be reluctant to continue doing business, and the company's access to capital may also be impaired, at least temporarily.

The Global Perspective

A global rating scale imposes a consistent, common discipline on all cross-border analysis, while still allowing the assessment of an issuer in its local context. Standard & Poor's weighs the diverse national considerations, but expresses its ratings on a single scale so that debtholders can compare issues of equivalent credit quality.

International corporate ratings are conducted by teams that combine knowledge of the country of domicile with industry expertise. The analysis of corporates around the globe all follow the same rating methodology (described in the previous section): Industry risk and the company's competitive position are evaluated in conjunction with the firm's financial profile and policies. This fundamental analysis is performed with an appreciation of relevant industry and financial characteristics of a specific country or region. If the regional environment poses additional risks to corporates operating there, that too is incorporated in the analysis. *(The section starting on page 34 elaborates on country economic and political factors that pertain in emerging markets.)*

The analysis is conducted based on the issuer's financial statements prepared in accordance with the prevailing local standard—as long as these meet international standards and are audited by a reputable firm. In some emerging markets it is critical to resolve in advance what level of disclosure will be available—at the time of the rating and on an ongoing basis (to allow appropriate surveillance.)

Business risk

Business risk analysis entails the assessment of an issuer's economic, operational, and competitive environment. The analysis of corporates of differing nationalities calls for an appreciation of this environment for an issuer's specific geographical and industrial mix. Demand and supply factors, both domestic and worldwide, are assessed. Industries where competition takes place on a local basis, such as retailing, are viewed differently than those which are exposed to global market forces, such as semiconductors or energy. Other industries, such as automobiles, face a combination of global and regional market considerations. Industry risk varies from region to region.

In reviewing companies in export-oriented countries, emphasis is placed on a firm's ability to withstand local currency appreciation and the country's sentiments toward trade protectionism. Japanese manufacturers, for example, were challenged in the mid-1980s and again in the mid-1990s by the strong appreciation of the yen relative to the dollar. Labor conditions can also differ internationally. Where labor costs are high, an industrial company's cost structure can impair its international competitive position. Differing social attitudes and legal restrictions regarding labor make headcount reductions or other forms of industrial rationalization more difficult in certain countries.

The role of regulation and legislation, actual and potential, must also be considered. In Europe, a growing number of industries are experiencing challenges to traditional arrangements stemming from new directives from the European Economic Commission.

Financial risk

Key aspects of financial risk assessed by Standard & Poor's include earnings protection, cash flow adequacy, asset quality, use of debt leverage, and financial flexibility. It is a challenge to interpret and compare financial measures that are derived from differing accounting practices. For example, some systems use historical cost and others use current, or inflated, cost to value assets.

The analyst begins by assessing company performance based on its own accounting framework. Adjustments are made to enable comparisons. Standard & Poor's does not translate a company's financial accounts to a

U.S. GAAP framework (nor does it ask companies to do so.) By understanding the features of each accounting system, analysts seek out differences that materially affect the way a company operating under any reporting system compares with that of its international peer group.

Endeavoring to adjust measurements of international companies to common denominators, the analysis focuses on "real" stocks and flows, namely, levels of debt, cash, and cash flow. There is less emphasis on abstract measures, such as shareholders' equity and reported earnings. Although earnings and net worth have important economic meaning if measured consistently and responsibly, this meaning is often blurred in a cross-border context. For example, differing depreciation or asset revaluation policies can result in significant distortions. In addition, profitability norms differ on an international basis. A company generating relatively low returns on permanent capital in a country with low interest rates perhaps should be viewed more favorably than a similar company reporting higher returns in a higher interest rate environment.

Financial parameters that are increasingly viewed as relevant and reliable are coverage of fixed financial charges by cash flow and operating cash flow relative to total debt. The traditional measure of debt to capital is no longer weighted as heavily. In any event, ratios of corporates outside the U.S. are not directly comparable with median statistics published for U.S. industrials.

Balance-sheet distortion

Treatment of goodwill offers an example of balance-sheet distortion. In some countries, companies write off goodwill at the outset of an acquisition, whereas companies in other parts of the world do not. U.K. companies tended to write off goodwill, that is, until recent changes in their accounting procedures. The result is that U.K. companies tend to have capital structures that look weaker and earnings that look better than those of competitors from countries that capitalize goodwill and amortize it over time. To adjust, the analyst may add back goodwill to shareholders' funds and make a qualitative or quantitative adjustment for goodwill amortization in analyzing a U.K. company.

Asset valuation practices also differ from country to country, resulting in differences in both a company's reported equity base and its depreciation expense. There is no easy way to compare companies that revalue their assets with those that do not. Rather, Standard & Poor's recognizes that, for all companies, reported asset values often differ from market values. In discussions with management, Standard & Poor's analysts endeavor to gain an appreciation of the realizable values of a company's assets under reasonably conservative assumptions.

Net debt

In many countries, notably in Japan and Europe, local practice is to maintain a high level of debt while holding a large portfolio of cash and marketable securities. Many companies manage their finances on a net debt basis. In these situations, Standard & Poor's focuses on net interest coverage, cash flow to net debt, and net debt to capital. When a company consistently demonstrates such excess liquidity, interest income may be offset against interest expense in looking at overall financial expenses. Net debt leverage is similarly calculated by netting out excess liquidity from short-term borrowings. Each situation is analyzed on a case-by-case basis, subject to additional information regarding a company's liquidity position, normal working cash needs, nature of short-term borrowings, and funding philosophy. Funds earmarked for future use, such as an acquisition or a capital project, are not netted out.

In some countries it is not uncommon for industrial companies to establish their treasury operations as a profit center. In Japan, for example, the term "zaiteku financing" refers to the practice of generating profits through arbitrage and other financial-market transactions. If financial position-taking comprises a material part of a company's aggregate earnings, Standard & Poor's segregates those earnings to assess the profitability of the core business. Standard & Poor's may also view with skepticism the ability to realize such profits on a sustained basis and may treat them like nonrecurring gains.

Earnings differences

Shareholder pressures and accounting standards in certain countries—such as the U.S.—can result in companies seeking to maximize profits on a quarter-to-quarter or short-term basis. In other regions—aided by local tax reg-

ulation—it is normal practice to take provisions against earnings in good times to provide a cushion against downturns, resulting in a long run "smoothing" of reported profits. Given local accounting standards, it is not rare to see a Swiss or German company vaguely report "other income" or "other expenses," which are largely provisions or provision reversals, as the largest line items in a profit and loss account. In meetings with management, Standard & Poor's discusses provisioning and depreciation practices to see to what extent a company employs noncash charges to reduce or bolster earnings. Credit analysis focuses on operating performance and cash flow, not financial reports distorted by accounting techniques.

Contingent liabilities

Consideration of contingent liabilities also varies internationally. Off-balance-sheet obligations can often be significant and subject to differing methods of calculation. For example, the practice of factoring receivables with recourse back to the company is common in Japan. While some accounting systems treat this practice as a form of debt financing, Japanese companies simply report it as a contingency.

Pensions are handled very differently in different countries. For example, U.S. firms explicitly reflect the pension asset/liability on their balance sheet, while German firms do not. Standard & Poor's adds in any pension obligation when calculating ratios for German firms, to incorporate a consistent view of these liabilities. Other forms of contingent liabilities, such as implicit financial support to nonconsolidated affiliated companies or projects, are also common, and are factored into the analysis.

Other national and regional factors

Many international corporate issuers benefit from their status within the country or region of domicile. This is particularly true for corporates with significant state ownership. Other local factors that might affect an issuer's financial flexibility include access to local banks and capital markets.

State ownership

Without a guarantee or other form of formal support arrangement, a state-owned corporate issuer does not intrinsically carry the same level of credit risk as its sovereign owner. Nevertheless, state ownership can bolster a company's credit profile through implicit support. Government support can take the form of facilitated access to external sources of capital or, in extreme cases, direct financial infusions.

The link between government and industry differs from country to country and, even within a country, from firm to firm. The analysis begins by considering the state's historical relationship with industry, including the degree to which governmental financial aid has been used to support state-owned firms in the past. However, it is important to anticipate potential changes in historical arrangements. For example, Economic Commission competition has the potential to inhibit the ability of member states to grant economic support freely to industries operating in competitive sectors. In many countries, the trend of late has been toward forcing government-owned entities to operate in a more self-sufficient manner—dubbed "corporatization"—and withdrawing state support.

The analyst considers the strategic importance of the firm to the country of domicile. Certain state-owned firms provide a vital service or technology, often in fields relating to defense, energy, telecommunications, or electronics. Such firms may be perceived to serve national interests more than firms engaged in more basic industries. Also considered is a firm's economic importance—in terms of employment, foreign-exchange generation, and local investment. Standard & Poor's meets with officials of sovereign governments to ascertain their view of a firm's strategic importance and potential sovereign support for that issuer.

Analysis of an issuer on a stand-alone basis allows the rating to reflect both the likelihood of the issuer needing to seek external state support and the likelihood of receiving such support. Wherever a rating is notably higher than it would have been on a stand-alone basis, strong implicit ties to the sovereign state have been confirmed in meetings with government officials.

Local ownership blocks

Concentration of ownership, resulting in companies with cross shareholdings or common parents, exists in several countries. Japan and Korea, for example, have numerous industrial groupings that combine companies across several industrial sectors. In Canada, Sweden,

Latin America, and Southeast Asia large networks of family holdings are found.

There are both positive and negative implications of group affiliation. In many cases, a company may benefit from operating relationships or greater access to financing. Conversely, a company's group affiliation could bring responsibility for providing support to weaker group companies. Standard & Poor's assesses whether constraints on group influence, such as an external minority interest position, justify rating an issuer on a standalone basis. If not, the analysis attempts to incorporate the economic and financial trends in the issuer's affiliate group as well.

Access to local sources of capital

An issuer's standing within its home financial community is also considered. Large issuers in a relatively small country are often in a favorable position to attract financing from that country's banking system. Access to ready bank financing may be enhanced by cross shareholdings between a bank and an industrial firm or the development over time of a special relationship with one or more banks. At the same time, certain issuers benefit from recognition and status within local capital markets. While access to public debt and equity cannot be assumed, particularly in times of financial stress, prominence within local markets broadens a firm's financial options. One way to determine how well a company might compete for capital is by comparing its performance to local peers in terms of local accounting and financial norms.

LOCAL CURRENCY CREDIT RATING:

A current opinion of an obligor's overall capacity to generate sufficient local currency resources to meet its financial obligations (both foreign and local currency), absent the risk of direct sovereign intervention that may constrain payment of foreign currency debt. Local currency credit ratings are provided on Standard & Poor's global scale or on separate domestic scales, and they may take the form of either issuer or specific issue credit ratings.

Country or economic risk considerations pertain to the impact of government policies on the obligor's business and financial environment, including factors such as the exchange rate, interest rates, inflation, labor market conditions, taxation, regulation, and infrastructure. However, the opinion does not address transfer and other risks related to direct sovereign intervention to prevent the timely servicing of cross-border obligations.

FOREIGN CURRENCY CREDIT RATING:

A current opinion of an obligor's overall capacity to met its foreign-currency-denominated financial obligations. It may take the form of either an issuer or an issue credit rating. As in the case of local currency credit ratings, a foreign currency credit opinion on Standard & Poor's global scale is based on the obligor's individual credit characteristics, including the influence of country or economic risk factors. However, unlike local currency ratings, a foreign currency credit rating includes transfer and other risks related to sovereign actions that may directly affect access to the foreign exchange needed for timely servicing of the rated obligation.

Transfer and other direct sovereign risks addressed in such ratings include the likelihood of foreign-exchange controls and the imposition of other restrictions on the repayment of foreign debt.

Country Risk: Emerging Markets

Standard & Poor's rating criteria has always emphasized an appreciation of relevant local characteristics. In emerging markets, country risk takes on added importance. Outlined below are examples of various country-specific factors, which pertain to every aspect of corporate analysis.

The degree of concern to attribute to local economic/political risk factors is a function of the likelihood of their occurring. Sovereign ratings provide much insight into the perceived likelihood of these risks coming into play.

To acheive a local currency corporate rating higher than the sovereign foreign currency rating would mean that the corporate can service its debts (not just survive as an ongoing concern) even under a scenario so severe—in terms of inflation, currency devaluation, and fiscal crisis—that it causes the government to default on its foreign currency debt. And to be higher-rated than the sovereign local currency rating means that the corporate can continue to service its debt even under a scenario so severe—in terms of financial crisis, banking system collapse, political unrest, or even anarchy—that it causes the government to default on its local currency debt.

History shows us that some companies indeed have managed to honor their obligations even under such stressful circumstances. But these instances are clearly the exception to the rule, as all companies are extensively affected by country factors. Nonetheless, companies that mitigate these specific risks can be rated higher than the sovereign, since their risk of default may be lower. Even for such companies, there would normally be a limit on how far above the sovereign the corporate rating could go, considering how difficult it is to divine in advance how things will play out in crises. And the further away a country is from default the more speculative such an undertaking would be. (In the typical case, the combination of ordinary corporate risks with the potential for problems associated with a risky country environment add up to a lower rating than the government's—the most creditworthy entity in that country!)

(Separately, there is the risk of direct government intervention—which is particularly germane to foreign currency ratings. That is discussed on page 37.)

Business risk factors

Macroeconomic volatility. Does the country's economic track record suggest high volatility in the macroenvironment? This may compound the constraint on credit quality typically associated with cyclical industries, since they become even more cyclical, and may experience stronger "booms" and "busts."

Access to imported raw materials. Is the company heavily dependent on imported supplies, and could the company's operations therefore be interrupted if foreign-exchange controls are imposed by the sovereign?

Exchange-rate risk. Is the exchange rate subject to significant volatility, which could compress margins relative to global peers and/or affect demand for products?

Government regulation. Is there a risk of the government "changing the rules of the game," through import/export restrictions, direct intervention in service quality or levels, redefining boundaries of competition such as service areas, altering existing barriers to entry, changing subsidies, or changing antitrust legislation? For extractive industries, what is the risk of government contract renegotiation or nationalization? Are environmental regulations expected to tighten significantly; are local lobbying groups gaining political clout in this respect?

Taxes/royalties/duties. Does the company or its key investments enjoy tax subsidies or royalty arrangements that have renegotiation risk at the federal or regional level? Does the government have a history of micro-managing the cur-

rent account balance through changing taxes or duties on imports/exports/foreign borrowings?

Legal issues. What is the transparency of the legal system? Does the type of legal system (common vs. civil vs. Islamic) create differences in contract risks or treatment of creditor rights, particularly with regard to collateral and workout/bankruptcy situations?

Labor issues. What is the potential for strikes? Is there inflexibility of regulations which may make firing workers an unrealistic or expensive option?

Infrastructure problems. Are there potential bottlenecks, poor transport, high-cost/inefficient port services? Is there a need to supply own electricity or other basic services/infrastructure?

Changing tariff barriers/trade blocs/subsidies. Are domestic companies protected by tariffs or other industry subsidies that are likely to drop as governments liberalize their external trade regulations? Has/will the country join a local trade bloc, which could immediately drop tariffs on imports from members?

Corruption issues. Is corruption an issue in terms of raising the cost of business or creating uncertainty about maintaining a "level playing field" for business?

Terrorism. Are there risks of attacks on the companies facilities, kidnapping of key employees? How has the company mitigated these risks?

Industry structure/operating environment. Industry characteristics may be favorable or unfavorable relative to global peers. For example, the cement industry in Mexico is highly concentrated among two or three large players, versus a fiercely competitive and fragmented U.S. market. Growth prospects for consumer products or new technologies and services can offer tremendous opportunities, by tracking expected population growth or increasing per capita incomes, which may be offset by other risks. For example, demand for cellular telephones in many emerging markets that are underserved is exploding, yet there are still limitations due to relatively low per capita incomes and changing regulations, which may allow new forms of competition.

Financial risk factors

Financial policy:

Disclosure/local accounting standards issues. Does the company provide consolidated financial statements? The lack of consolidated statements, which may not be required by local regulatory/accounting standards, can hinder the analyst's ability to assess overall cash flow generation and debt service coverage. Lack of segment information may make it difficult to analyze properly profitability trends or project performance. Changes in overall accounting presentation, for example eliminating inflation accounting without requiring restatement of prior years, makes trend comparisons meaningless or difficult. Obtaining timely financial statement reporting may be an issue.

Foreign-exchange risks. Does the company hedge foreign-exchange risks, to the extent it is within its control to do so? Does the company show a propensity to speculate with financial arbitrage opportunities? (For example, does the company borrow in U.S. dollars to invest in high interest rate local currency instruments, exposing itself to devaluation risk?)

Family/group ownership issues. If the issuer is part of a conglomerate or family-controlled group of companies, is the company's financial policy dictated by the group, and are there potential weaknesses at other group companies that could negatively affect the issuer? Conversely, strong group ownership and support can enhance creditworthiness.

Profitability/cash flow:

Potential price controls. These are particularly a threat for basic local goods or services, such as telephone/electric services, or gasoline sales. At times of spiraling inflation (a risk captured in the sovereign foreign currency rating), governments often try to assuage consumers by controlling prices on highly visible goods or services, and under severe stress may freeze all prices in an effort to control inflation.

Inflation/currency fluctuation risk. Where existing or potential high/accelerating inflation is an issue, does the company have the pricing flexibility, systems, and know-how to keep revenues increasing in-line with or ahead of costs? Will import prices of supplies be affected by devaluation? How well matched, by currency, are revenues and costs? Does a mismatch expose the company to devaluation or, for exporters, currency appreciation risk, which can lead to sustained reductions in profitability?

Restricted access to subsidiary cash flow. Is access to cash flows of foreign subsidiaries constrained by potential transfer/convertibility risk?

Capital structure/financial flexibility:

Inflation accounting. Does local accounting tend to overstate fixed asset values, which leads to understated or noncomparable leverage ratios? As a consequence of overstated fixed asset values, high depreciation charges may lead to relatively understated earnings.

Devaluation risk. Does the currency of debt obligations expose the company to devaluation risk? How well matched by currency are revenues versus debt? Companies with local currency revenue stream and dollar-denominated debt see their earnings power severely hurt relative to debt service when the government devalues the currency. While local inflation eventually may allow companies to raise prices enough to compensate, this process generally takes time, as weak local market conditions or price controls limit price flexibility.

Access to capital. This is often a key constraint for emerging market issuers, which broadly penalizes their credit quality relative to those of firms in developed markets. Even the strongest emerging market private-sector issuers have had difficulties accessing local or international capital markets during periods of stress. Thin domestic capital markets prevent companies from accessing local markets at reasonable rates as well; at times of stress, the local banking system would be suffering illiquidity due to high capital flight. A weak or poorly regulated local banking system can introduce additional volatility. Moreover, Latin American-based companies typically do not have access to committed credit lines.

Debt maturity structure. For emerging market issuers, concentration in short-term debt, whether dollar- or local-currency denominated, exposes the company to critical rollover risk.

Local dividend payout requirements. Do the requirements make dividends more like a fixed cost? In Chile, public companies must pay out a minimum 30% of net income as dividends, while Brazil has a 25% minimum requirement. On the other hand, this explicit link of payments to profits gives companies more flexibility to lower dividends when profits decrease.

Liquidity restrictions. Is the company's liquid asset position held in local government bonds, local banks, or local equities, and will the issuer have access to these assets at times of stress on the sovereign. For example, local bank deposit freezes accompanied the sovereign stress scenarios in Ecuador in 1998/1999 and in Argentina in 2002.

Sovereign Risk

Sovereign credit risk is always a key consideration in the assessment of the credit standing of banks and corporates. Sovereign risk comes into play because the unique, wide-ranging powers and resources of a national government affect the financial and operating environments of entities under its jurisdiction. Past experience has shown time and again that defaults by otherwise creditworthy borrowers can stem directly from a sovereign default.

In the case of foreign currency debt, the sovereign has first claim on available foreign exchange, and it controls the ability of any resident to obtain funds to repay creditors. To service debt denominated in local currency, the sovereign can exercise its powers to tax, to control the domestic financial system, and even to issue local currency in potentially unlimited amounts. Given these considerations, the credit ratings of nonsovereign borrowers most often are at, or below, the ratings of the relevant sovereign.

While "sovereign ceiling" is an inappropriate term, Standard & Poor's always assesses the impact of sovereign risk on the creditworthiness of each issuer and how it may affect the ability of that issuer to fulfill its obligations according to the terms of a particular debt instrument. This is done in a more flexible manner than the term "ceiling" suggests, by looking at the issuer's own position and ability to meet its obligations in general, as well as the particular features of a specific obligation that might affect its timely payment. For example, geographic diversification or support by an external parent tends to add to the overall creditworthiness of a borrower and to lessen its exposure to sovereign action. Also, borrowers may add features to specific debt issues, such as external guarantees, or they may structure them in particular ways, such as asset-backed transactions, that enhance the likelihood of payment. Nevertheless, for most international debt issuers, the sovereign risk factor remains an extremely important consideration in the assignment of overall creditworthiness.

From 1975-1995, Standard & Poor's has documented 69 cases of sovereign default on either bond or bank debt. Of those defaulting countries where there was significant private-sector external debt outstanding at the time, private-sector borrowers defaulted in 68% of the cases.

The key elements to consider are:

- The economic, business, and social environments that influence both the sovereign's own rating and those of issuers domiciled there. (Refer to previous section.)
- The ways in which a sovereign can directly or indirectly intervene to affect the ability of an entity to meet its offshore debt obligations, even if that entity has sufficient funds on hand to meet that obligation.

Actions by the sovereign

Sovereign governments in many countries act to constrain an issuer's ability to meet offshore debt obligations in a timely manner. While higher-rated sovereigns are not expected to interfere with the issuer's ability to use available funds to meet such offshore obligations, the chances of some form of intervention increase significantly for entities domiciled in lower-rated nations.

At a time of local economic stress, when foreign exchange is viewed as an increasingly scarce and valuable commodity, the likelihood of direct constraint, intervention, or interference with access to foreign exchange can be high. For this reason alone, it is unlikely that most issuers' ability to meet offshore debt obligations in a timely manner can be viewed as more probable than their sovereign's own likelihood of meeting their offshore debt obligations.

Even when the issuer has sufficient funds to meet its offshore debt obligations, the sovereign may absolutely prohibit, or otherwise constrain, the issuer from meeting those obligations in a timely manner. Such constraint can take many forms. During 2002, for example, the Argentinean government rationed

the availability of foreign exchange to private-sector entities to the point that some of these entities defaulted on foreign currency debt obligations, despite many of these same firms having sufficient funds to meet these obligations in a timely manner if access to foreign exchange had been possible.

However, sovereign governments do not necessarily treat all types of debt obligations equally. In the past, even in situations where the sovereign itself was in default on some of its debt, permission has been granted for certain obligations to be met on a timely basis. Trade credits are often distinguished from capital market instruments. In several instances in the 1980s, bond debt issued by private Latin American entities continued to be serviced even while bank loans were being rescheduled, although at that time bond debt was relatively low. With bond debt increasing as a proportion of the total, future situations could be quite different. Standard & Poor's expects that sovereigns will continue to discriminate among the wide range of issues in the future, permitting some to proceed while constraining others. Therefore, each obligation must be analyzed on its own merits in the rating process and the likely government action with respect to that type of obligation addressed.

A sovereign government under severe economic or financial pressure seeking to retain valued foreign currency reserves in the country, and which may not be able to meet, or already has not met, its timely obligations on offshore debt, could impose many constraints on other governmental or private-sector borrowers, including:

- Setting limits on the absolute availability to foreign exchange;
- Maintaining dual or multiple exchange rates for different types of transactions;
- Making it illegal to maintain offshore or foreign currency bank accounts;
- Requiring the repatriation of all funds held abroad, or the immediate repatriation of proceeds from exports and conversion to local currency;
- Seizing physical or financial assets if foreign-exchange regulations are breached;
- Requiring that all exports (of the goods in question) be conducted through a centralized marketing authority, or the posting of a significant bond prior to the export of goods to assure immediate repatriation of proceeds;
- Implementing restrictions on inward and outward capital movements;
- Refusing to clear a transfer of funds from one entity to another;
- Revoking permission to use funds to repay debt obligations;
- Mandating a moratorium on interest and principal payments, or required rescheduling or restructuring of debt; and
- "Nationalizing" the debt of an issuer and making it subject to the same repayment terms or debt restructuring as that of the sovereign.

The past record of a particular sovereign can indicate the potential for imposition of controls in the future. Some sovereigns have displayed much more restraint in applying controls to private capital movements than others, and such a positive track record is incorporated into the assessment of both the sovereign itself and entities domiciled in that country. In addition, different types of obligations may have been treated differently. However, a good track record is not, in and of itself, definitive proof that the sovereign would not impose controls of some type at some point in the future in a period of severe economic stress. Conditions change and governments change.

One key element in this evaluation is whether, and to what degree, a particular transaction fits within the national priorities. For example, when a government is actively encouraging exports, a transaction specifically tied to export promotion might be favored and remain exempt from restrictions even while other transactions, which do not fulfill such national objectives, are constrained. In addition, when specific permission for a transaction has been granted, a sovereign might be more reluctant to withdraw such permission, or may "grandfather" that particular transaction, while future transactions are constrained or prohibited. It is therefore possible that some debt issues of a particular borrower are not highly subject to sovereign interference, while others issued by the same entity are.

Government ownership and regulation

Many of the entities issuing debt that are domiciled in low-rated countries are partially, or completely, government owned. If foreign-exchange controls are imposed, it is unlikely that government-owned institutions would be permitted or would choose to circumvent government controls.

The same holds true for entities that are highly regulated by the government, even without a direct ownership tie. This includes most financial institutions and regulated utilities. Thus, it is unlikely that a government-owned entity, or one that is highly regulated, could be viewed as more creditworthy than the sovereign itself in terms of meeting foreign currency obligations.

Duration of controls

When controls or restrictions are imposed, their duration cannot be predicted. In some instances, controls have lasted for only a few weeks or months, and in some others, they have been applied selectively. In still other cases, they have been much longer-lasting and all-encompassing. A rating cannot be based on a guess as to the duration or comprehensiveness of controls, and analysis cannot determine that controls would be in place for a specific (short) period of time. Accordingly, liquidity and parental support which would only temporarily serve to meet debt service are not sufficient to justify a higher rating in themselves. A reserve fund of one year's payments or even longer cannot be assumed sufficient to overcome the impact of controls. Reserve funds may be used for some transactions—to cover the temporary interruption of supply for an export receivables deal, for example—but not to deal with the potential imposition of currency controls or similar actions that may prevent the payment on debt.

Governing law

The law governing a specific debt issue, as well as other legal factors, may be relevant in evaluating whether a sovereign could affect timely payment on a debt obligation. However, Standard & Poor's exercises caution in placing weight on the legal factor. When sovereign powers are involved, issues such as conflicts of law, waivers, and permission to hold and use funds held outside the country of domicile are confused at best and would likely be tested and resolved by the courts only after, rather than prior to, a default.

Special cases

In some instances, an issuer is technically domiciled in a particular country for tax or reasons other than business undertaken within that country. For example, issuers domiciled in certain specified financial centers, such as the Cayman Islands, are viewed as independent of that financial center's sovereign risk. No substantial business is undertaken within that jurisdiction; no substantive assets are maintained in that jurisdiction; and the issuer could change its location quickly and without risk to the debtholder should the sovereign impose any form of controls or onerous taxes.

Multilateral lending institutions, such as the International Bank for Reconstruction and Development (World Bank), the International Finance Corporation (IFC), and the Interamerican Development Bank (IADB), enjoy preferred creditor status. By virtue of the borrowing country's membership in the lending organization and as a condition of eligibility to receive loans, the country assures that it will not impose any currency restriction or other impairment to the repayment of such loans. In some cases, the treaty establishing the organization also specifies such special treatment of loans by member nations. Often these loans, while made to other, nonsovereign enti-

ties, are also guaranteed by the borrowing country, and the lending institution has a policy that no further loans will be granted to borrowers in that country if any loans are in default.

These factors give the borrowing country strong incentives to maintain timely loan repayment. The result has been an excellent repayment record for such obligations even while other borrowings from banks or other lenders have fallen into default. One analytical element is assessing the creditworthiness of these loans in the proportion of a country's total external indebtedness made up of this type of obligation. The larger the proportion, the more difficult it may be for the country to meet these in a timely manner and preserve their special status.

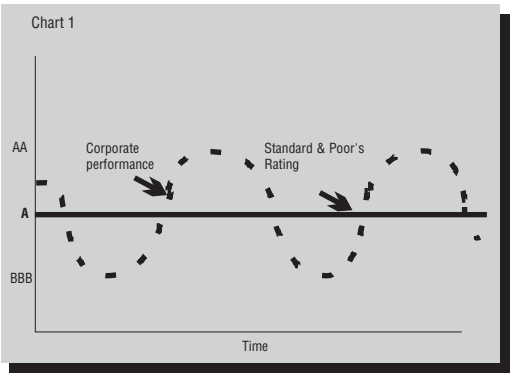
Factoring Cyclicality into Corporate Ratings

Standard & Poor's credit ratings are meant to be forward-looking; that is, their time horizon extends as far as is analytically foreseeable. Accordingly, the anticipated ups and downs of business cycles—whether industry-specific or related to the general economy—should be factored into the credit rating all along. This approach is in keeping with Standard & Poor's belief that the value of its rating products is greatest when its ratings focus on the long term, and do not fluctuate with near-term performance. Ratings should never be a mere snapshot of the present situation. There are two models for how cyclicality is incorporated in credit ratings. Sometimes, ratings are held constant throughout the cycle. Alternatively, the rating does vary—but within a relatively narrow band.

Cyclicality and business risk

Cyclicality is, of course, a negative that is incorporated in the assessment of a firm's business risk. The degree of business risk, in turn, becomes the basis for establishing ratio standards for a given company for a given rating category. (The ratio guidelines that Standard & Poor's publishes are expressed as a matrix, so that the degree of business risk is explicitly recognized.) The analysis then focuses on a firm's ability to meet these levels, on average, over a full business cycle, and the extent to which it may deviate and for how long.

The ideal is to rate "through the cycle" *(see chart 1)*. There is no point in assigning high ratings to a company enjoying peak prosperity if that performance level is expected to be only temporary. Similarly, there is no need to lower ratings to reflect poor performance as long as one can reliably anticipate that better times are just around the corner.



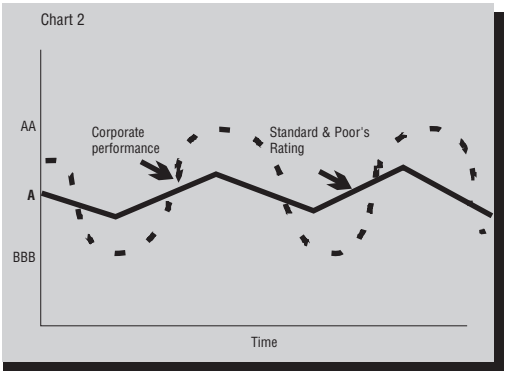
The rating profile of the chemical industry offers a good illustration of Standard & Poor's long-term approach. Ratings for the major industry participants have been highly stable over a 12-year period, which has included two full industry cycles.

However, rating through the cycle is often the incorrect model. One reason is that rating through the cycle requires an ability to predict the cyclical pattern—and this is usually difficult to do. If indeed there is such a thing as a "normal" cycle, it is rare. The phases of the latest cycle will probably be longer or shorter, steeper or less severe, than just repetitions of earlier cycles. Management's determination to learn from previous cycles itself implies that "things will be different this time." Interaction of cycles from different parts of the globe, and the convergence of secular and cyclical forces further complicate things.

Moreover, even predictable cycles can affect individual firms so as to have a lasting impact on credit quality. For example, a firm may accumulate enough cash in the upturn to mitigate the risks of the next downturn. (The Big Three automobile manufacturers have been able—during the most recent cyclical upswing—to accumulate huge cash hoards that should exceed cash outflows anticipated in future recessions.) Conversely, a firm's business can be so impaired during a downturn that its competitive position may be permanently altered. In the extreme, a company will not survive a cyclical downturn to participate in the upturn!

Accordingly, ratings may well be adjusted with the phases of a cycle. Normally, however, the range of the ratings would not fully mirror the amplitude of the company's cyclical highs

or lows, given the expectation that a cyclical pattern will persist. The expectation of change from the current performance level—for better or worse—would temper any rating action, even absent a totally clear picture of the cyclical pattern. In most cases, then, the typical relationship of ratings and cycles might look more like chart 2.



The ratings of the forest products industry reflect such a pattern.

Sensitivity to cyclical factors—and ratings stability—also varies considerably along the rating spectrum. The creditworthiness of non-investment-grade firms is, almost by definition, more volatile. Moreover, the lowest credit rating categories often connote the imminence of default. As the credit quality of a company is increasingly marginal, the nature and timing of near-term changes in market conditions could mean the difference between survival and failure. A cyclical downturn may involve the threat of default before the opportunity to participate in the upturn that may follow. Accordingly, cyclical fluctuations will usually lead directly to rating changes—possibly even several rating changes in a relatively short period. Conversely, a cyclical upturn may give companies a breather that may warrant a modest upgrade or two from those very low levels.

In contrast, companies viewed as having strong fundamentals—that is, those enjoying investment-grade ratings—are unlikely to see their ratings changed significantly due to factors deemed to be purely cyclical—unless the cycle is either substantially different from what was anticipated or the company's performance is somehow exceptional relative to what had been expected.

Analytical challenges

The notion of "rating through the cycle," while conceptually appealing, presupposes that the characteristics of future cycles are readily foreseeable. The very term "cycle" seems to imply regularity. In actuality, this is seldom the case.

Cyclicality encompasses several different phenomena that can affect a company's performance. General business cycles, marked by fluctuations in overall economic activity and demand, are only one type. Demand-driven cycles may be specific to a particular industry. For example, product-replacement cycles lead to volatile swings in demand for semiconductors. Other types of cycles arise from variations in supply, as seen in the pattern of capacity expansion and retrenchment that is characteristic of the chemicals, forest products, and metals sectors. In some cases, natural phenomena are the driving forces behind swings in supply. For example, variations in weather conditions result in periods of shortage or surplus in agricultural commodities.

The confluence of different types of cycles is not unusual. For example, a general cyclical upturn could coincide with an industry's construction cycle that has been spurred by new technology. The interrelationship of different national economies is an additional complicating factor.

All these cycles can vary considerably in their duration, magnitude, and dynamics. For example, the unprecedented eight years of uninterrupted, robust economic expansion in the U.S. that followed the 1982 trough was totally unforeseen. On the other hand, there was no basis to assume in advance that the downturn that followed would be so severe, albeit relatively brief. Indeed, at any given point, it is difficult to know the stage in the cycle of the general economy, or a given industrial sector. A "plateau" following a period of demand growth might indicate that the peak has been reached—or it could represent a pause before the resumption of growth.

Even general downturns vary in their dynamics, affecting industry sectors differently. For example, the soaring interest rates that accompanied the recession of 1980-1981 had a particularly adverse affect on sales of consumer durables, such as automobiles. Sometimes, sluggish demand for large-ticket items can spur demand for other, less costly consumer products.

In any case, purely cyclical factors are difficult to differentiate from coincident secular changes in industry fundamentals, such as the

emergence of new competitors, changes in technology, or shifts in customer preferences. Similarly, it may be tempting to view cyclical benefits—such as good capacity utilization—as a secular improvement in an industry's competitive dynamics.

A high degree of rating stability for a company throughout the cycle also should entail consistency in business strategy and financial policy. In reality, management psychology is often strongly influenced by the course of a cycle. For example, in the midst of a prolonged, highly favorable cyclical rebound, a given management's resolve to pursue a conservative growth strategy and financial policy may be weakened. Shifts in management psychology may affect not just individual companies, but entire industries. Favorable market conditions may spur industry-wide acquisition activity or capacity expansion.

Standard & Poor's is also cognizant that public sentiment about cyclical credits may fluctuate between extremes over the course of the cycle, with important ramifications for financial flexibility. Whatever Standard & Poor's own views about the long-term staying power of a given company, the degree of public confidence in the company's financial viability is critical for it to have access to capital markets, bank credit, and even trade credit. Accordingly, the psychology and the perceptions of capital providers must be taken into account.

Regulation

The regulatory relationship can be a benign one—or it can be adversarial. It affects virtually all corporates to one extent or another, and is obviously critical in the case of utilities—where it is a factor in all assessments of business risk.

Evaluation of governmental involvement/regulation encompasses legislative, administrative, and judicial processes at the local and national levels. This evaluation considers the current environment—and the potential for change. For example, a system that requires legislative action to modify regulations is more stable—and is viewed more positively—than one that is subject to ministerial whim, as exists in some Asian countries. Similarly, a regulatory framework enacted with regard to a recently privatized system is more prone to be *re*visited by government regulators.

The impact of regulation runs the gamut—from regulation's providing of direct, tangible support to its being a hindrance. For a utility business profile to be considered "well above average" usually requires strong evidence of government support or regulatory sheltering. Support can be explicit—such as in Canada and in other locales where a government guarantees a utility's obligations. Or it can take the form of strong and obvious implicit support, such as in Greece.

Japanese investor-owned utilities have historically been insulated from competition and been protected by a very cooperative, coordinated, rate-setting process. Other governments may facilitate the utility's access to external sources of capital, especially where the utility is a direct instrument of government policy. In the U.S., municipally owned utilities have also been sheltered—at least they have in the past. (Deregulation has unleashed competitive pressures, but politics makes it difficult to make adjustments that would affect either residential rates or the city's own general fund.)

Short of such outright support, regulatory treatment should be transparent and timely and should allow for consistent performance—if it is to be viewed positively in the ratings context.

Aspects of Regulation

The role of the regulator is evident in:

- Rate setting,
- Operational oversight, and
- Financial oversight.

Setting rates is obviously important. To support credit quality, a utility must be assured of earning a fair—and consistent—rate of return. Different regulators can be more—or less—generous with respect to the levels allowed — or with respect to which assets are included in the "returns" calculations. They can choose to overlook—or to penalize—a utility for any service shortcomings in service.

Operational regulation pertains to technology, to environmental protection considerations, safety rules, facility siting, and service levels—and the freedom a company has to pursue initiatives involving each of these areas. Regulatory inflexibility can hamstring the utility in its attempt to be competitive. For example, if a utility faces new competition for its large users, it may want to lower the rates it charges its commercial/industrial customers—and make up its lost revenues by raising the rates at the expense of residential customers. The regulators may object and insist that residential rates continue to be subsidized—creating a problem for the company.

Financial oversight refers to the regulator's ability to maintain—and interest in maintaining—a particular level of credit quality at the utility. This is a separate consideration from how benign the relationship might be in other respects. If the situation warrants it, the rating evaluation may rely on the regulator to enforce—or at least encourage—a certain level of financial strength at the utility. In this respect, the regulator's role can take different forms:

• Approval is the most basic element. That a utility requires approval to sell debt or pay dividends creates an obstacle with respect to its fiscal aggressiveness.
• Influence refers to the economic incentives that a regulator can provide to maintain a certain level of credit quality. In jurisdictions with rate-of-return regulation, regulators can effectively mandate their view of an "appropriate" balance sheet by specifying return on equity. Even when regulation is not classic "rate base rate of return"—such as with price cap or banded rate of return—regulators may still desire a minimum level of credit quality. In past Standard & Poor's surveys, regulators articulated a concern about credit quality's falling below 'A'. Now, however, attitudes are changing about regulating with an eye toward credit quality.
• Regulatory mandate—the explicit demand of a specified level of credit quality—is rare today. In the past, some regulators would impose penalties if a company's credit rating dropped below the desired minimum.

As competition intensifies, regulators have focused on service quality, and are less concerned with credit quality. (After all, even a bankrupt utility can continue to deliver services!) Of course, not all regulatory jurisdictions will follow the trend in identical fashion. In the U.S., there are currently few instances where ratings rely heavily on regulators to maintain credit quality; outside the U.S., however, there is a greater basis for depending on regulators in this regard.

Regulatory Separation

Utilities are often owned by companies that own other, riskier businesses or that that are saddled with an additional layer of debt at the parent level. Corporate rating criteria would rarely view the default risk of an unregulated subsidiary as being substantially different from the credit quality of the consolidated economic entity (which would fully take into account parent-company obligations). Regulated subsidiaries can be treated as exceptions to this rule—if the specific regulators involved are expected to create barriers that insulate a subsidiary from its parent.

In those cases that benefit from regulatory insulation, the rating on the subsidiary is more reflective of its "stand-alone" credit profile. (As a corollary, the parent-company rating is negatively affected—since it is deprived of full access to the subsidiary's assets and cash flow.) With utilities' competition and consolidation increasing and with shifts to new forms of regulation that are coming into existence, however, there is less reason to expect such regulatory intervention. Just as there is less and less basis to rely generally on regulators to maintain a level of credit quality—as discussed above—so, too, there is less basis for regulatory separation.

Rating policy has evolved in tandem with these trends. The bar has been raised with respect to factoring in expectations that regulators would interfere with transactions that would impair credit quality. To achieve a rating differential for the subsidiary requires a higher standard of evidence that such intervention would be forthcoming. *(See sidebar "Telecommunications Ratings Policy Revised.")*

In the past, the mere existence of regulation was given considerable weight when determining the adequacy of protection for the subsidiary's assets and cash flow. Now Standard & Poor's analyzes regulatory insulation on a case-by-case basis. The key is a regulator's demonstrated willingness to protect creditworthiness. Some examples of U.S. state jurisdictions where protective measures have been implemented are Oregon, New York, Virginia, and California.

The Oregon Public Utilities Commission approved the Enron Corp./Portland General Electric Co. merger, based on various restrictive conditions. Likewise, the New York Public Service Commission, in approving the Keyspan Energy/Long Island Lighting Co. merger, required a cap on leverage, a prohibition of certain types of loans, and a limit on holding-company investment in nonutility operations.

Outside the U.S., regulators in many countries still play a more significant role in the finances of utilities—making the case for regulatory separation in those countries. Moreover, some recent transactions—notably in the U.K.—have employed (or at least have considered employing) structural insulation techniques to achieve "ring-fencing" for the acquired utility subsidiary. In these instances, setting up independent directors, minority ownership stakes, and so forth combine with regulatory oversight to insulate the subsidiary and achieve higher ratings.

TELECOMMUNICATIONS RATINGS POLICY REVISED

Standard & Poor's no longer allows the corporate credit rating (CCR) of a regulated telephone operating company to be higher than the CCR of its parent.

The revised approach represents a further evolution of the rating methodology for U.S. local exchange companies (LECs) that reflects the important regulatory and business developments that have occurred in the telephone industry recently. The impact of the policy, on companies for which the former regulatory separation methodology was applicable, in general, is a lowering of telephone operating company CCRs and a raising of parent company CCRs.

Regulatory separation is the factor that *historically* enabled telephone operating companies to have higher debt ratings than their parent companies. (In contrast, for nonutility corporates, subsidiary debt ratings have, all along, been constrained by the rating of the parent.) This constraint is based on the concept that, although a subsidiary may—on a stand-alone basis—appear to be a better credit than its parent, the financially less-creditworthy parent ultimately controls the subsidiary's financial actions and so can avail itself of the financial resources of the subsidiary. Under Standard & Poor's regulatory separation methodology, LECs were deemed to benefit from a buffer between the LEC subsidiary and its parent—that buffer arising from the ability and willingness of state regulators to impose some level of credit quality at the regulated subsidiary.

In April 1997, following a review of the status and impact of regulatory separation, Standard & Poor's modified its criteria regarding the application of regulatory separation and the impact on ratings of U.S. telephone parent companies and their LEC subsidiaries. The 1997 policy revision acknowledged the continued, but generally decreasing, impact of regulatory separation on ratings and led to modified guidelines for assessing the ratings impact of regulatory separation. These guidelines reflected Standard & Poor's assessment that there was sufficient evidence that specific state regulators could and would use their regulatory role to ensure maintenance of some minimum credit quality. As a result of that methodology revision, there were a number of rating changes that narrowed the rating gap between higher-rated telephone operating subsidiaries and their respective parents.

The new methodology that Standard & Poor's now uses recognizes the vast industry changes that have occurred in the three years since the Telecommunications Act of 1996, amounting to a secular transformation of the telecommunications' competitive environment, and tangible evidence of regulators' lack of response to credit-weakening events.

Of LECs and CLECs

In general, although LECs still maintain very favorable market positions, the days of the LEC monopoly are clearly numbered. Driven by the regulatory changes resulting from the Telecommunications Act of 1996 and fast-moving technological developments, competitive local exchange companies (CLECs) are becoming formidable competitors to the LECs. In addition to the vast number of CLECs entering the market for both voice and data, AT&T Corp. is poised to be a major alternative telephone provider. AT&T's goal is not just to be the largest cable provider, but to modify the wires of its owned and affiliated cable systems to offer local telephone service to millions of potential customers. This multibillion-dollar investment in cable upgrades, if successful, would make AT&T the largest CLEC, putting it in direct competition with its former regional Bell operating company affiliates.

The growth of CLECs and the potential for lower-cost wireless service as a wireline replacement portend genuine competition for most regulated LECs. This more competitive environment will erode the historical notion that the LEC was a bottleneck monopoly of a vital service. It was this view of the LEC as a

TELECOMMUNICATIONS RATINGS POLICY REVISED (CONTINUED)

monopoly of a vital public service that led to the regulatory view that such companies should exhibit a pristine balance sheet. Accordingly, state regulators are likely to shift their regulatory focus away from oversight of a company's financial policy and toward ensuring an open marketplace. Specifically, Standard & Poor's anticipates that regulators will increase efforts to ensure that competitors to the LECs have the necessary tools, including collocation and the ability to purchase the existing network elements, to mount a challenge to the entrenched LEC. This expected shift in the regulatory paradigm means that state regulators will be increasingly less likely to provide a financial buffer between the telephone operating company and its parent. Protection that formerly inured to bondholders of the telephone operating company will dissipate.

In addition to the technical and regulatory trends noted above, there is also tangible evidence that the notion of bondholder protection from regulatory separation is becoming obsolete. During the past couple of years, regulators have had the opportunity to react to merger proposals that weakened the credit quality of the regulated company. In fact, the regulatory response has generally been focused on open market and service quality issues, and has not been focused on the issue of diminution of the regulated operating companies' credit quality.

Recent Industry Actions

When Global Crossing Ltd. announced its ambition to purchase Frontier Telephone of Rochester Inc. (Frontier), Standard & Poor's indicated that the Frontier ratings could fall significantly. Indeed, the Frontier CCR was eventually lowered to 'BB+' from 'AA-' as a result of the Global Crossing transaction. Although, because of an earlier agreement with the New York State Public Service Commission (PSC), the rating downgrade will restrict dividends from Frontier for a period of time, importantly, the PSC did not try to prevent the acquisition.

Similarly, Standard & Poor's lowered its CCR on Cincinnati Bell Telephone Co. (CBT) to 'BBB-' from 'AA-' following parent company Cincinnati Bell Inc.'s (doing business as BroadWing Inc.) acquisition of 'B'-rated IXC Communications Inc. This acquisition was dependent on obtaining Ohio Public Utilities Commission (PUCO) approval prior to debt issuances at CBT, thereby limiting the parent company's ability to leverage the telephone operating company. However, despite the credit pressures placed on CBT by its parent's proposed purchase of the much lower rated IXC, PUCO did not create any roadblocks for consummation of the transaction or impose any financial penalty on CBT for a weaker credit profile.

In June 1999, US West Communications Inc., rated 'A+', announced it would be acquired by Qwest Communications International Inc. Standard & Poor's noted that the CCR of the combined entity could fall as low as 'BBB-'. The thrust of regulatory concern: areas of service quality, ensuring access by competitors to the US West network, and interoperability of operating systems between US West and competitors. The issue of lower credit quality at US West, at this juncture, does not appear to be a hurdle factor in gaining regulatory approval.

Standard & Poor's believes that the preceding examples of regulatory responses are supportive of its revised telephone rating methodology that recognizes a new regulatory and competitive paradigm. Telephone companies can expect to deal with an array of increasingly formidable competitors, and telephone company bondholders can no longer look to state regulators for protection.

Loan Covenants

Rationale for Covenants

Covenants provide a framework that lenders can use to reach an understanding with a borrower regarding how the borrower will conduct its business and financial affairs. The stronger the covenant package is, the greater the degree of control the lender can exercise over the investment. Borrowers typically seek the least restrictive covenant package they can negotiate, since they want maximum flexibility to conduct their business in the way they see fit.

Covenants' intended functions include:

• *Preservation of repayment capacity.* Some covenants limit new borrowings and assure lenders that cash generated both from ongoing operations and from asset sales will not be diverted from servicing debt. Covenants can prevent shareholder enrichment at the expense of creditors. Credit quality is preserved by share-repurchase and dividend restrictions, which seek to maintain funds available for debt service. Finally, to ensure that the base of earning assets is maintained, covenants can govern asset sales and investment decisions.

• *Protection against financial restructurings.* All lenders are concerned with the risk of a sudden deterioration in credit quality that can result from a takeover, a recapitalization, or a similar restructuring. Properly crafted covenants may prevent some of these credit-damaging events from occurring without the debt's first having been repaid or the pricing's first having been adjusted.

• *Protection in the event of bankruptcy or default.* These covenants preserve the value of assets for all creditors and—what is particularly important—safeguard the priority positions of particular lenders. Such covenants assure the lenders that subsequent events or actions will not materially affect their ultimate recourse. Protection is provided through negative-pledge clauses, cross-acceleration (or cross-default) provisions, and limits on obligations that either are more senior or rank equally.

• *Signals and triggers.* Signals and triggers assure the steady flow of information, provide early warning signals of credit deterioration, and place the lender in a position of influence should deterioration occur. Since triggers can bring the parties to the table, to enable the lender to decide whether it might be appropriate to modify or waive restrictions, they must therefore be set at appropriate levels, to signal deterioration before the credit drops to unacceptable levels. Among tests that perform this function are net-worth maintenance tests, cross-default provisions, and merger and consolidation restrictions.

In many cases, covenants can serve more than one function. For example, a well-written debt test will not only help preserve repayment capacity, but will also serve as a signal of potential credit deterioration and provide protection against damaging recapitalizations.

Public-market participants long ago stopped demanding significant covenant protection, perhaps because poorly written covenant packages with weak tests and significant loopholes enabled managements to circumvent them. Furthermore, in a widely held transaction, a covenant violation that normally would be waived could deteriorate into a payment default, due to the difficulty of having all the investors act in unison. Moreover, investors in publicly traded debt instruments have little interest in working with borrowers and probably have fewer resources to do so. Their primary protection is their ability to sell their investments if things should turn sour.

Traditional private-placement investors and bank lenders do have the resources and the expertise to work out problem credits. Such investors negotiate covenant packages carefully, to give themselves the most advantageous position from which to exercise control, and they expect to be compensated adequately for accepting covenants that are weak, those that might allow management more leeway to cause a deterioration in credit quality.

In general, covenant packages are more relaxed than in the past, however, because, now, liquidity has increased, and financial markets broadened.

Covenants and Ratings

Covenants *do not* play a significant enhancing role in determining the credit ratings assigned to companies. In assigning ratings, there are several flaws in a strategy of relying on covenants to protect credit quality:

• Covenants don't address *fundamental credit strength*. Covenants do not and cannot affect the borrower's facing business adversity, competitive reverses, and so forth. The level of a covenant is often inconsistent with the rating level desired. For example, a covenant that allows a company to leverage itself *no more than 60%* has little bearing on the company's achieving a 'BBB' rating, if 40% is the maximum leverage tolerated for that specific company as a 'BBB'.

• Enforcement is dubious. A company that is determined to do so can often, with the assistance of its lawyers, find ways to evade the letter of the agreement embodied in covenants. They could even choose to ignore them altogether! A court will usually *not* force a company to comply with covenants. Rather, the court will award damages—if the breach of covenants is considered the cause of the damages. So long as the company continues to pay principal and interest, the court is unlikely to recognize any damages as having occurred. Enforcement is more likely if there is a specific remedy that is provided for in the event of a breach of the covenant. Usually, the remedy is the ability to declare an event of default and accelerate the loan. However, this remedy is so severe that, more often than not, lenders choose not to precipitate a default by demanding immediate repayment—despite a stipulated right to do so. Instead, the lender may prefer to take a security position, to raise rates, or to provide more input into the company's decisions. Such actions could be valuable to that lender—without enhancing credit quality for the benefit of all creditors. In practice, lenders also waive covenants for a variety of reasons. Waivers might result from company/bank relationship issues, a lack of understanding of the magnitude of problems, or a realization that the original levels were unnecessarily tight.

• Finally, if the covenants appear only in certain issues, those issues could be refinanced.

For all these reasons, in most cases, Standard & Poor's does not believe that a particular covenant or group of covenants can improve a rating. Generally, there is no point in analyzing fine variations among different covenant packages, which certainly will not affect a particular borrower's ability to meet its obligations in a timely fashion.

Relying on covenants to insulate a subsidiary from its parent company is similarly problematic. Accordingly, Standards & Poor's would usually not rate a subsidiary based on its strong "stand-alone" profile, even if there were significant covenant restrictions.

The main reason to be aware of a rated entity's covenants is quite the opposite: Tight covenants could *imperil* credit quality by, in the event of their violation, provoking a crisis with the lenders, since the lender would have the discretion to accelerate the debt, causing a default that might otherwise have been avoided.

A covenant package can be helpful as an expression of management's intent. Since most companies (especially public companies) would be expected to honor, not evade, commitments they make, covenants can provide an insight into management's plans. An analyst would consider how complying with covenants were consistent with other articulated strategic goals. Management's willingness to agree to certain restrictive covenants, in essence, "puts their money where their mouth is." For example, if a company had traditionally been highly leveraged but planned to deleverage in the future, the analyst would expect to see a debt test that ratcheted down over time.

Typical Covenants

Covenants typically vary according to the level of credit quality. They increase in number and grow more stringent as the quality of the credit declines. They also vary depending on whether the debt is issued publicly or privately. Private lenders tend to require a complete and exacting package. These lenders are also likely to negotiate—and are more capable of renegotiating—covenants in the event of a change in strategy or of a covenant default. In addition, the tenor of the loan will govern which specific covenants are appropriate.

There are certain basic covenants that are present in all loan documents, irrespective of credit quality or type of financing. While these covenants may be worded in different ways,

they are considered important by all creditors for purposes of managing their investments. They are:

- Information requirements (which financial and other information must be provided at which times);
- Default (which events might constitute defaults and which remedies might be provided, possibly including cross-default and cross-acceleration provisions); and
- Modifications (how and under which conditions the loan documents might be amended, including defeasance provisions, if any).

Beyond these provisions, covenants are transaction-specific. While investment-grade transactions have few negative covenants, there are some that are common, including:

- A limitation on liens (with a negative pledge);
- A limitation of sale/leaseback transactions; and
- A limitation on mergers, consolidations, or sales of assets.

As one moves to speculative-grade transactions, other covenants are usually added to those above. Some of the most common are:

- Limitations on the incurring of additional debt (including debt at subsidiary levels),
- Restrictions on certain payments (including dividends, stock purchases, loans, and investments),
- Changes of control provisions, and
- Net-worth maintenance requirements.

Bank loan agreements may also contain provisions for periodic paying down of outstanding balances.

Over time, the lists will change, as the market's willingness to accept certain conditions changes. (For example, in the late 1980s and early 1990s, when event risk loomed large due to LBOs and takeovers, issues that contained covenants providing event-risk protection typically enjoyed a price advantage over those without such protection. With the end of the LBO boom, however, the market no longer demanded these clauses).

When reviewing a covenant package for any purpose, it is necessary to check its terms and definitions carefully. What is and—sometimes, what is more important—what is not included significantly affect the level of protection. Often, specified ratio calculations are not standardized, and it may be necessary to have management supply calculations and compliance documents.

Ratings and Ratios

Ratio Medians

Presented on the next pages are key ratio medians for U.S. corporates by rating category. Definitions of the ratios appear on page 55. The ratio medians are purely statistical, and are not inteded as a guide to achieving a given rating level. Ratio Guidelines are presented on page 56. They more faithfully represent the role of ratios in the ratings process.

Ratios are helpful in broadly defining a company's position relative to rating categories. They are not intended to be hurdles or prerequisites that should be achieved to attain a specific debt rating.

Caution should be exercised when using the ratio medians for comparisons with specific company or industry data because of major differences in method of ratio computation, importance of industry or business risk, and impact of mergers and acquisitions. Since ratings are designed to be valid over the entire business cycle, ratios of a particular firm at any point in the cycle may not appear to be in line with its assigned debt ratings. Particular caution should be used when making cross-border comparisons, due to differences in accounting principles, financial practices, and business environments.

Financial ratio medians are adjusted for unusual items and to capitalize operating leases.

Company data are adjusted for the following:

• Nonrecurring gains or losses are eliminated from earnings. This includes gains on asset sales, significant transitory income items, unusual losses, losses on asset sales, and charges due to asset writedowns, plant shutdowns, and retirement programs. These adjustments chiefly affect interest coverage, return, and operating margin ratios.

• Unusual cash flow items similar in origin to the nonrecurring gains or losses are also reversed.

• The operating lease adjustment is performed for all companies. Companies that buy all plant and equipment are put on a more comparable basis with firms that lease part or all of their operating assets. The lease adjustment impacts all ratios.

Still, several adjustments commonly made by Standard & Poor's analysts are not incorporated in the adjusted medians. Omitted are alterations reflecting net debt and the captive finance company methodology. The net debt adjustment would affect median ratios largely for the 'AAA' rating category, which is almost entirely composed of cash-rich pharmaceutical companies. (If the net debt adjustment were made, interest coverage, cash flow to debt, and debt ratios for the 'AAA' category would not be meaningful, since many of these firms have no net debt.) The captive finance adjustment has a greater effect, mainly on automobile, department store, and some capital goods companies.

The adjusted ratio median universe includes about 500 companies. The data exclude companies, such as the auto manufacturers and cable television firms, that, even with adjustments, have financial ratios that are not representative of those used in the rating process.

The medians themselves are affected by economic and environmental factors, as well as mergers and acquisitions. The universe of rated companies is constantly changing, and in certain rating categories, adding or deleting a few companies can materially change the financial ratio medians.

Strengths and weaknesses in different areas have to be balanced and qualitative factors evaluated. There are many nonnumeric distinguishing characteristics that determine a company's creditworthiness.

ADJUSTED KEY INDUSTRIAL FINANCIAL RATIOS

U.S. Industrial long term debt

Three-year (1998 to 2000) medians	AAA	AA	A	BBB	BB	B	CCC
EBIT int. cov. (x)	21.4	10.1	6.1	3.7	2.1	0.8	0.1
EBITDA int. cov. (x)	26.5	12.9	9.1	5.8	3.4	1.8	1.3
Free oper. cash flow/total debt (%)	84.2	25.2	15.0	8.5	2.6	(3.2)	(12.9)
FFO/total debt (%)	128.8	55.4	43.2	30.8	18.8	7.8	1.6
Return on capital (%)	34.9	21.7	19.4	13.6	11.6	6.6	1.0
Operating income/sales (%)	27.0	22.1	18.6	15.4	15.9	11.9	11.9
Long-term debt/capital (%)	13.3	28.2	33.9	42.5	57.2	69.7	68.8
Total debt/capital (incl. STD) (%)	22.9	37.7	42.5	48.2	62.6	74.8	87.7
Companies	8	29	136	218	273	281	22

Data for earlier years and in greater detail are available by subscribing to Standard & Poor's CreditStats.

KEY UTILITY FINANCIAL RATIOS

U.S. Electric Utility long-term debt

For 12 months ended Sept. 2001	AA	A	BBB	BB
EBIT interest coverage (x)	4.2	3.4	2.8	1.9
Preferred dividend coverage (x)	4.1	3.3	2.7	1.8
Return on equity (%)	12.3	12.5	10.9	11.4
Common dividend payout (%)	92.3	81.7	81.6	33.9
Short term debt/capital (%)	8.2	10.4	11.2	6.2
Total debt/capital (%)	51.7	55.92	58.78	73.3
Preferred stock/capital (%)	2.3	3.0	2.7	4.5
Common stock/capital (%)	50.9	43.2	39.6	26.1
Funds from operations interest coverage	5.1	4.0	3.5	2.4
Funds from operations/total debt (%)	35.5	23.76	20.42	12.47
Net cash flow/capital expenditures (%)	97.5	74.8	80.6	65.2

EBIT—Earnings before interest and taxes.
EBITDA—Earnings before interest, taxes, depreciation, and amortization.

FORMULAS FOR KEY RATIOS

1. EBIT interest coverage = $\frac{\text{Earnings from continuing operations* before interest and taxes}}{\text{Gross interest incurred before subtracting (1) capitalized interest and (2) interest income}}$

2. EBITDA interest coverage = $\frac{\text{Earnings from continuing operations* before interest, taxes, depreciation, and amortization}}{\text{Gross interest incurred before subtracting (1) capitalized interest and (2) interest income}}$

3. Funds from operations/total debt = $\frac{\text{Net income from continuing operations plus depreciation, amortization, deferred income taxes, and other noncash items}}{\text{Long-term debt** plus current maturities, commercial paper, and other short-term borrowings}}$

4. Free operating cash flow/total debt = $\frac{\text{Funds from operations minus capital expenditures, minus (plus) the increase (decrease) in working capital (excluding changes in cash, marketable securities, and short-term debt)}}{\text{Long-term debt** plus current maturities, commercial paper, and other short-term borrowings}}$

5. Return on capital = $\frac{\text{EBIT}}{\text{Average of beginning of year and end of year capital, including short-term debt, current maturities, long-term debt**, non-current deferred taxes, and equity.}}$

6. Operating income/sales = $\frac{\text{Sales minus cost of goods manufactured (before depreciation and amortization), selling, general and administrative, and research and development costs}}{\text{Sales}}$

7. Long-term debt/capital = $\frac{\text{Long-term debt**}}{\text{Long-term debt + shareholders' equity (including preferred stock) plus minority interest}}$

8. Total debt/capital = $\frac{\text{Long-term debt** plus current maturities, commercial paper, and other short-term borrowings}}{\text{Long-term debt plus current maturities, commercial paper, and other short-term borrowings + shareholders' equity (including preferred stock) plus minority interest}}$

*Including interest income and equity earnings; excluding nonrecurring items.
**Including amount for operating lease debt equivalent.

Ratio Guidelines

Risk-adjusted ratio guidelines depict the role that financial ratios play in Standard & Poor's rating process, since financial ratios are viewed in the context of a firm's business risk. A company with a stronger competitive position, more favorable business prospects, and more predictable cash flows can afford to undertake added financial risk while maintaining the same credit rating.

The guidelines displayed in the matrices make explicit the linkage between financial ratios and levels of business risk. For example, consider a U.S. industrial—which includes manufacturing, service, and transportation sectors—with an *average* business risk profile. Cash flow coverage of 60% would indicate an 'A' rating. If a company were *below average*, it would need about 85% cash flow coverage to qualify for the same rating. Similarly, for the 'A' category, a firm that has an *above-average* business risk profile could tolerate about 40% leverage and an average firm only 30%. The matrices also show that a company with only an *average* business position could not aspire to an 'AAA' rating, even if its financial ratios were extremely conservative.

Ratio medians that Standard & Poor's has been publishing for more than a decade are merely statistical composites. They are not rating benchmarks, precisely because they gloss over the critical link between a company's financial risk and its business risk. Medians are based on historical performance, while Standard & Poor's risk-adjusted guidelines refer to expected future performance.

Guidelines are not meant to be precise. Rather, they are intended to convey ranges that characterize levels of credit quality as represented by the rating categories. Obviously, strengths evidenced in one financial measure can offset, or balance, relative weakness in another.

U.S. INDUSTRIALS

Manufacturing, Service and Transportation Companies

Funds from Operations/Total Debt Guidelines (%)

	—Rating category—				
Company business risk profile	**AAA**	**AA**	**A**	**BBB**	**BB**
Well above average business position	80	60	40	25	10
Above average	150	80	50	30	15
Average	—	105	60	35	20
Below average	—	—	85	40	25
Well below average	—	—	—	65	45

Total Debt/Capitalization Guidelines (%)

	—Rating category—				
Company business risk profile	**AAA**	**AA**	**A**	**BBB**	**BB**
Well above average business position	30	40	50	60	70
Above average	20	25	40	50	60
Average	—	15	30	40	55
Below average	—	—	25	35	45
Well below average	—	—	—	25	35

U.S. UTILITIES

Funds from Operations/Total Debt Guidelines (%)

Company business risk profile		—Rating category— AAA	AA	A	BBB	BB	B
Well-above-average	1	23	18	15	10	5	—
business position	2	29	23	19	14	9	—
Above average	3	35	29	23	17	12	7
	4	40	34	28	21	15	9
Average	5	46	37	30	24	18	11
	6	53	43	35	27	19	13
Below average	7	63	52	42	31	21	14
	8	75	61	49	35	23	15
Well below average	9	—	—	57	41	27	17
	10	—	—	69	50	34	22

Total Debt/Capitalization (%)

Company business risk profile		—Rating category— AAA	AA	A	BBB	BB	B
Well-above-average	1	47	53	58	64	70	—
business position	2	43	49	54	60	66	—
Above average	3	39	45	50	57	64	70
	4	35	41	46	53	61	68
Average	5	33	39	44	51	59	67
	6	30	36	43	50	57	65
Below average	7	27	34	41	49	56	64
	8	23	31	39	47	55	62
Well below average	9	—	—	35	43	51	58
	10	—	—	29	37	43	50

Rating the Issue

Distinguishing Issuers and Issues

Standard & Poor's assigns two types of credit ratings—one to corporate *issuers* and the other to specific corporate debt *issues* (or other financial obligations). The first type is called a Standard & Poor's corporate credit rating. It is a current opinion on an issuer's overall capacity to pay its financial obligations—that is, its fundamental creditworthiness. This opinion focuses on the issuer's ability and willingness to meet its financial commitments on a timely basis. It generally indicates the likelihood of default regarding all financial obligations of the firm, since companies that default on one debt type or file under the Bankruptcy Code virtually always stop payment on all debt types. It does not reflect any priority or preference among obligations. In the past, Standard & Poor's published the "implied senior-most rating" of corporate obligors, which is a different term for precisely the same concept. "Default rating" and "natural rating" are additional ways of referring to this issuer rating.

Generally, a corporate credit rating is published for all companies that have issue ratings—in addition to those firms who have no ratable issues, but request just an issuer rating. Where it is germane, both a local currency and foreign currency issuer rating are assigned.

Standard & Poor's also assigns credit ratings to specific *issues*. In fact, the vast majority of credit ratings pertain to specific debt issues. Issue ratings also take into account the recovery prospects associated with the specific debt being rated. Accordingly, junior debt is rated below the corporate credit rating. Preferred stock is rated still lower *(see chapter on preferred stock, page 84)*. Well-secured debt can be rated above the corporate credit rating.

Notching: An overview

The practice of differentiating issues in relation to the issuer's fundamental creditworthiness is known as "notching." Issues are notched up or down from the corporate credit rating level.

Payment on time as promised is obviously critical with respect to all debt issues. The potential for recovery in the event of a default—that is, ultimate recovery, albeit delayed—is also important, but timeliness is the primary consideration. That explains why issue ratings are still anchored to the corporate credit rating. They are notched—up or down—from the corporate credit rating in accordance with established guidelines.

Notching guidelines are explained in the chapters that follow. They take into account the degree of risk/confidence with respect to recovery. But the guidelines also reflect a convention for blending the two rating aspects, namely, timeliness and recovery potential.

A key principle is that investment-grade ratings focus more on timeliness, while noninvestment grade ratings give additional weight to recovery. For example, subordinated debt can be rated up to two notches below a noninvestment grade corporate credit rating, but one notch at most if the corporate credit rating is investment grade. Conversely, a very well-secured bank loan or first mortgage bond will be rated one notch above a corporate credit rating in the 'BBB' or 'A' rating categories—but the enhancement would be two notches in the case of a 'BB' or 'B' corporate credit rating. In the same vein, the 'AAA' rating category need not be notched at all, while at the 'CCC' level the gaps may widen.

The rationale for this convention is straightforward: as the default risk increases, the concern over what can be recovered takes on greater relevance and, therefore, greater rating significance. Accordingly, the ultimate recovery aspect of ratings is given more weight as one moves down the rating spectrum.

There is also an important distinction between notching up and notching down. Whenever a financial obligation is judged to have materially worse recovery prospect than other debt of that issuer—by virtue of its being unsecured, subordinated, or because of a hold-

ing company structure—the issue rating is notched down. Thus, priority in bankruptcy is considered in broad, relative terms; there is no full-blown attempt to quantify the potential severity of loss. And, since the focus is relative to the various obligations of the issuer, no comparison between issues of different companies is warranted. For example, the fact that a senior issue of company A is not notched at all does not imply anything about its recovery prospects relative to the junior debt of company B—with the same corporate credit rating—which is notched down.

In contrast, issue ratings are not enhanced above the corporate credit rating unless a comprehensive analysis indicates the likelihood of full recovery—100% of principal—for that specific issue. The degree of confidence of full recovery that results from this more rigorous analysis is reflected in the extent that the issue is notched up. If the analysis concludes that recovery prospects may be less than 100%, the issue is not deemed deserving of rating enhancement, even though it can be valuable indeed to realize, say, 80% or 90% of one's investment and avoid a greater loss!

The entire notion of junior obligations—and the related difference it makes with respect to recovery prospects—is specific to the applicable legal system. Notching guidelines are, therefore, a function of the bankruptcy law and practice in the legal jurisdiction that governs a specific instrument. For example, distinguishing between senior and subordinated debt can be meaningless in India, where companies may be allowed to continue paying even common dividends, at the same time that they are in default on debt obligations. Accordingly, notching is not applied in India! The majority of legal systems broadly follow the practices underlying Standard & Poor's criteria for notching—but it is always important to be aware of nuances of the law as they pertain to a specific issue.

Junior Debt: Notching Down

When a debt issue is judged to be junior to other debt issues of the company, and, therefore, to have relatively worse recovery prospects, that issue is assigned a lower rating than—that is, it is "notched down" from—the corporate credit rating. As a matter of rating policy, the differential is limited to one rating designation in the investment-grade categories. For example, when the corporate credit rating is 'A', junior debt may be rated 'A-'. In the speculative-grade categories, where the possibility of a default is greater, the differential is up to two rating designations.

Notching relationships are based on broad guidelines that combine consideration of asset protection and ranking. The guidelines are designed to identify material disadvantage for a given issue by virtue of the existence of better-positioned obligations. The analyst does not seek to predict specific recovery levels, which would involve knowing the exact asset mix and values at a point well into the future.

Notching relationships are subject to review and change when actual developments vary from expectations. Changes in notching do not necessarily have to be accompanied by changes in default risk.

Guidelines for notching

To the extent that certain obligations have a priority claim on the company's assets, lower-ranking obligations are at a disadvantage because a smaller pool of assets will be available to satisfy the remaining claims. One case is when the issue is contractually subordinated—that is, the terms of the issue specifically provide that debt holders will receive recovery in a reorganization or liquidation only after the claims of other creditors have been satisfied. Another case is when the issue is unsecured and assets representing a significant portion of the company's value are collateralized by secured borrowings. A third form of disadvantage can arise if a company conducts its operations through one or more legally separate subsidiaries, but issues debt at the parent (i.e., holding company) level. In this case, if the whole group declares bankruptcy, creditors of the subsidiaries—including holders of even contractually subordinated debt—would have the first claim to the subsidiaries' assets, while creditors of the parent would have only a junior claim, limited to the residual value of the subsidiaries' assets remaining after the subsidiaries' direct liabilities have been satisfied.

The disadvantage of parent company creditors owing to the parent/subsidiary legal structure is known as "structural subordination." Even if the group's operations are splintered among many small subsidiaries, whose individual debt obligations have only dubious recovery prospects, the parent company creditors may still be disadvantaged compared with a situation in which all creditors would have an equal claim on the assets.

Investment-Grade Example
Corporate Credit Rating: 'A'

				Issue ratings
Assets	$100	Priority debt	$30	A
		Lower-priority debt	$10	A-
		Equity	$60	

The lower-priority debt is rated one notch below the corporate credit rating of 'A', since the ratio of priority debt to assets (30 to 100) is greater than 20%.

As a rough measure of asset availability, Standard & Poor's looks at the percentage of priority debt and other liabilities relative to all available assets. When this ratio reaches certain threshold levels, the disadvantaged debt is rated one or two notches below the corporate credit rating. These threshold levels take into account that it normally takes more than $1 of book assets—as valued today—to satisfy $1 of priority debt. (In the case of secured debt—which limits the priority to the collateral pledged—the remaining assets are still less

likely to suffice to repay the unsecured debt, inasmuch as the collateral ordinarily consists of the firm's better assets and often substantially exceeds the amount of the debt.)

For investment-grade companies, the threshold is 20%. That is, if priority debt and liabilities equal 20% or more of the firm's assets, the lower-priority debt (unsecured, subordinated, or holding company) is rated one notch below the corporate credit rating.

Speculative-Grade Example
Corporate Credit Rating: 'BB+'

				Issue ratings
Assets	$100	Priority debt	$35	BB+
		Lower-priority debt	$20	BB-
		Equity	$45	

The lower-priority debt is rated two notches below the corporate credit rating of 'BB+', since the ratio of priority debt to assets (35 to 100) is greater than 30%.

If the corporate credit rating is speculative grade, there are two threshold levels. If priority obligations equal even 15% of the assets, the lower-priority debt is penalized one notch. When priority debt and other liabilities amount to 30% of the assets, lower-priority debt is substantially disadvantaged and is, therefore, differentiated by two notches.

Multiple layers

A business entity can have many levels of obligations, each ranking differently with respect to priority of claim in a bankruptcy. For analytical purposes, debt levels are ranked as follows, from highest priority to lowest:

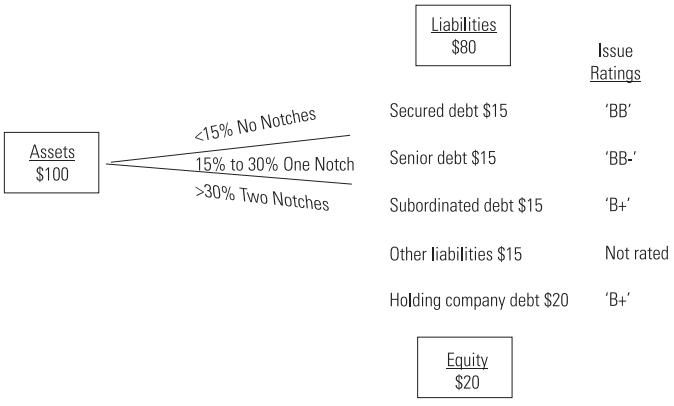
- Debt secured with higher-quality operating asset collateral
- Debt secured with lesser-quality operating asset collateral
- Senior debt of the operating company
- Senior liabilities (rank *pari passu* with senior debt)
- Subordinated debt
- Junior subordinated debt
- All other operating company liabilities
- Senior debt of the holding company
- Subordinated debt of the holding company

Once a notching threshold level is crossed—aggregating successive layers of priority claims—notching applies to the remaining, lower-ranking issues *(see illustration below)*.

If the priority claims do not quite reach a threshold level, but the preponderance of the next-lower debt level is below the threshold, those claims may be considered disadvantaged and notched accordingly. (Senior subordinated debt is sometimes subordinated only with respect to senior debt, but is *pari pass*u with other liabilities. In other instances, it may be subordinated to other liabilities as well. Its position in the priority of levels, therefore, depends on the specific terms of each issue.)

The reason notching is constrained to one notch for investment-grade companies and two notches for speculative-grade firms is to maintain the important weighting of timeliness in all ratings. Remember, notching pertains only to differentiating recovery prospects—it is presumed that a default will interrupt payment

XYZ Corp. and XYZ Holdings Inc.
Corporate Credit Ratings 'BB'



on all of a company's debt issues. The very highest ranking issues receive the corporate credit rating, or sometimes a higher rating, if full recovery is confidently expected *(see next chapter)*; the lowest ranking issues will never be rated lower than one notch under the investment-grade corporate credit rating, or two notches in the case of non-investment-grade corporate credit ratings. This rating convention often results in debt issues of significantly different standing being rated the same!

Issue ratings are always notched from the top down, as indicated by the examples. If a two-notch distinction is indicated, the gap is not narrowed to highlight the contrast between that junior issue and worse-positioned issues.

Speculative-Grade Example
Corporate Credit Rating: 'BB+'

				Issue ratings
Assets	$100	Priority debt	$25	BB+
		Lower-priority debt	$15	BB
		Equity	$60	

Here, assuming the issuer was speculative grade, the lower-priority debt might be rated one notch below the corporate credit rating, rather than two notches, although the ratio of priority debt to assets (25 to 100) is close enough to the guideline threshold of 30% to make this a borderline case.

				Issue ratings
Assets	$100	Priority debt	$25	BB+
		Lower-priority debt	$30	BB-
		Equity	$45	

In this case, the lower-priority debt should be rated two notches below the corporate credit rating. Although the ratio of priority debt to assets is still 25 to 100, the substantial amount of lower-priority debt would dilute recoveries for all lower-priority debtholders.

Senior secured debt. Not all senior secured debt of an issuer is necessarily equally secured. Second-mortgage debt, for example, has only a junior claim to an asset also securing first-mortgage debt, making it inferior to a first-mortgage issue secured by the same asset. The second-mortgage debt issue would receive the corporate credit rating only if the amount of first-mortgage debt outstanding was sufficiently small relative to the assets.

Debt issues are often secured by different collateral of varying quality. If the collateral that secures a particular issue is of dubious value, that secured debt may be notched down from the corporate credit rating. For example, if a manufacturing company had borrowings under a bank credit facility secured by high-quality receivables and relatively liquid inventory, a senior secured debt issue that was collateralized with only relatively illiquid property, plant, and equipment could well be rated below that company's corporate credit rating.

Application of guidelines

Perspective. Notching takes into account expected future developments. For example, a company may be in the process of refinancing secured debt so that it would have little or no secured debt within a year. If there is confidence that the plan will be carried out, a notching differential should not be needed, even today. Conversely, if companies have open first-mortgage indentures or the leeway to increase secured borrowings under negative pledge covenants (or if no negative pledge covenants are in place), Standard & Poor's attempts to determine the likelihood that the company will incur additional secured borrowings. But the analyst would not automatically base notching on the harshest assumptions.

If an issuer has a secured bank credit facility, such borrowings would be reflected in notching to the extent that the issuer was expected to draw on the facility. In general, the lower the corporate credit rating, the greater the likelihood that the issuer will need to tap its sources of financing. In the absence of expectations to the contrary, Standard & Poor's takes a conservative approach, assuming that available bank borrowing capacity is fully utilized. Likewise, if a company typically uses bank borrowings to fund seasonal working capital requirements, Standard & Poor's focuses on expected peak borrowing levels, rather than the expected average amount.

Adjustments. Book values are used as a starting point; analytic adjustments are made if assets are considered significantly overvalued or undervalued for financial accounting purposes. This analysis focuses on the varying potential of different types of assets to retain value over time and in the default context based on their liquidity characteristics, special-purpose nature, and dependence on the health of the company's business. Goodwill is

especially suspect, considering its likely value in a default scenario. In applying the notching guidelines, Standard & Poor's generally eliminates from total assets goodwill in excess of a "normal" amount—10% of total assets. The particular characteristics of specific intangibles, as distinct from goodwill, are considered. (For example, some credit is typically given for the enduring value of well-established brands in the consumer products sector.) Standard & Poor's does not, however, perform detailed asset appraisals or attempt to postulate specifically how market values might fluctuate in a hypothetical stress scenario.

In applying the guidelines above, lease obligations—whether capitalized in the company's financial reporting or kept off balance sheet as operating leases—and the related assets under leases are included. Similarly, sold trade receivables and securitized assets are added back, along with an equal amount of debt. Other creditors are just as disadvantaged by such financing arrangements as by secured debt. In considering the surplus cash and marketable securities of companies that presently are financially healthy, Standard & Poor's assumes neither that the cash will remain available in the default scenario, nor that it will be totally dissipated, but rather that, over time, this cash will be reinvested in operating assets that mirror the company's current asset base, subject to erosion in value of the same magnitude.

Local and foreign currency issue ratings. In determining local currency issue ratings, the point of reference is the local currency corporate credit rating: local currency issue ratings may be notched down one notch from the local currency corporate credit rating in the case of investment-grade issuers, or one or two notches in the case of speculative-grade issuers. A company's foreign currency corporate credit rating is often lower than its local currency corporate credit rating, reflecting the risk that a sovereign government could take actions that would impinge on the company's ability to meet foreign currency obligations. But junior foreign currency issues are not notched down from the foreign currency corporate credit rating, as the government action would apply regardless of the senior/junior character of the debt. Of course, the issue would never be rated higher than if it had been denominated in local currency. For example, if a company's local currency corporate credit rating were 'BB+' and its foreign currency corporate credit rating were 'BB-', subordinated foreign currency-denominated issues could be rated 'BB-'. But, if a company's local currency corporate credit rating were 'BB+' and its foreign currency corporate credit rating were 'BB', subordinated foreign currency-denominated issues would be rated 'BB-', just as subordinated local currency-denominated issues would.

Commercial paper. Commercial paper ratings are linked to the issuer's corporate credit rating *(see page 79)*. Although commercial paper is generally unsecured, commercial paper ratings focus exclusively on default risk. For example, if an issuer has an 'AA-' corporate credit rating and secured debt issue rating and an 'A+' unsecured rating, its commercial paper rating would still be 'A-1+'—the commercial paper rating associated with the 'AA-' issuer default rating—not 'A-1', the commercial paper rating ordinarily appropriate at the 'A+' default risk rating level.

Parents and subsidiaries: Structural subordination

At times, a parent and its affiliate group have distinct default risks. The difference in risk may arise from covenant restrictions, regulatory oversight, or other considerations. This is the norm for holding companies of insurance operating companies and banks. In such situations, there are no fixed limits governing the gaps between corporate credit ratings of the parent and its subsidiaries. The holding company has higher default risk, apart from post-default recovery distinctions. If such a holding company issued both senior and junior debt, its junior obligations would be notched relative to the holding company's corporate credit rating by one or two notches.

Often, though, a parent holding company with one or more operating companies is viewed as a single economic entity. When the default risk is considered the same for the parent and its principal subsidiaries, they are assigned the same corporate credit rating. Yet, in a liquidation, holding company creditors are entitled only to the residual net worth of the operating companies remaining after all operating company obligations have been satisfied.

Parent-level debt issues are not always notched down to reflect structural subordination; this is done only when the priority liabilities create a material disadvantage for the parent's creditors, taking into account all mitigating factors *(discussed below)*. In considering

the appropriate rating for a specific issue of parent-level debt, priority liabilities encompass all third-party liabilities (not just debt) of the subsidiaries—including, for example, trade payables, pension and retiree medical liabilities, and environmental liabilities—plus any relatively better-positioned parent-level liabilities. (For example, parent-level borrowings collateralized by the stock of the subsidiaries would be disadvantaged relative to subsidiary liabilities, but would rank ahead of unsecured parent-level debt.)

Potential mitigating factors. Even if material liabilities exist at the subsidiary level, other factors may offset the disadvantage this poses to parent company creditors.

Guarantees. Guarantees by the subsidiaries of parent-level debt (i.e., upstream guarantees) may overcome structural subordination by putting the claims of parent company creditors on a *pari passu* basis with those of operating company creditors, if such guarantees are enforceable under the relevant national legal system(s) and if the circumstances do not cause undue concern regarding potential allegations of fraudulent conveyance *(see sidebar: "Upstream Guarantees")*. Although joint and several guarantees from all subsidiaries provide the most significant protection, several guarantees by subsidiaries accounting for a major portion of total assets would be sufficient to avoid notching of parent debt issues in most cases.

Operating assets at the parent. Although some businesses are conducted through subsidiaries, the parent often is not a pure holding company, but rather also directly owns certain operating assets. This direct ownership gives the parent creditors a priority claim to the parent-level assets, offsetting, at least partially, the disadvantage that stems from the parent's claims being structurally subordinated to the assets owned by the subsidiaries.

Diversity. When the parent owns multiple operating companies, more liberal notching guidelines may be applied to reflect the benefit the diversity of assets might provide. The threshold guidelines are relaxed (but not eliminated) to correspond with the extent of business and/or geographic diversification of the subsidiaries. For bankrupt companies that own multiple, separate business units, the prospects for residual value remaining for holding company creditors improve as individual units wind up with shortfalls and surpluses. And for healthy, well-diversified companies, one can presume that their structure will change significantly on the way to a default, making today's apparent structural subordination less relevant.

Holding companies with diverse businesses—in terms of product or geography—have greater opportunities for dispositions, asset transfers, or recapitalization of subsidiaries. If, however, the subsidiaries are operationally integrated, economically correlated, or regulated, the company's flexibility to reconfigure is more limited. For example, Standard & Poor's would give little credit for diversity to a globally integrated commodities company, in contrast to a multinational retailer with largely autonomous regional operations.

Concentration of debt. If a parent has a number of subsidiaries, but the preponderance of subsidiary liabilities are concentrated in one or two of these, e.g., industrial groups having finance or trading units, this concentration of liabilities can limit the disadvantage for parent company creditors. Although the net worth of the leveraged units could well be eliminated in the bankruptcy scenario, the parent might still obtain recoveries from its relatively unleveraged subsidiaries. In applying the notching guideline in such cases, it may be appropriate to eliminate the assets of the leveraged subsidiary from total assets, and its liabilities from priority liabilities. (The analysis then focuses on the assets and liabilities that remain, but the standard notching guideline must be substituted by other judgments regarding recovery prospects.)

Downstream loans. If the parent's investment in a subsidiary is not just an equity interest, but also takes the form of downstream senior loans, this may enhance the standing of parent-level creditors because they would have not only a residual claim on the subsidiary's net worth, but also a debt claim that would generally be *pari passu* with other debt claims. Standard & Poor's gives weight to formal, documented loans—not to informal advances, which are highly changeable. (On the other hand, if the parent has borrowed funds from its subsidiaries, the resulting intercompany parent-level liability could further dilute the recoveries of external parent-level creditors.) As with guarantees, the assessment of downstream advances must take into account the applicable legal framework.

Single Economic Entity Example

Parent—Corporate Credit Rating: 'BB+'

Debt type*	Issue rating
Senior secured	BB-
Senior unsecured	BB-
Subordinated	BB-

Subsidiary—Corporate Credit Rating: 'BB+'

Debt type*	Issue rating
Senior secured	BB+
Senior unsecured	BB
Subordinated	BB-

Different Default Risk Example

Parent—Corporate Credit Rating: 'BB+'

Debt type*	Issue rating
Senior secured	BB+
Senior unsecured	BB
Subordinated	BB-

Subsidiary—Corporate Credit Rating: 'B+'

Debt type*	Issue rating
Senior secured	B+
Senior unsecured	B
Subordinated	B-

*Debt types are used here merely as illustrative of typical results for different priority debt; notching actually depends on the guidelines explained above.

In the first example, since the parent and subsidiary are viewed as having the same default risk, the lowest rating at either is two notches below the single corporate credit rating. If the parent is a holding company without assets other than its ownership interest in the subsidiary, the parent's debt is viewed as junior and notched down. In contrast, in the second example, the parent and subsidiary are viewed as having different default risks, so each has a different corporate credit rating (assumed to be 'BB+' at the parent and 'B+' at the subsidiary) and the two-notch limit is relative to the corporate credit ratings at each entity: there is no limit on the span of ratings that applies across the two legal entities.

Given the endless variety of circumstances, there is no mechanical formula for combining these mitigating factors. Enforceable upstream guarantees from some major subsidiaries will generally be sufficient to avoid notching. For well-diversified investment-grade companies, the guideline threshold may be relaxed up to 50%, and the presence of additional mitigants may warrant some additional leeway.

Adjustments. Additional adjustments are necessary in assessing structural subordination. Standard & Poor's eliminates from the notching calculations subsidiaries' deferred tax assets and liabilities and other accounting accruals and provisions that are not likely to have clear economic meaning in a default.

Exceptions to the rule

If the recovery prospects for a specific junior issue equate to the level associated with senior debt generally, notching is dispensed with. As long as recovery of 75-85 cents on the dollar can be reasonably anticipated, the junior debt is not notched below the senior debt.

Only a handful of rated junior issues provide for such good recovery prospects. In each case, there are assets that serve as collateral—and these assets' value is not dependent on the fate of the issuer. For example,

- A major U.S. pharmaceutical company marketed subordinated capital securities that explicitly provide for the possibility of future contribution of financial assets as collateral. In that case, the rating of the issue would be raised—there would be no need to notch for subordination—and the coupon would be reset downward. In this instance, the collateral needed to warrant an upgrade would be spelled out in a detailed schedule that takes into account the quality and tenor of such collateral, as well as the option to periodically "top-up" the collateral.
- There a few confidential ratings for privately-placed preferred issues of subsidiaries formed to own stock in companies that are unrelated to the ultimate parent. The parent companies guarantee payment. Although the issues are subordinated to the senior debt of the parents with respect to most of the assets, the preferred holders benefit from a prior claim on the shares. In each case, the current market value of these shareholdings is a multiple of the issuing company liabilities. While, on the one hand, equity values are not especially reliable, the preferred issues are highly "overcollateralized" with assets whose value is not tied to the fate of their parent company. Arguably, the preferred holders should fare at least as well as the parents' senior creditors—whose claim will be against the assets of a bankrupt entity.
- Some mandatory equity financings involve contracts where the investors' obligation to purchase common equity is secured by Treasuries. The rating addresses the company's ability to honor its obligations: periodic payments (in addition to the interest on the Treasury securities) and issuance of common stock at the end

of three years in return for the Treasuries. The return to the investor is a function of the common stock value: this risk is not addressed by the credit rating. However, in the event of a company bankruptcy in the interim, the investors get the Treasuries back. Therefore, the rating is the same as the corporate credit rating, even if the company obligation is subordinated.

With respect to these and similar cases, Standard & Poor's does not presume any specific level of recovery for the senior creditors of the company in question. The senior debt could still, in the end, fare better than the collateralized subordinated issue—or it might come out with lesser recovery. The key: As long as the subordinated debt should recover as much as the vast majority of defaulted senior debt, it is not discernibly disadvantaged and does not deserve to be notched down.

The average recovery for senior unsecured debt is about 50%; for senior secured the average is 65%. But the criterion is not defined in terms of the average; half of all cases do better than that. Recovery of 75%-85% would compare favorably with that experienced by roughly three-quarters of senior creditors.

Note that it is not necessary to conclude that holders will be made whole to eliminate the notching down of subordinated obligations. Obligations that are likely to provide full ultimate recovery are rated above the corporate credit rating *(see "Notching Up")*.

UPSTREAM GUARANTEES

When a subsidiary guarantees the debt of its parent, that is commonly referred to as an upstream guarantee. The object of the exercise is to address the structural subordination that would otherwise apply to parent-company debt if the debt, liabilities, and preferred stock of the operating company are material. Upstream guarantees, if valid, eliminate the rating distinction, since the operating company becomes directly responsible for the guaranteed parent debt. However the validity of the guarantee is subject to legal risk. An upstream guarantee may be voided in court, if it is deemed to constitute a fraudulent conveyance. The outcome depends on the specific fact pattern, not legal documentation—so one cannot standardize the determination. But, if *either* the guarantor company received value *or* was solvent for a sufficiently long period subsequent to issuing the guarantee, the upstream guarantee should be valid.

Accordingly, Standard & Poor's considers upstream guarantees valid if *any* of these conditions are met:

1) The proceeds of the guaranteed obligation are provided to (downstreamed to) the guarantor. It matters not whether the issuer downstreams the money as an equity infusion or as a loan. Either way, the financing benefits the operations of the subsidiary, which justifies the guarantee.
2) The legal risk period—ordinarily one or two years from entering into the guarantee—has passed, or
3) There is a specific analytical conclusion that there is little default risk during the period that the guarantee validity is at risk, or
4) The rating of the guarantor is at least 'BB-' in jurisdictions that involve a two-year risk, or at least 'B+' in jurisdictions with one-year risk.

Accordingly, there will be cases where Standard & Poor's declines to recognize the upstream guarantee at the time of issuance—due to legal risk—but would upgrade the issue a year (or two) later.

Accordingly, Standard & Poor's accepts an upstream guarantee whenever the guarantor obtained value. As long as the guarantor is the recipient of the funds, it meets this test.

Well-Secured Debt: Notching Up

In 1996, Standard & Poor's first published its framework for weighting both timeliness and recovery prospects in assigning ratings to well-secured debt. The extent of any enhancement depends on the following three considerations:

Economics. Will the "second way out" provide 100% recovery? of principal only? of interest, too? (If all accrued interest, before and after default, can be recovered, the length of any delay is less consequential.)

Importantly, there can be different degrees of confidence with respect to recovery. For example, excess collateral translates into greater likelihood that there will be enough value to recover the entire obligation—although, obviously, the creditor will never get more than the obligation amount. Subjective judgments are critical in deciding how to stress collateral values in hypothetical post-default scenarios.

How long a delay? The time it takes to realize the ultimate recovery is critical. In the best case, the recovery is highly valued due to its nearly timely character—almost like a grace period. In the worst case, Standard & Poor's would not give any credit for a very delayed payment. In estimating the length of delay, the analysis would focus on:

- How the legal system resolves bankruptcies or provides access to collateral. This varies by legal jurisdiction. In the U.S., 18 to 24 months is the typical time needed to resolve a Chapter 11 filing. (The analysis would identify and differentiate cases that might take longer than usual because of perceived complexities, such as litigation.) In Western European countries, which are generally more creditor-oriented, the access to collateral may be expedited.
- The structure of an obligation. The analysis could distinguish between a bond, a lease obligation, and certificates governed by Section 1110 of the U.S. Bankruptcy Code—which provides specific legal rights to obtain certain transportation assets during a bankruptcy proceeding.
- The terms of an obligation. In the case of a guarantee that provided for ultimate—but not necessarily timely—payment; for example, it would be important to know within what period payment must be made.

Weighting. The higher the rating, the more one should give weight to timeliness; the lower the rating, the more it should incorporate a post-default perspective. (This principle is the basis for the policy of rating junior debt of investment-grade issuers one notch below the issuer rating, but differentiating junior debt of speculative-grade borrowers by two notches.) Therefore, the degree of enhancement generally depends on the starting point—the level of the issuer credit rating.

In those exceptional cases of high confidence in quick payment—such as ultimate guarantees by governments—a different approach is used: notching down from the guarantor. (Enhancement should not result in a rating that would equal the rating with full timeliness. For example, in the case of a 'BB' issuer and an ultimate guarantee from an 'AA' guarantor, the result might be anywhere between 'BB+' and 'AA-,' but definitely is capped below the 'AA' that would apply if the guarantee were to include full timeliness—either explicitly or as an analytical conclusion).

The matrices that follow *(see table)* place the above-mentioned factors into a systematic framework.

With respect to short-term ratings, the importance of timeliness is paramount. Accordingly, there is no enhancement of short-term ratings based on ultimate recovery.

To reiterate, the policy of enhancing issue ratings based on ultimate recovery prospects does not apply unless the expected recovery is 100%. Standard & Poor's does not attempt to differentiate run-of-the-mill unsecured debt of different issuers—although we know that some defaults will result in recovery of 80 cents on the dollar, and others will result in 30 cents.

Ultimate Recovery Rating Criteria Framework

Corporate Credit Rating Level: 'BB', 'B'	Within 24 months	Within 6 months	Within 60 days
Reasonable confidence of full recovery of principal (over 1x collateral cover, after stress)	+1 notch	+1 or 2 notches	+2 or 3 notches
Highly confident of full recovery of principal (over 1.25x collateral cover, after severe stress case)	+2 notches	+2 or 3 notches	+3 or 4 notches
Highly confident of recovering principal and interest (over 1.65x collateral cover, after severe stress case)	+3 notches	+3 or 4 notches	+4 notches

Corporate Credit Rating Level: 'A', 'BBB'	Within 24 months	Within 6 months	Within 60 days
Reasonable confidence of full recovery of principal (over 1x collateral cover, after stress)	+1 notch	+1 notch	+1 notch
Highly confident of full recovery of principal (over 1.25x collateral cover after severe stress case)	+1 notch	+2 notches	+2 notches
Highly confident of recovering principal and interest (over 1.65x collateral cover, after severe case)	+2 notches	+2 notches	+2 or 3 notches

Bank Loan and Private Placement Rating Criteria

Both syndicated bank loans and privately placed debt frequently include collateral, strong covenants, and other features designed to protect the lender against loss if a borrower defaults. In assigning ratings to bank loans and private placements, Standard & Poor's takes these features into account when analyzing the recovery prospects of a specific loan. To the extent that a bank loan or private placement is well-secured and contains loan-specific features that other loans may lack, the likelihood of full recovery is enhanced, leading to the potential for a rating higher than the borrower's corporate credit rating.

Globally, creditor rights vary greatly, depending on legal jurisdiction. Well-secured debt of borrowers subject to the U.S. Bankruptcy Code generally receives a rating that is one to three notches (i.e., up to one full category) higher than the corporate credit rating. Even greater weight could be given to collateral elsewhere in the world where legal jurisdictions may be more favorable for secured creditors. On the other hand, no consideration is given for security in many countries such as China, where the bankruptcy process is virtually unpredictable.

Highly rated issuers generally are not expected to provide much collateral or other post-default protection when raising funds in public or private debt markets. Because the probability of their defaulting is low, post-default recovery is of little relevance. For these reasons, it would be unusual to find debt issues that deserved a rating higher than the issuer's corporate credit rating.

Determining ratings

The starting point for assigning a bank loan or private placement debt rating is determining the borrower's default risk, based on an analysis of the firm's business strength and financial risk. The result is the corporate credit rating. The analysis then proceeds to the recovery aspects of a specific debt issue.

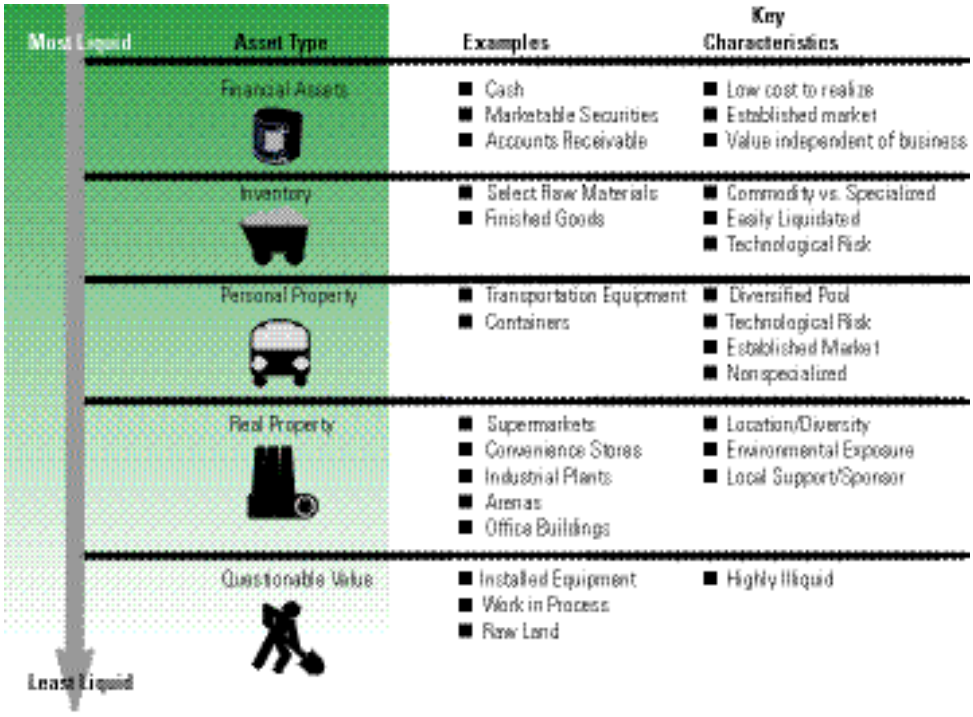
Empirical studies point to relatively high average recovery rates for secured debt generally. But, it is critical to analyze each situation. The high average will prove little consolation for holders of a loan that returns relatively little. Recent experience with loans to telecom companies underscores how recovery rates can diverge from the overall decent performance of this asset class.

Standard & Poor's analyzes the issue's legal structure and the collateral that supports each issue. The recovery risk profile is established by assessing the characteristics of various asset types used as collateral and subjecting the collateral values to stress analysis under different post-default scenarios. High collateral coverage levels can increase confidence that asset values will cover the secured debt, even under adverse conditions, although, obviously, greater levels of collateral do not entitle a creditor to any more than the amount of the claim.

When the collateral value exceeds the amount of the claim, the creditor could receive post-petition interest. This excess collateral value is referred to as an "equity cushion." The creditor must carefully manage its legal posture to take advantage of this cushion and receive interest—while asserting that it is still entitled to the court's "adequate protection" of the collateral. Accordingly, rating criteria call for recognizing *the potential* that a borrower must pay such interest, even though it is almost impossible to accurately predict such an outcome.

Covenants

Covenants alone—in the absence of collateral—seldom result in superior recovery protection. (In fact, a company's default risk can be heightened by covenants that place it at the mercy of its bankers.) Covenants can, however, play a significant role in protecting creditors of a subsidiary of another, perhaps riskier, company; tight covenants can help prevent the borrower's assets from being removed by the



parent firm. Covenants may also mitigate concern about potential credit-harming actions incorporated in the issuer's credit rating—if the covenants would force the loan to be repaid before the issuer undertakes the action. One example involved a large retailer whose corporate credit rating was constrained by the company's aggressive acquisition strategy and financial policy. Because of well-constructed covenants, its bank loan would have had to be repaid and refinanced before the company could put into effect any acquisition plans. In this example, covenants improved the bank loan rating. (For more on covenants, see the box above and "'Tight' Covenants" on page 78.)

Collateral value analysis

Collateral can consist of discrete assets (such as real estate or vehicles) that may have value independent of the business, or it may be the operating assets of a business enterprise, in which the value is a function of the business unit as a going concern. (Bank loans given to below-investment-grade issuers tend to have a first-priority lien on substantially all of a company's assets: receivables, inventory, trademarks, patents, plants, property, equipment, and pledges of subsidiary stock. Private placement debt issues are more likely to be secured by one or more discrete asset types.)

Both types of collateral can enhance a creditor's rights and help ensure loan repayment, even though it is rare that a creditor will be able to simply foreclose and seize the collateral to liquidate it. In the U.S. at least, a bankruptcy filing imposes a stay on a creditor's right to the collateral during what is often a long and tortuous reorganization process. Moreover, the bankruptcy judge often has wide discretion (although seldom exercised) to substitute collateral. Indeed, most large company bankruptcies never result in liquidation: the company is usually reorganized. (The decision of whether to reorganize is influenced by a myriad of factors, including the legal system, industry trends, the long-term viability of the business, its product and market position, and regulatory or political considerations.) The form the reorganization takes, including the resolution of creditors' claims, is the result of a negotiated process worked out before or after an actual bankruptcy filing. Nonetheless, the outcome for creditors is ultimately a function of the collateral's value going into the reorganization process. For example, bankruptcy judges can substitute collateral, but they must adhere to the principle of "adequate protection" by providing collateral of comparable value to that of the original. So, knowing the value of the collateral—relative to the amount

owed—provides an approximation of just how well a creditor is secured.

Consequently, the bank loan analysis focuses on determining the value of the various asset types. If the security consists of operating assets of a unit that will continue as a going concern, an enterprise value analysis is performed. Given the nature of the enterprise value methodology, this is appropriately used only when the default scenario can be reasonably visualized, e.g., for highly leveraged companies. In these instances, the business presumably continues, and the financial overextension leads to default when the company can no longer service its entire fixed-charge burden. Accordingly, the enterprise value analysis cannot be used for investment-grade companies or for speculative-grade companies with conservatively leveraged balance sheets. Instead, a liquidation analysis is conducted to determine the value of the assets that constitute such companies' collateral.

The analysis method that produces the higher asset value should be used in determining the bank loan rating. Generally, if the business assets are all part of the security package, thinking of the collateral as a going concern business would yield the highest values. In rare cases when a line of business is out of favor or there are concerns about business prospects, selling individual assets can produce more money—so the discrete asset value methodology would be employed.

Discrete asset value analysis

Standard & Poor's has rated loans backed by a broad range of assets, from real estate and drilling rigs to timberlands and oil and gas reserves. Important considerations include the type and amount of collateral, whether its value can be objectively verified and is likely to hold up under various post-default scenarios, and any legal issues related to perfection and enforcement.

The analytical starting point is the assets' current value. Market value is key, and therefore appraisals are often required. Several methods are used to determine the market value, including recent sales of comparable assets and the assets' replacement cost, adjusted to reflect their age and technology. Other valuation techniques include discounting cash flow, industry norms and multiples of earnings and cash flow, and replacement value and fixed prices per unit of production (for natural resources). Although all valuation methodologies rely on some subjective aspects, the more objective the valuation the better. As described below, the relevant value is the value of the asset in a distressed scenario. Therefore, cash flows are stressed, rather than using the historical levels of cash flow, which reflect business as usual.

Book values are typically irrelevant, but may sometimes suffice if historical price and depreciation policies are standardized, and depreciation schedules are adequate to keep book value in line with market value. Two examples of assets for which this approach has been used are shipping containers and autos. Appraisals are usually necessary when the collateral is specialized, such as real estate, plants, or equipment.

The assets' potential to retain value over time is also critical. Therefore, collateral is judged according to volatility, liquidity, special-purpose nature, and—perhaps most important—the correlation of its value with the health of the issuer's business. Even assets that have value independent of the specific owner may still be correlated to industry or market factors. Because the relevant context is the default of the assets' owner, the analyst must be mindful that the circumstances leading to a default might also affect the assets' values. For example, if the borrower were a supermarket chain and the collateral were its fleet of trucks, the assets' value would not be reduced by the company's default. But, if the borrower were an offshore contract driller and the collateral were its fleet of vessels, there might well be a strong correlation between the events leading to the company's default and the market value of its drilling ships. Also, if proper upkeep is critical to the assets' value, there might be some doubt about how much maintenance a failing company would provide. The asset characteristics that should help determine the stability of asset values are set forth in the chart on page 73.

Any costs that would have to be expended to realize asset values also must be taken into account. These include dismantling installation, transportation, foreclosure, and remarketing costs, to name a few. On the other hand, the analysis would be based on an orderly liquidation scenario, rather than a fire sale.

Enterprise value analysis

Enterprise value is based on investors' presumed willingness to pay a multiple of the

firm's cash flow at a certain point in time. For notching purposes, that point in time is after the default. The enterprise value is established by using a general market capitalization approach. The firm's EBITDA at the hypothetical point of default is multiplied by a representative equity multiple. Appropriate discounts are applied to stress both cash flow and capitalization rates used to determine the value of the business.

EBITDA is projected to reflect the decline in cash flow at the time the company defaults. For this analytical exercise, the analyst simulates default scenarios. First, a base case is constructed that represents the minimum decline in EBITDA associated with a potential default. The scenario results in maximum cash flow consistent with a default and, therefore, equals the highest value for the defaulted company. Second, an alternative scenario is proposed, under which EBITDA is reduced by 50% to reflect other possible, more stressful default scenarios. Additional scenarios, with different reductions, can reflect company-specific default factors such as sector risk, political, regulatory, or other factors. The more negative scenario is not automatically used in the rating determination; analysts must judge which scenario is appropriate based on the company's individual circumstances. For example, a borrower with a respectable business position but a risky financial profile would be more likely to default (if a default occurs at all) due to its leverage than to a decline in its business strength. Such an entity would be viable over the long term if it were more appropriately capitalized. *The base case scenario would be weighed more heavily.*

By contrast, a borrower with a weak business position but no special financial risk would most likely default because of a decline in its business (failure to keep up with competition, changes in technology, etc.). The impairment of its business associated with the default scenario could more seriously affect its cash flow and market value. *Accordingly, the weighting would lean toward the downside risks.*

Some companies could have a weak business position *and* a weak financial profile; their default might result from a decline in business, a lack of financial flexibility, or some combination thereof. In such situations, the analyst would attempt to determine the appropriate default scenario based on company-specific information and industry fundamentals.

The multiple used in the enterprise valuation model is derived from the cash flow multiple of the borrower's peer group. This market multiple, too, is adjusted to incorporate the negative effect that a bankruptcy filing, or the threat of one, can have on asset values. Cash flow multiples, of course, change along with interest rates. For rating purposes, 5x has some empirical validity over the long term, as we cannot predict interest rates at the unspecified time of the simulated default. Actual experience with sales of distressed companies shows the 5x multiple to be widely applicable.

In some instances, a higher multiple might be warranted, for example if an industry has unusual growth potential. But, one must be cautious about arguing for a higher multiple for a company in a very troubled situation—namely, following a bankruptcy filing. It is hard to be confident that the industry would still have such positive characteristics in that context. When the insolvency risk can be attributed to a cyclical problem, there might be some predictability of a post-default rebound. That should warrant using a higher multiple of the cash flow at a cyclical low point, which the point of default presumably would be.

To be conservative, any priority claims such as product or environmental liabilities that are material would be deducted from the enterprise value. Similarly, the value of other existing secured debt, such as industrial revenue bonds, mortgage debt, or secured lease debt, is subtracted from the enterprise value. In some instances, trade creditors could have a perfected first-priority interest in merchandise, and the bank creditors would have a lower-priority claim on inventory.

The enterprise value analysis also assumes that any revolving portion of a bank credit facility is fully drawn at the time of default. (This harsh assumption is not made automatically, though, with respect to notching down any unsecured issues.) In some cases, assumed borrowings under the rated facilities are earmarked for acquisitions. In these instances, the default EBITDA levels would be adjusted for the additional cash flow from these acquisitions. The effect is adequately dealt with in the base case scenario, but adjustment is called for in the downside case. Given the likelihood that most acquisitions will not be totally productive, the full amount of the borrowings is not added to EBITDA. The conservative position is to add 50% of the new debt to the EBITDA figure.

Standard & Poor's default scenario is modeled on EBITDA being insufficient to cover interest expense. Several events could trigger a loss in confidence or a liquidity crisis, making the prediction of a default's timing difficult. For example, problems with refinancing could precipitate a default. A company may not be able to meet its amortization schedule or a bullet maturity, hastening a default. Defaults often coincide with principal payment dates. (Other large required outlays would have a similar effect on a wobbly company. Such payments could be related to tax liabilities, legal judgments, or non-discretionary capital projects.) A company facing an exceptionally large bullet maturity may have difficulty accessing the capital markets for funds to repay the maturity, and default—even though the company's cash flows might be higher than its ongoing debt service needs. (This default risk would be identified as an important rating factor in arriving at the corporate credit rating.) In such a case, the cash flow associated with the default scenario may well be higher than the usual base case default assumptions.

On the other hand, refinancing risk is ultimately related to a company's prospects. If prospects for a company suggest an ongoing capability to service its debt, this should be perceived by lenders, and financing would be available. The distressed EBITDA default scenario generally reflects conditions that preclude refinancing.

Companies and their bankers often assert that the carefully crafted covenants in the loan documentation will cause the bankers to stop advancing funds, causing a default long before cash flow falls as far as the model indicates. Therefore, much more value would remain with the business, enhancing the possibility of notching up the bank loan rating. Yet, if the bankers are perceived as being likely to exercise their options (contrary to empirical evidence), the company's default risk would be significantly increased, leading to a lower corporate credit rating.

Stock as collateral

Being secured by a pledge of a business unit's stock is not the same as being secured by the assets of that unit. The stock represents only the residual value after all claims directly against the unit have been satisfied—and may in the end be worthless.

The criteria, however, do not preclude assigning value when shares are the collateral. Ownership confers control of a unit's assets, even through bankruptcy proceedings. Shares of the borrower—which would be bankrupt in the relevant scenario—would presumably have little value. The same would apply to the shares of major subsidiaries of a bankrupt borrower, especially if the companies are in the same general line of business. But, shares of a subsidiary in a different line of business, or of a subsidiary in a different location that has independent business prospects, may retain value, even if that subsidiary is drawn into the bankruptcy (as long as there is no risk of substantial consolidation). In such a case, the key analytical issue would be determining who takes priority over the equity holders. If that unit has few liabilities—and there are provisions to prevent incurring additional debt—the residual value of the shares can be substantial. Subsidiary stock has been viewed as having considerable value when assets that could not be pledged directly (e.g., certain licenses and contracts) were set aside in dedicated subsidiaries. These assets were the sole assets of the units, while liabilities were strictly limited.

Borrowing bases

A borrowing base sets a limit on borrowing based on a percentage of the assets outstanding at a given time. The borrowing base definitions of eligible assets are used to exclude impaired assets such as overdue receivables or obsolete inventory. If the analyst is comfortable with the borrowing base formula at the outset, its applicability can be relied on over time. The amount of any new borrowings would depend on the quality and value of then-current assets, although risk remains for what has already been borrowed. For example, the borrowing base may require an amount of oil and gas reserves as collateral. But once the advance is extended, the oil is produced—and there can be no guarantee that new oil will be found to replace it.

Ideally, as oil is produced or inventories are sold and receivables are collected, the proceeds must be used to repay bank borrowings, and renewal of borrowing means once again meeting the tests. But often, this is not the case. Nonetheless, the proximity of the valuation to the time of the ultimate default, as well as potential limitation of exposure to further

deterioration are advantages. Periodic monitoring allows the banker to exercise some control. It is therefore important to know how frequently compliance with the borrowing base is calculated and what remedies are available if the base is exceeded.

The definition of eligible assets is obviously critical. The path to bankruptcy could involve a major drop in asset values, even if the default scenario incorporates an inventory buildup resulting from a decline in sales. Unit value may slip as inventory piles up. Accumulation of aging, uncollectible receivables is also possible, but less common. Credit agreements often have sublimits on inventory borrowings in relation to total borrowings to guard against just such unfavorable shifts in the collateral mix.

Tenor/amortization

Long-term concerns that could constrain a corporate credit rating may extend beyond the time horizon of an issue or bank loan facility. Therefore, a short final maturity may be favorable. (Unsecured debt issues do not benefit similarly from shorter maturities because they can be repaid only by refinancing. The issue's long-term risk profile would affect the refinancing risk.)

In addition, because confidence in asset valuations diminishes over a longer time span, the ratings benefit that could be given for asset-based recovery potential is greatest for short-term loans. For example, at a given time, the outlook for energy markets may cause little concern for the value of oil rigs for the next two or three years, but great concern about potential loss of value over a 12-year period. Also, the risk of obsolescence or regulatory restrictions increases over time for certain types of assets such as aircraft. Similarly, when assessing a potential bankruptcy scenario, doubts about how operating assets might be affected would be greater if bankruptcy proceedings are anticipated to be lengthier than normal.

Amortization reduces the amount of debt that must be covered by the value of the assets, and thereby improves loan-to-value coverage (unless the security is reduced in tandem via a borrowing base formula). Accordingly, if one tranche of a loan facility amortizes more quickly or is significantly shorter than another, the two tranches could be rated differently.

Legal considerations

For collateral to be given weight in the rating process, lenders should have a perfected security interest in the collateral. Perfection can be accomplished in a number of ways, including Uniform Commercial Code filings in the U.S., possession, title, and regulatory filings.

Not all collateral types (e.g., patents and trademarks) readily lend themselves to perfection. And some assets, such as cargo containers, may be easy to perfect but hard to locate and recover if they are in foreign countries at the time of a bankruptcy filing. Uncertainty about gaining possession of part of the collateral can be offset by providing greater overcollateralization.

"Tight" Covenants

When could tight covenants enhance a company's rating?

- If the covenant breach arises from deterioration in the business, the bank's enforcement will only compound the problem. If the bank refuses to provide more funds—and especially if it requires repayment—the company's liquidity will suffer and the risk of default increases. Best-case scenario: the bank waives or renegotiates the covenant without penalizing the company by way of compensation or tougher terms.
- If the covenant breach is linked to a proposed credit-harming transaction that is discretionary, the bank could force the company to abandon the transaction. But, if the bank waives the covenant, or if the company manages to refinance the bank loan as part of its deal, the covenant will not have benefited the company's default-risk profile.

Accordingly, tight covenants could theoretically benefit the corporate credit rating, but in practical terms is quite far-fetched. Any benefit would require the following conditions:

1. A company's entering into a deliberate credit-harming event would be an explicit rating factor that would preclude a higher rating (and situations in which the rating explicitly takes into account such an action or event risk are uncommon), AND
2. The covenants would have to be tight enough to prevent any transaction that is inconsistent with the higher rating level, AND
3. Standard & Poor's could be confident in advance that the bank would not waive the covenant, AND
4. The bank could not be (easily) replaced (the higher the rating, the less likely points 3 or 4 would apply. The bank's waiver or alternative financing should be available for reasonable credits. So, as long as the rating outcome following the transaction is 'BB-' or better, Standard & Poor's should presume that the deal would proceed.), AND
5. Standard & Poor's would have to be similarly confident that the bank would refrain from enforcing the covenant if a company's credit deteriorates for fundamental reasons. Otherwise, the increased risk caused by covenant enforcement in those situations would likely offset any rating enhancement related to avoiding deliberate credit-harming transactions. Accordingly, the rating benefit would be restricted to situations in which the corporate credit rating is based largely on the expectation of or risk of a deliberate credit-harming action, perhaps a pending transaction. These situations are rare.

Would having tight covenants enhance the bank loan rating?

If the covenant breach arises from deterioration in the business, enforcement of the covenants and precipitating a bankruptcy might indeed benefit the bank in terms of ultimate recovery of principal. The bank would be seeking repayment early on, with respect to the business decline, while the business retained value. If Standard & Poor's were rating recovery prospects directly, this benefit could be made apparent. But, current rating methodology involves notching up from the corporate credit rating. So, the rating outcome for the bank loan with tight covenants would not necessarily be higher than it would be without the tight covenants—and might even be lower. Increased notching would presumably be from a lower corporate credit rating.

If the covenant breach arises from a discretionary transaction, the bank could avoid risk by preventing that transaction or by insisting that it be taken out by other financing. The rating benefit, then, would still depend on the extent to which such a potential credit-harming transaction plays a role as a rating factor. The more prominent the transaction's role in the rating—that is, to the exclusion of concern for ordinary, fundamental risks—the more the potential that tight covenants could mitigate risk and enhance the assigned rating.

Airline and Railroad Equipment Debt

Aircraft and railroad equipment leases and secured debt that qualify for special protection under Section 1110 or Section 1168, respectively, of the U.S. Bankruptcy Code can receive ratings above the corporate credit rating of the airline or railroad. In Canada, there is a parallel provision, Section 106(5) of the Canada Transportation Act, which is very similar to Section 1168, and which is accorded similar rating treatment by Standard & Poor's. These sections exclude certain types of leases and secured debt from the automatic stay of creditor claims and substitution of collateral sections of the code. Creditors may repossess collateral if the debtor does not resume debt service or lease rentals and cure any past-due amounts within 60 days of filing for bankruptcy. This provides a powerful incentive for continued payment under these obligations in bankruptcy.

Thus, Standard & Poor's rating enhancement is based on both reduced default risk and good ultimate recovery:

- Legal provisions that encourage continuing payment of interest and principal in a Chapter 11 bankruptcy proceeding in order to avoid seizure of collateral (thus reducing default risk);
- Accelerated access to collateral if payment is not made, under provisions of Section 1110 or 1168; and
- Relatively good value retention, over long periods of time, of aircraft and rail equipment, ease of tracking them, and the ability to realize their value by reselling to other operators.

Qualifications for rating enhancement

To qualify for Section 1110 or 1168 treatment, creditors must have a security interest in the equipment (for financings on assets delivered before Oct. 22, 1994, this must be a purchase money security interest), or be a lessor, or be a conditional vendor. For Section 1110, collateral must be aircraft or aircraft parts, and the debtor must be an airline. For Section 1168, collateral must be locomotives, rolling stock, or accessories (such as autoracks) and the debtor a railroad. Note that creditors of leasing companies which own such equipment could not claim Section 1110 or 1168 protections, nor could creditors of the holding companies that own airlines or railroads.

Standard & Poor's accords the maximum possible rating enhancement *(see Degree of Enhancement)* only in those cases where an airline's size and market position make liquidation unlikely, allowing for a reasonable possibility that aircraft financing will be paid at the contracted rate. Railroads must file under special provisions of Chapter 11 of the U.S. Bankruptcy Code, and cannot file under Chapter 7 (which provides for liquidation). The bankruptcy court can order liquidation, but only if a reorganization plan has not been approved by five years following the filing. During the reorganization process, which usually takes several years, the railroad continues to operate. Since equipment is vital for rail operations, debtholders with equipment obligations can be more confident of payment than other creditors. After the reorganization process is completed, the emerging firm typically continues to use its predecessor's equipment and assumes most or all outstanding secured debt obligations. Collateral which is technologically or economically less desirable or which does not cover outstanding secured debt by a comfortable margin would also not qualify for the rating enhancement; a bankrupt airline or railroad might well allow such equipment to be repossessed rather than continue debt service.

Legal opinions needed

An issuer seeking a rating on aircraft or rail equipment financings must provide several legal opinions to support the case for Section 1110 or 1168 status:

• An opinion that creditors will enjoy the benefits of Section 1110 or 1168 protection in the event of bankruptcy;

• An opinion that creditors have a first priority perfected security interest in the equipment being financed and payments being made by the airline or railroad under the related lease, if any, and that the relevant documents have been filed with the Federal Aviation Administration or the Surface Transportation Board (both entities of the U.S. Department of Transportation), respectively.

• Where the lessor of the equipment to the airline is a trust, opinions bearing on nonconsolidation of the assets in the trust, of which the owner participant is a beneficiary, with the estate of the owner participant in bankruptcy. This opinion addresses the risk that cash payments from the lessee to the debtholder may be delayed or diverted due to the owner participant's bankruptcy.

• For pass-through certificates, an opinion on the valid formation of the pass-through entity, and that the pass-through trust does not constitute an investment company as defined in the Investment Company Act of 1940, and is not subject to federal or state taxation.

• For railroads, an opinion that common carrier railroad equipment obligations are issued under an exemption from registration with the Securities & Exchange Commission afforded by Section 3(a)(6) of the Securities Act of 1933, and that prior approval of the issuance by state regulators should not be required.

Degree of enhancement

The degree of enhancement applied by Standard & Poor's depends on the above factors and the issuer's corporate credit rating. For airlines, investment-grade issuers receive a one "notch" upgrade (e.g., 'A-' to 'A'), while speculative-grade airlines would typically receive a two-notch enhancement (e.g., 'B' to 'BB-'). Rail equipment obligations are typically rated one full category above that of the company's corporate credit rating, but in most cases no lower than 'BBB-'. The potential rating enhancement for Section 1168 is greater than that accorded to airlines, which enjoy legally similar protection under Section 1110 of the Bankruptcy Code. The reasons for this difference and the factors that support credit quality of railroad equipment trust certificates are explained below.

• As noted above, railroads cannot, by statute, enter Chapter 7 liquidation proceedings. Liquidation under Chapter 11 has historically been rare, although partial deregulation of the industry makes that outcome more conceivable than in the past.

• A trustee always is appointed to oversee a railroad reorganization, and, as such, is explicitly charged with considering "the public interest" in addition to those of other parties. In practice, this means maintaining service whenever possible.

• Railroads, with their proprietary rights of way, are often the only practical means of delivering bulk commodities (such as coal, grain, and chemicals) to certain shippers and customers. Congress and the regulatory bodies (historically, the Interstate Commerce Commission [ICC]; since January 1, 1996, the Surface Transportation Board of the U.S. Department of Transportation) tend to place a premium on maintaining service, which implies keeping equipment.

• Equipment debt and leases represent a smaller proportion of total obligations than for airlines, and supply and demand for railroad equipment tends to stay in better balance than for aircraft. Consequently, continued debt service in reorganization is less burdensome for railroads than is sometimes the case for airlines.

• Railroad equipment is typically financed in groups, because the cost of individual units ($1.5 million to $2.0 million for a locomotive, $40,000 to $60,000 for a typical railcar) make separate transactions uneconomical. A trustee would have to reject the whole pool to escape debt service, in contrast to airlines, which can reject leases on individual aircraft that no longer meet their needs.

At the point an airline or railroad is in Chapter 11 bankruptcy proceedings and nonequipment senior obligations are typically in default, its corporate credit rating is "N.M." ("not meaningful"). The rating on Section 1110 or 1168 obligations would be based on Standard & Poor's estimate of the likelihood of a successful reorganization and the particular features of the equipment financing under consideration. For airlines, such a rating would typically be in the 'CCC' category, but might fall into the 'B' category if the financing in question is very well secured and/or has been affirmed by the court and the airline seems likely to reorganize successfully. For railroads, a rating in the 'B' category or even 'BB' categories would be more likely.

Commercial Paper

Commercial paper consists of unsecured promissory notes issued to raise short-term funds. Typically, only companies of strong credit standing can sell their paper in the money market, although there was some issuance of lesser-quality, unrated paper prior to the junk bond market collapse late in 1989. (Alternatively, companies sell commercial paper backed by letters of credit (LOC) from banks. Credit quality of such paper rests entirely on the transaction's legal structure and the bank's creditworthiness. As long as the LOC is structured correctly, credit quality of the direct obligor can be ignored.)

Rating criteria

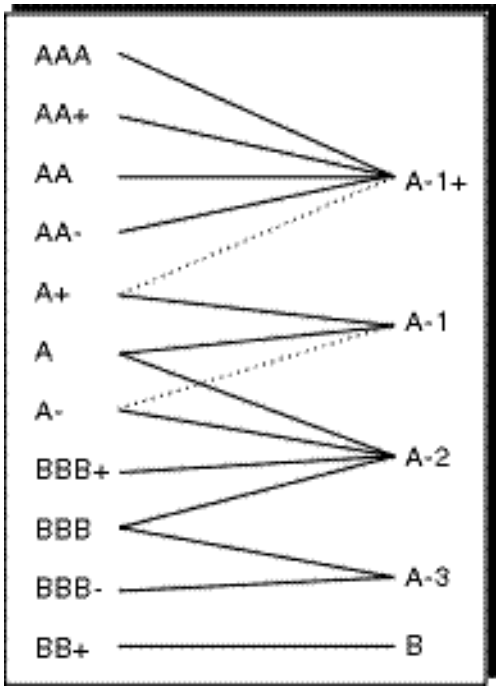
Evaluation of an issuer's commercial paper (CP) reflects Standard & Poor's opinion of the issuer's fundamental credit quality. The analytical approach is virtually identical to the one followed in assigning a long-term corporate credit rating, and there is a strong link between the short-term and long-term rating systems *(see chart)*. Indeed, the time horizon for CP ratings extends well beyond the typical 30-day life of a CP note, the 270-day maximum maturity for the most common type of CP in the U.S., or even the one-year tenor used to distinguish between short-term and long-term ratings in most markets. CP ratings are intended to endure over time, rather than change frequently.

In effect, to achieve an 'A-1+' CP rating the firm's credit quality must be at least the equivalent of an 'A+' long-term corporate credit rating. Similarly, for CP to be rated 'A-1', the long-term corporate credit rating would need to be at least 'A-'. (In fact, the 'A+'/'A-1+' and 'A-'/'A-1' combinations are rare. Typically, 'A-1' CP ratings are associated with 'A+' and 'A' long-term ratings.)

Conversely, knowing the long-term rating will not fully determine a CP rating, considering the overlap in rating categories. However, the range of possibilities is always narrow. To the extent that one of two CP ratings might be assigned at a given level of long-term credit quality (e.g., if the long-term rating is 'A'), overall strength of the credit within the rating category is the main consideration. For example, a marginal 'A' credit likely would have its CP rated 'A-2', whereas a solid 'A' would almost automatically receive an 'A-1'.

Occasionally, the CP rating may focus more intensely on the nearer term. For example, a company may possess substantial liquidity—providing protection in the near or intermediate term—but suffer from less-than-stellar profitability, a longer-term factor. Or, there could be a concern that, over time, the large cash holdings may be used to fund acquisitions. Conversely, following a major acquisition, confidence that the firm can restore financial health over the next couple of years

CORRELATION OF CP RATINGS WITH LONG-TERM CORPORATE CREDIT RATINGS*



* Dotted lines indicate combinations that are highly unusual. *See text.*

may be factored into its long-term ratings, while the financial stress that dominates the near term may lead to a relatively low CP rating. Having different time horizons as the basis for long- and short-term ratings implies that either one or the other rating is expected to change.

Backup policies

Ever since the Penn Central bankruptcy roiled the commercial-paper market and some companies found themselves excluded from issuing new commercial paper, Standard & Poor's has deemed it prudent for companies that issue commercial paper to make arrangements in advance for alternative sources of liquidity. This alternative, "backup" liquidity protects them from defaulting were they unable to roll over their maturing paper with new notes—due to a shrinkage in the overall commercial-paper market *or* some cloud over the company that might make commercial-paper investors nervous. Many developments affecting a single company or group of companies—including bad business conditions, a lawsuit, management changes, a rating change—could make CP investors flee the credit.

(Given the size of the CP market, backup facilities could not be relied on with a high degree of confidence in the event of widespread disruption. A general disruption of CP markets could be a highly volatile scenario, under which most bank lines would represent unreliable claims on whatever cash would be made available through the banking system to support the market. Standard & Poor's neither anticipates that such a scenario is likely to develop, nor assumes that it never will.)

Having inadequate backup liquidity affects both the short- and long-term ratings of the issuer because it could lead to default, which would ultimately pertain to all of the company's debt. Moreover, the need for backup applies to all confidence-sensitive obligations—not just rated CP. Backup for 100% of rated CP is meaningless if other debt maturities—for which there is no backup—coincide with those of CP. Thus, the scope of backup must extend to Euro CP, master notes, and short-term bank notes.

The standard for industrial and utility issuers has long been 100% coverage of confidence-sensitive paper for all but the strongest credits. Backup is provided by excess liquid assets or bank facilities in an amount that equals all such paper outstanding.

(While the backup requirement relates only to outstanding paper—as opposed to the entire program authorization—a firm should anticipate prospective needs. For example, it may have upcoming maturities of long-term debt that it may want to refinance with commercial paper, which would then call for backup of greater amounts.)

Available cash or marketable securities are ideal to provide backup. (Of course, it may be necessary to "haircut" their apparent value to account for potential fluctuation in value or tollgate taxes surrounding a sale. And it is critical that they be immediately saleable.) Yet the vast majority of commercial paper issuers rely on bank facilities for alternative liquidity.

(This high standard has provided a sense of security to the commercial-paper market–even though backup facilities are far from a guarantee that liquidity will, in the end, be available. For example, a company could be denied funds if its banks invoked "material adverse change" clauses. Alternatively, a company in trouble might draw down its credit line to fund other cash needs, leaving less-than-full coverage of paper outstanding, or issue paper beyond the expiration date of its lines.)

Companies rated 'A-1+' can provide 50%-75% coverage The exact amount is determined by the issuer's overall credit strength and its access to capital markets. Current credit quality is an important consideration in two respects: It indicates:

1) The different likelihood of the issuer's ever losing access to funding in the commercial-paper market; and

2) The time frame presumed necessary to arrange funding should the company lose access. A higher-rated entity is less likely to encounter business reverses of significance and—in the event of a general contraction of the commercial-paper market—the higher-rated credit would be less likely to lose investors. In fact, higher-rated firms could actually be net beneficiaries of a flight to quality.

In 1999, Standard & Poor's introduced a new approach that offers companies a second option. Under the new criteria, companies have greater flexibility with respect to the amount of backup they maintain—if they are prepared to match their maturities carefully

with available liquidity. The new criteria focus explicitly on a company's maturity schedule, thereby differentiating between companies that are rolling over all their commercial paper in just a few days and those that have a cushion by virtue of having placed longer-dated paper.

The basic idea is that firms—if and when they lose access to commercial paper—should have sufficient liquidity to cover any paper coming due during the time they would require to arrange additional funding. How long might that take? Again, a key assumption is that companies of better credit quality will be able to arrange funding more quickly. Accordingly, companies currently rated 'A-1+' or 'A-1' are presumed to remain reasonably good credits—even if they should experience a liquidity problem—and should be able to arrange funding within 30 days. For companies that are rated only 'A-2', the presumed period is longer, 90 days; as weaker credits, they would find it more difficult to arrange financing. For 'A-3' rated companies, coverage should be 100% of outstanding amounts, no matter what the maturity profile.

It is critical to consider the upcoming maturities on a rolling basis—rather than to rely on averages—because borrowing patterns vary as companies finance peak needs or occasionally bunch maturities. The backup must always cover the peaks—as they fall within the number of days to be covered. The issuer has to perform a daily exercise of matching the maximum amount of paper maturing in the upcoming 30- or 90-day periods (depending on its rating) with backup liquidity that includes excess cash, bank lines, capital-market commitments, and so forth. The maturities to be matched include commercial paper, euro CP, master notes, and short-term notes, as well as current maturities of long-term debt and medium-term notes that the company is planning to refinance with commercial paper or short-term notes.

All issuers—even if they provide 100% backup—must always match the first few days of maturities with excess cash or funding facilities that provide for immediate availability. For example, a bank backup facility that requires two-day notification to draw down won't be of any use in repaying paper maturing in the interim. The same would hold true if foreign exchange is needed—and the facility requires a couple of days to provide it. Moreover, if a company issuing commercial paper in the U.S. were relying on a bank facility in Europe, differences in time zones or bank holidays could prevent availability when needed. Obviously, a bank facility in the U.S. would be equally lacking with respect to maturing euro CP. So-called "swing lines" typically equal 15%-20% of the program size in order to deal with the maximum amount that will mature in any three- to four-day period.

Extendible commercial notes (ECN) provide "built-in backup" by allowing the issuer to extend for several months if there is difficulty in rolling over the notes. Accordingly, there is no need to provide backup for them. However, there is no way to prevent the issuer from tapping backup facilities intended for other debt and use the funds to repay maturing ECNs—instead of extending. This risk is known as "leakage." Accordingly, for issuers that provide 100% backup, unbacked ECNs must not exceed 20% of extant backup for outstanding conventional commercial paper. Companies providing backup based on upcoming maturity levels could not issue ECNs without backup because that would degrade their coverage below what is deemed a minimum level.

Guidelines for U.S. industrials and utilities

	Traditional approach (% of total outstanding)	New approach (days of upcoming maturing paper)
A-1+/AAA	50%	30 days
A-1+/AA	75%	30 days
A-1	100%	30 days
A-2	100%	90 days
A-3	100%	All paper outstanding

Quality of backup facilities

Banks offer various types of credit facilities that differ widely regarding the degree of the bank's commitment to advance cash under all circumstances. Weaker forms of commitment, while less costly to issuers, provide banks great flexibility to redirect credit at their own discretion. Some lines are little more than an invitation to do business at some future date.

Standard & Poor's expects that all backup lines be in place and confirmed in writing. "Preapproved" lines or orally committed lines

are viewed as insufficient. Specific designation for CP backup is of little significance.

Contractually committed facilities are desirable. In the U.S., fully documented revolving credits represent such contractual commitments. Standard & Poor's considers it prudent for 'A-1' and 'A-2'—and certainly 'A-3'—CP issuers to have a substantial portion of their backup in the form of a contractually committed facilities. (The weaker the credit, the greater the need for more reliable forms of liquidity.) As a general guideline, if contractually committed facilities cover 10-15 days' upcoming maturities of outstanding paper, that should suffice.

(Even contractual commitments often include "material adverse change" clauses, allowing the bank to withdraw under certain circumstances. While inclusion of such an escape clause weakens the commitment, Standard & Poor's does not consider it critical—or realistic—for most borrowers to negotiate removal of "material adverse change" clauses.)

In the absence of a contractual commitment, payment for the facility—whether by fee or balances—is important because it generally creates some degree of moral commitment on the part of the bank. In fact, a solid business relationship is key to whether a bank will stand by its client. Standardized criteria cannot capture or assess the strength of such relationships. Standard & Poor's is interested, therefore, in any evidence—subjective as it may be—that might demonstrate the strength of an issuer's banking relationships. In this respect, the analyst is also mindful of the business cultures in different parts of the world and their impact on banking relationships and commitments.

Dependence on just one or few banks is also viewed as an unwarranted risk. Apart from the potential that the bank will not have adequate capacity to lend, there is the chance that it will not be willing to lend to this issuer. Having several banking relationships diversifies the risk that any bank will lose confidence in this borrower and hesitate to provide funds.

Concentration of banking facilities also tends to increase the dollar amount of an individual bank's participation. As the dollar amount of the exposure becomes large, the bank may be more reluctant to step up to its commitment. In addition, the potential requirement of higher-level authorizations at the bank could create logistical problems with respect to expeditious access to funds for the issuer. On the other hand, a company will not benefit if it spreads its banking business so thinly that it lacks a substantial relationship with any of its banks.

There is no analytical distinction to be made between a 364-day and a 365-day facility! Even multiyear facilities will provide commitment for only a short time as they approach the end of their terms. However, it is obviously critical that the company arrange for the continuation of its banking facilities well in advance of their lapsing.

It is important to reiterate that even the strongest form of backup—a revolver with no "material adverse change" clause—does not enhance the underlying credit and does not lead to a higher rating than indicated by the company's own creditworthiness. Credit enhancement can be accomplished only through an LOC or another instrument that unconditionally transfers the debt obligation to a higher-rated entity.

Banks providing issuers with facilities for backup liquidity should themselves be sound. Possession of an investment-grade rating indicates sufficient financial strength for the purpose of providing a CP issuer with a reliable source of funding. There is no requirement that the bank's credit rating equal the issuer's rating. Nonetheless, Standard & Poor's would look askance at situations where most of a company's banks were only marginally investment grade. That would indicate an imprudent reliance on banks that might deteriorate to weaker, non-investment-grade status.

Recent Innovations

Apart from ECNs, several new forms of backup have been designed recently. Companies are keen to utilize these new products to diversify their sources of alternative liquidity and also to reduce their reliance on the commercial-banking sector.

Typically, a structured entity is created to provide commitments to commercial paper issuers. The entity may obtain its funding from commercial banks, insurance companies, mutual funds, small investors, or even from the commercial paper market itself. The funds may be raised in advance—or lined up via contract. A banking firm may provide a short-term commitment to create immediate availability, "bridging" the time it takes to access the funds from the capital markets. Such enti-

ties can "leverage" their funding capacity—making commitments in an amount that is a multiple of their funding capacity—based on the premise that not all the commitments will be exercised—at least, not all at the same time.

(Standard & Poor's analyzes the extent to which a given structure can prudently make commitments in excess of its funding limits. The determining factors include: diversification of companies to which commitments are made; the credit quality of those companies; the duration of the commitment; and how long the companies would retain the advances, which may be determined by the terms of repayment. Standard & Poor's would issue a letter stating that the entity's commitments are acceptable as commercial paper backup, or might assign a rating to the entity—much like a counterparty rating—indicating the quality of its commitment.)

With the advent of nonbank backup and ECNs, it is necessary to consider how a company might manage to remain solvent *after* utilizing the backup arrangement to repay or extend its maturing commercial paper. The extension of an ECN, for example, merely provides the company a breather; the company must still procure new funding to pay off the note. The extended note represents a hard maturity, as opposed to the expiration of a bank facility, because a bank facility presumably would be renewed in a normal lending relationship. Similarly, backup provided by structured vehicles or capital-market contracts would pay off the outstanding commercial paper—but leave the company still facing hard maturities.

DOCUMENTATION FOR COMMERCIAL PAPER PROGRAM RATINGS

—Company letter requesting rating
—Copy of board authorization for program
—Indication of authorized amount
—Indication of program type (e.g., 3(A)3, 4(2), ECN, euro)
—Description of use of proceeds
—Listing of dealers (unless company is a direct issuer)
—Description of backup liquidity (including list of bank lines, giving the terms of the facilities, the name of each bank participating, commitment amount, and form of the commitment).

The common analytical element for determining how long a breather is required when the backup facility provides only a temporary respite—and how much backup is needed in the first place—is the pragmatic question: How much time might a company need to arrange more permanent funding? However, the tenor of backup facilities is relevant only in a scenario where the company already has lost access to the commercial paper market! Accordingly, Standard & Poor's feels that the tenor of any backup facility with a hard maturity needs to be at least 90 days. The rating level of the company while it is still issuing commercial paper is not a consideration.

Preferred Stock

Preferred stock carries greater credit risk than debt in two important ways: The dividend is at the discretion of the issuer and the preferred represents a subordinated claim in the event of bankruptcy. Accordingly, preferred is generally rated below subordinated debt. When the firm's corporate credit rating (CCR) is investment grade, its preferred stock is rated two notches below the CCR. For example, if the CCR is 'A+', preferred stock would be rated 'A-'. (In case of a CCR of 'AAA', preferred would be rated 'AA+'.) When the CCR is non-investment grade, preferred stock is rated at least three notches (one rating category) below the CCR. Deferrable payment debt is treated identically to preferred stock, given subordination and the right to defer payments of interest.

Financial instruments that have one of these characteristics—but not both (for example, deferrable debt with a senior claim) are generally rated one notch below the CCR for investment grade credits, and two notches below the CCR for speculative grade credits.

When there is an unusual reliance on preferred stock, there is greater risk to the dividend. If preferred issues total over 20% of the firm's capitalization, that normally would call for greater differentiation from the CCR. There are other situations where the dividend is jeopardized, so notching would exceed the guidelines above. For example, state charters restrict payment when there is a deficit in the equity account. This can occur following a write-off, even while the firm is healthy and possesses ample cash to continue paying. Similarly, covenants in debt instruments can endanger payment of dividends—even while there is a capacity to pay.

Subordination of an instrument is a rating consideration no matter the degree of the subordination. Standard & Poor's does not ordinarily make a distinction for deep subordination, i.e., the fact that preferred stock is junior to other subordinated issues.

The risk of deferral of payments is analyzed from a pragmatic, rather than a legal, perspective. In some instances, the right to defer is constrained by virtue of financial covenants. In others, the discretion to defer is limited by the remedy that preferred holders possess to take over the issuing entity and liquidate its assets. Note, though, that such situations are exceptional and normally pertain to negotiated, privately placed transactions. Yet there do exist a handful of preferred issues that are rated *pari passu* with the company's debt (in some cases, senior debt).

If a company defers a payment or passes on a preferred dividend, that is tantamount to default on the preferred issues. The rating is changed to 'D' once the payment date has passed. The rating would usually be lowered to 'C' in the interim, if nonpayment were predictable—for example, if the company were to announce that its directors failed to declare the preferred dividend. Whenever a company resumes paying preferred dividends but remains in arrears with respect to payments it skipped, the rating is, by definition, 'C'. *(See page 24 for a discussion of how different types of preferred stock affect a firm's overall creditworthiness.)*

Convertible Preferred

Securities such as PERCS and DECS/PRIDES provide for mandatory conversion into common stock of the company. Such securities vary with respect to the formula for sharing potential appreciation in share value. In the interim, these securities represent a preferred stock claim. Other offerings package a short-life preferred stock with a deferred common stock purchase contract to achieve similar economics.

These issues are viewed very positively in terms of equity credit—that is, if conversion will take place in a relatively short time frame and the imbedded floor price of the shares

makes it unlikely that the firm will regret its decision to sell new common.

Ratings on the issue address only the likelihood of interim payments and the solvency of the firm at the time of conversion to enable it to honor its obligation to deliver the shares. These ratings do *not* address the amount or value of the common equity that the investor will ultimately receive. Standard & Poor's highlights this risk by appending an "r" to the ratings of these hybrid securities.

Trust preferred stock

When using a trust preferred, a company establishes a trust that is the legal issuing entity of the preferred stock. The sale proceeds of the preferred are lent to the parent company, and the payments on this intercompany loan are the source for servicing the preferred obligation. In some cases, this financing structure can provide favorable equity treatment for the company, even while the payments enjoy tax-deductibility.

Standard & Poor's rating of trust preferreds is based on the creditworthiness of the parent company and the terms of the intercompany loan. Any equity credit that might be associated with these issues also is a function of the terms of the intercompany loan, especially with respect to payment flexibility.

This variety of preferred was introduced in 1995 as TOPrS—Trust Originated Preferred Securities. TOPrS represented a structural alternative for deferrable payment hybrids that had been sold since late 1993 under the appellation MIPS—Monthly Income Preferred Securities.

The use of a trust neither enhances nor detracts from the structure compared to the alternative issuing entities. The legal form of the issuing entity can be a business trust, limited partnership, off-shore subsidiary in a tax haven, or on-shore limited liability corporation. What these structures have in common is an intercompany loan with deferral features (typically five years), no cross-default provision, a long maturity, and deep subordination. The preferred dividend is similarly deferrable, as long as common dividends are not being paid. After the deferral period, the trust preferred holders have legally enforceable creditors rights—in contrast to conventional preferreds, which provide only very limited rights.

Criteria Topics

Equity Credit: What Is It and How Do You Get It?

Standard & Poor's is regularly asked "Will the issuer of this hybrid security receive 'equity credit'?" In other words, has the issuer's credit quality improved and has its debt capacity expanded, as is ordinarily the case when equity is added to the balance sheet?

The question of "equity credit" is not a yes/no proposition. The notion of "partial credit" is very appropriate. When it comes to calculating ratios, a hybrid security may be viewed as debt in some respects and as equity in other respects.

What is equity?

What constitutes equity in the first place? Traditional common stock—the paradigm equity—sets the standard. But equity is not a monolithic concept; rather, it has several dimensions. Standard & Poor's looks for the following positive characteristics in equity:

- It requires no ongoing payments that could lead to default;
- It has no maturity or repayment requirement;
- It provides a cushion for creditors in the case of a bankruptcy; and
- It is expected to remain as a permanent feature of the enterprise's capital structure.

If equity has these distinct defining attributes, it should be apparent that a specific security can have a mixed impact. For example, hybrid securities, by their very nature, will be equity-like in some respects and debt-like in others. Standard & Poor's analyzes the specific features of any financing to determine the extent of financial risks and benefits that apply to an issuer.

In any event, the security's perceived economic impact is relevant, its nomenclature is not. A transaction that is labeled debt for accounting, tax, or regulatory purposes may still be viewed as equity for rating purposes, and vice versa.

Attributes of equity

Equity provides value for the enterprise. When a company sells equity, it receives money to invest in its business. It is able to do research, buy equipment, or support inventory and receivables growth—all to generate cash flow and keep the enterprise healthy. If issuing a security allows the company to avoid a cash outflow that would have been incurred in the course of business, the beneficial impact is identical. When shares are issued in lieu of employee benefits that otherwise would be paid in cash, for example, as part of an ESOP, this aspect of equity is fulfilled. However, if shares are issued as a new—perhaps unnecessary—form of compensation, the benefit is dubious: Has the enterprise received anything of value?

Soft capital, a commitment from a nonaffiliated provider of capital to inject equity capital at a later date, offers another example of a transaction that falls short in terms of this basic attribute of equity. However valuable it may be to have a call on funds in the future, the business does not have the funds now. Also, by making the funds available at the company's discretion, there is the risk that a delay in the firm's exercising of its option may lead to a situation of "too little, too late."

Equity requires no ongoing payments that could lead to default.

Equity pays dividends, but has no fixed requirements that could lead to default and bankruptcy if these dividends are not paid. Moreover, there are no fixed charges that might, over time, drain the company of funds that may be needed to bolster operations. A company is under pressure to pay both preferred and common dividends, but ultimately retains the discretion to eliminate or defer payment when it faces a shortage of funds. Of course, a firm's reluctance to pass on a preferred dividend is not identical to its reticence to altering its common payout. Accordingly, there is a difference in "equity credit" afforded to common equity relative to preferred equity.

The longer a company can defer dividends the better. An open-ended ability to defer until

financial health is restored is best. As a practical matter, the ability to defer dividend payments for five or six years is most critical in helping to prevent default. If the company cannot restore financial health in five years, it probably never will. The ability to defer payments for shorter periods is also valuable, but equity content diminishes quickly as constraints on the company's discretion increase.

Debt instruments can be devised to provide flexibility with regard to debt service. Deferrable payment debt issued directly to investors—that is, without a trust structure—legally affords the company flexibility regarding the timing of payments that is analogous to trust preferreds. Yet, by being identified as a "debt security," the company's practical discretion to defer payments may be constrained, which diminishes the equity credit attributed to such hybrids vs. deferrable payment preferred stock.

Income bonds, i.e., where the payment of interest is contingent on achieving a certain level of earnings, were designed with this in mind. However, to the extent that cash flow diverges from earnings measures, income bonds tend to be imperfect instruments. A recent variation on the theme is the cash flow bond, which pegs the level of interest payments to the firm's cash flow. The equity content of such instruments is a function of the threshold levels used to determine when payments are diminished. If the level of cash flow that triggers payment curtailment is relatively low, that instrument is not supportive of high ratings.

Another straightforward concept entails linking interest payments to the company's dividend, creating an equity-mimicking bond. A number of international financial institutions issued such bonds in the late 1980s.

Equity has no maturity or repayment requirement.

Obviously, the ability to retain the funds in perpetuity offers the firm the greatest flexibility. Extremely long maturities are next best. Accordingly, 100-year bonds possess an equity feature in this respect (and only in this one respect) until they get much nearer their maturity. To illustrate the point, consider how much, or how little, the company would have to set aside today to defease or handle the eventual maturity. However, cross-default provisions would lead to these bonds being accelerated.

Preferred equity often comes with a maturity, as a limited life or sinking fund preferred, which would constitute a clear shortcoming in terms of this aspect of equity. Limited credit would be given for this type of preferred, even if the security had a 10-year life or more. Even if it could be assumed that the issue is successfully refinanced at maturity, the potential for using debt in the refinancing would be a concern *(see following discussion on permanence of equity)*.

Equity provides a cushion for creditors in the event of default.

What happens in bankruptcy also pertains to the risk of default, albeit indirectly. Companies can continue to raise debt capital only as long as the providers feel secure about the ultimate recovery of their loans in the event of a default. Debtholders' claims have priority in bankruptcy, while equity holders are relegated to a residual claim on the assets. The protective cushion created by such equity subordination allows the company access to capital, enabling it to stave off a default in the first place.

Flexible payment bonds, of course, would not qualify on this aspect of equity. Similarly, convertible debt—even mandatorily convertible debt—would not be much help in this regard if the issuer were vulnerable to default during the interim period prior to conversion.

Equity is expected to remain a permanent feature of the enterprise's capital structure.

At any time, a company can choose either to repurchase equity or to issue additional shares. However, some securities are more prone to being temporary than others. Standard & Poor's analysis tries to be pragmatic, looking for insights as to what may ultimately occur.

Preferred stock, in particular, is likely to have provisions for redemption or exchange, if not an outright stated maturity. Auction or remarketed preferred stock is designed for easy redemption. Even though the terms of this type of preferred provide for its being perpetual, failed auctions or lowered ratings typically prompt the issuer to repurchase the shares.

Standard & Poor's discussions with management regarding the firm's financial policies provide insights into the company's plans for the securities: whether a company will call or repurchase an issue and what is likely to replace it. Another important consideration is the issuer's tax-paying posture. It is difficult

for a non-taxpaying issuer to make the case that the firm will continue to finance with non-tax-deductible preferred stock once it becomes a taxpayer and can lower its cost of capital by replacing the preferred with debt. Other clues can come from the nature of investors in the issue (e.g., money market vs. long-term fixed-income investors) and the mode of financing that is typical of the company's peer group. For example, utilities traditionally finance with preferred stock, and industry regulators are comfortable with it. Therefore, the usual concern that limited-life preferred stock will be refinanced with debt does not generally apply in the case of utilities. In the case of so-called "tax-deductible" preferreds, the issues are different. The risk here is that their favorable tax status is overturned. Especially with regard to new hybrids, that risk may be substantial. This concern can be mitigated by provisions in the transaction to convert into another equity-like security in the event of loss of tax-deductibility.

Rating methodology

While many people focus on the leverage ratio in thinking about equity credit, a company's leverage is just one of many components of a rating assessment. (In fact, cash flow adequacy and financial flexibility have long surpassed balance-sheet considerations as important rating factors.) Standard & Poor's methodology of breaking all the analyses into categories allows each of the several attributes of hybrid securities to be considered separately and in the appropriate analytical category.

The aspect of ongoing payments is considered in fixed-charge coverage and cash-flow adequacy; equity cushion in leverage and asset protection; need to refinance upon maturity in financial flexibility; and potential for conversion in financial policy. The before-tax and after-tax cost of paying for the funds is also a component of both earnings and cash flow analysis.

There is no uniform weighting of the analytical categories to arrive at a rating conclusion. Accordingly, the relative importance of each equity attribute can vary. The critical issues for companies can differ. Moreover, the factors that delineate an 'A' from an 'AA' rating tend to differ from those factors that determine whether a rating will be 'B' or 'BB'. Similarly, the impact of a hybrid may depend on the specific needs of a given issuer or its place in the rating spectrum. Aspects affecting near-term flexibility are usually of prime importance for low-rated, troubled credits, while long-term considerations are more germane when an already highly rated credit is being reviewed for an upgrade. To illustrate the point: Replacing 20-year debt with 100-year debt is a nonevent for a company that faces insolvency in the next several quarters.

Standard & Poor's does not simply "haircut" hybrid securities or assign fractional "equity credit" when calculating financial ratios. There is just no tidy way to adjust financial ratios to reflect the nuances of complex structures. Sometimes, the analyst calculates alternative sets of ratios, reflecting that the "truth" lies in a gray area between two perspectives.

There are no specific limitations with respect to the amount of hybrid preferred that receives equity treatment. However, at some point, one would question a company's creating a capital structure with an unusually large proportion of newfangled securities. The analytical comfort range depends on the seasoning of the type of instrument, peer group comparisons, and any potential negatives for the firm that might prompt it to reevaluate and restructure.

Equity Credit: Factoring Future Equity into Ratings

There are many ways to arrange for the creation of equity in the future. These methods range from issuing traditional convertible securities to entering forward purchase contracts to establishing grantor trusts for future issuance. The key considerations for receiving credit today for the promise of a positive development in the future are:

- How predictable the outcome is, and
- How soon it will occur.

If the analyst is reasonably assured that an equity infusion will occur over the next two to three years, then that event can be incorporated into the financial analysis on a pro forma basis. On the other hand, analyzing an equity infusion in the distant future, even if one could be certain about this eventuality, requires a different approach. It is not meaningful to overlay such an event on current financial measures. To do so would be to isolate just one transaction from the full picture of the company's future, in effect, taking it out of context. Yet a program of equity issuance can be a powerful statement about the issuer's financial policy—an important rating consideration.

Predicting the outcome

The first dimension of the analysis is assessing the potential for issuance of, or conversion to, equity, and the likelihood of the company's retaining that equity as permanent capital. The risks vary by the type of instrument and its "bells and whistles."

The following discussion is arranged in an ascending order, based on the likelihood of a positive outcome. The instruments discussed convert into common stock, although conversion into perpetual preferred stock is another possibility that is now frequently considered.

Convertible debt usually turns into equity at the option of the investor. The issuer can force conversion, but only if the security is "in the money."

The odds of any specific issue's converting is a function of the conversion premium and the likelihood of the company's stock price achieving that level. Standard & Poor's has been extremely conservative about relying on anticipated stock price movements. Even when the stock is trading very near the strike price and the firm's future seems bright, the risk exists that the stock will fall out of favor or that the market as a whole may turn bearish. There are mechanisms that can increase the odds of conversion. For example, periodic adjustment of the conversion premium is one means. However, the difficulties in statistically assessing the outcomes still would limit any equity credit given for these issues. Conversely, discount bonds, such as LYONs, have a built-in mechanism for always "raising the bar" as the debt value accretes, thereby making the odds of conversion ever more remote.

In some securities, the issuer holds the option to convert into equity. For example, there may be a provision to pay with cash or stock. This provides a modicum of flexibility. However, there is no equity credit given. The analyst is still concerned that the issuer might not exercise its prerogative except under dire circumstances. After all, any firm can issue equity—if it chooses to—at the prevailing market price. The reality is that companies are rarely satisfied with the market price and are reluctant to add such an expensive form of capital. Even if the share settlement is mandatory, a company that is disinclined to issue at the market price would merely repurchase those shares.

There is an analogous problem with "soft capital" from a ratings perspective. The company has a contractual right to demand at any time an equity infusion from some outside provider of capital. But at what point will the company make this demand? Moreover, in the interim, the company does not enjoy the use of these funds to invest in maintaining the health of its business.

Covenants offer another way to influence the outcome. One popular method is to require

that the repayment of principal upon maturity must be made with funds raised through the issuance of equity. From Standard & Poor's perspective, this method of providing equity is flawed. For one thing, enforceability is dubious. Second, as discussed earlier, if the company is not inclined to add equity at the market price, it still can meet the legal requirement of issuing equity while simultaneously repurchasing its shares. (Banks have used this structure to raise Tier 1 regulatory capital. Indeed, considering the regulatory impetus behind the issuance, it is unlikely that a bank would cavalierly reverse such an equity issuance. But it would be wrong to generalize for all corporate issuers.)

A different covenant calls for automatic conversion when a trigger event occurs—typically, a rating downgrade or a defined financial setback. The debt would be eliminated at a time when the firm might find it difficult to service it. This represents an equity feature and helps to place a floor under the company's rating if the threshold for conversion is set high enough (e.g., at the investment-grade level).

The most favorable rating consideration is given to issues that are mandatorily convertible at a fixed time and at a fixed price. Preference equity redemption cumulative stock (PERCS) and debt exchangeable for common stock (DECS) offer two examples. Conversion is a certainty. At the end of a very short period, the investor receives one share of common stock—or a fractional share, if the price of the common has appreciated beyond a certain point. The company's decision to issue the equity is based on the locked-in floor price for the common stock. Regardless of the movement in the stock price, there is little reason for the company to reconsider its decision.

Synthetic mandatory equity securities can be created by using forward purchase contracts and related options contracts; the impact would be equally positive from a ratings viewpoint. (However, if there is a substantial mismatch between the issuance of the equity and the maturity of the debt, there is no assumption that the debt will be cancelled by the equity proceeds. The burden of proof is on the company with respect to the use of the equity sums for debt reduction.)

Grantor trusts, ESOPs

Apart from convertibles, grantor trusts and ESOPs offer avenues for future equity issuance. Many companies have established programs that commit them to issuing shares periodically as a means of dealing with large, unfunded, employee benefit liabilities. The firm places shares in a grantor trust or ESOP to be used over a period of time for employee benefits that otherwise would be paid in cash.

The vehicles for these programs differ with respect to the range of benefits that can be covered, the scheduling of issuance and releases of shares, the degree of exposure to changes in share price, and tax treatment. The creation of new equity via such programs is highly predictable. However, the major drawback is the extended period over which this will occur—seven to 10 years for many ESOPs and 10 to 15 years in the case of "rabbi trusts," such as Flexitrusts. This limits the positive impact on current credit quality, as explained below.

Timing the issuance

As important as knowing what will occur is knowing its context. Events anticipated in the short term are handled differently in the analytical process than those further out. Anything expected to occur in the next two to three years is factored into the projected financial statements and credit ratios that form a basis for rating assessments. The analyst's projections cover this period, taking into account all known aspects of an issuer's business environment, strategy, and financial plans. Historical financials are relevant only as a guide to what may occur in the future, since ratings address the risks of the future. Therefore, if equity is anticipated within two to three years, the transaction can be fully analyzed and incorporated in the current ratings.

The rating review of a company making a large, debt-financed acquisition offers a common example. The analysis would not focus on a snapshot view of the issuer's financial condition; rather, the rating would take into account the company's plan to restore financial health, if such a plan exists. New equity is usually part of such plans. The company might issue convertible securities or it might commit to issuing specific amounts of common equity over the short term. In any event, one would expect that the company's timetable for accomplishing its objectives not exceed two or three years.

When a positive or negative development is anticipated farther out in the future, its ratings impact is diminished. As a dynamic entity, the issuer will be affected in many offsetting ways

in the interim. To single out one expected event is to take it out of context. To reflect its impact in pro forma financial ratios would be a distortion.

Still, the willingness to issue equity over time to maintain credit quality can be an important element of financial policy. Establishing a program to do so represents tangible evidence that adds credence to a stated commitment. From a ratings perspective, the beneficial impact still can be significant, even if the equity program is not reflected in financial ratios. Indeed, when focusing on the longer term, rating analysis emphasizes the firm's fundamentals: its competitive position and financial policies.

In this light, consider the case of a prominent utility that decided to establish a "rabbi trust" to fund a very substantial amount of employee benefits over a 15-year period. Historically, this firm had issued a combination of debt and equity to maintain its leverage at 50% and its debt rating at 'A'. Standard & Poor's, relying on the firm's financial policies, was confident that the future held more of the same. Based on the legal commitment to add more than $1 billion of equity via the trust, the company lobbied for a rating upgrade.

However, Standard & Poor's concluded that the future equity added little in this instance. The company still plans to issue debt alongside the new equity issued by the trust. The dividend reinvestment plan that was used to issue equity in the past would now be discontinued. In fact, leverage at all times will continue to be 50%. In short, nothing has changed. In this case, the equity program enhances confidence in the 'A' rating, rather than suggesting that the rating be upgraded.

Often, companies combine share issuance programs with share repurchase transactions. A company may incur debt to purchase shares already outstanding that will be reissued through a trust or an ESOP. Another option is for the ESOP to borrow to buy shares in the market, with the corporate sponsor guaranteeing the debt. This is known as a leveraged ESOP.

The analyst separates the dual aspects of these actions. The negative impact is identical to any debt-financed share repurchase. Separately, the promise of future equity is taken into account, along the lines previously discussed. The positive impact of future equity issuance usually is sufficient to partially offset the credit-harming effects of the share repurchase. The net result can be an affirmation or a smaller downgrade than otherwise would have occurred.

A Hierarchy of Hybrid Securities

Issuers and their advisers have requested a handy gauge of the equity credit that Standard & Poor's attributes to specific securities, so they can know what to expect when issuing various hybrids and more easily compare financing alternatives. The scale on the following page is an attempt to convey the measure of equity credit attributed to specific securities.

The main use of this scale should be to appreciate whether and to what extent one security is better/worse than an alternative financing. Securities are placed on the scale after taking into account the overall impact of each security by balancing and weighing the beneficial aspects and the drawbacks.

Equity credit of 50% means that the impact of issuing that security is half as good as the impact of issuing common stock. The notion of partial credit can be illustrated as follows: If issuing a certain amount of common equity would lead to an upgrade of two notches for a given company, then issuing a like amount of an instrument with 50% equity content should translate into a one-notch upgrade. Alternatively, doubling the amount of the hybrid with 50% equity content might be needed to achieve the two-notch upgrade. (The impact of issuing common stock for a given company can be minimal or substantial, depending on the materiality of the issue and the credit factors specific to that company's situation.)

Percentage equity credit has nothing to do with ratio calculations! There is no way to translate percentage equity credit into ratio calculations; such calculations are determined for each type of instrument—and each of its features—separately. *Never* does the analyst divide an instrument's amount into fractions for ratio purposes.

There are many hybrids that are more debt-like than equity-like. They don't appear on the chart, because they have a damaging—or *negative*—impact on credit quality.

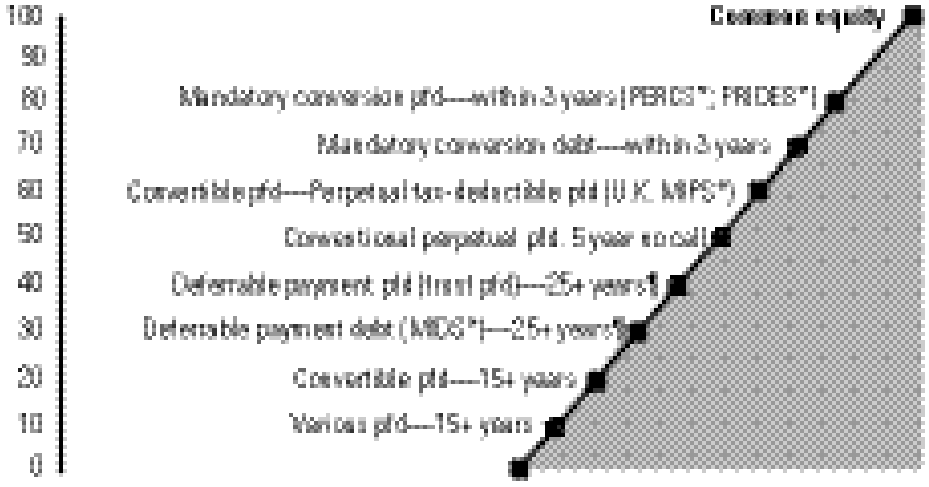
Some aspect or aspects of a debt security may allow it to be differentiated from "plain vanilla" debt. But that does *not* mean that the security provides, on balance, a positive rating impact.

For example, bonds with very long maturities are not as credit-harming as short-term debt. In that sense, they may be said to have an equity component—but, obviously, the equity content is not very great! Their negative impact is somewhat less than conventional debt—but is still nearly as bad.

The scale conveys the relative impact of various securities, given a typical weighting of rating factors *for investment-grade companies*. As mentioned above, the weighting could vary with company-specific circumstances or with the size of issuance relative to the existing capital structure. Less-than-investment-grade companies are excluded because the analysis of such firms does not lend itself easily to standardization. In general, the rating implications for an existing rating would depend on whether the financing replaces another that is more/less equity-like, i.e., higher/lower on the scale.

There can be minor variations for two issues of a single type of security. For example, the deferral period might be six years in one transaction and seven years in another. Obviously, the longer the deferral option, the better. But it would be wrong to attach too much importance to fine gradations. The finer the distinction, the less meaningful it is in the scheme of things. Note, too, that the self-same security changes as far as equity content over its life. *Remaining life* is relevant, not the tenor at time of issuance.

Relative Equity Impact



Note: The scale presented here is intended as a communication device. It is not a substitute for analysis, nor should it be interpreted as a tool for quantification of hybrids with respect to ratio calculations. (See pages 56-58.) Indeed, those seeking to reduce hybrid analysis to formulas could be harboring a delusion regarding the nature of the credit-rating process. The analytical complexity of hybrids reminds us once again that ratings are an art, not a science!

* Trade name of specific banking firm product, for illustration purposes only.
¶ Remaining life; initially issued with 30+ years' life.

Some other hybrids

- ***Mandatory exchangeable debt or preferred (e.g., DECs)***

If the issue must be settled with the stock of another entity (which is currently owned by the issuer), the analytical treatment is that of a deferred asset sale. All asset sales may be positive or negative to credit quality; there is no standardized impact. The factors that determine the credit impact include price achieved and use of after-tax proceeds. Will the proceeds be distributed to shareholders? Or used to pay down debt on a permanent basis? Or be reinvested? If reinvested, is the new asset more/less risky than what was sold?

- ***Mismatched mandatory conversion debt (e.g., FELINE PRIDES)***

Given the mismatch, the equity issuance is not ordinarily netted against the debt obligation. It is equivalent to a company simultaneously issuing deferred equity (+80% in the chart above) and a like amount of debt. The net impact of these two issues would depend on whether leverage is increased or decreased, which, in turn, depends on the extent of financial leverage prior to these two issuances.

- ***Step-up preferred***

If an instrument provides for adjustment of terms, the analyst may consider the adjustment date as the expected maturity, with the related diminution of equity credit. If the adjustment is to above-market rates, it is presumed that the instrument will be refinanced—and not necessarily with another equity-like security.

- ***Remarketed convertible trust preferred (e.g., HIGH TIDES)***

On balance, this hybrid is viewed negatively, despite the potential for conversion to common and the rate savings created by the remarketing feature. The need to remarket at a level above par could lead to terms that are unpalatable to the issuer, prompting a refinancing.

- ***Auction preferred***

These frequently remarketed preferreds are treated virtually as debt. They are sold as commercial paper equivalents, which leads to failed auctions if credit quality ever falls to 'A-3', or even 'A-2', levels. While the company has no obligation to repurchase the paper—the last holder could be stuck with this "perpetual" security—invariably, the issuer chooses to repurchase the preferred, bowing to market pressures to do so.

Parent/Subsidiary Rating Links

Affiliation between a stronger and a weaker entity will almost always affect the credit quality of both, unless the relative size of one is insignificant. The question is rather how close together the two ratings can be pulled on the basis of affiliation.

General principles

In general, economic incentive is the most important factor on which to base judgments about the degree of linkage that exists between a parent and subsidiary. This matters more than covenants, support agreements, management assertions, or legal opinions. Business managers have a primary obligation to serve the interest of their shareholders, and it should generally be assumed that they will act to satisfy this responsibility. If this means infusing cash into a unit they have previously termed a "stand-alone" subsidiary, or finding a way around covenants to get cash out of a "protected" subsidiary, then management can be expected to follow these courses of action to the extent possible. It is important to think ahead to various stress scenarios and consider how management would likely act under those circumstances. If a parent "supports" a subsidiary only as long as the subsidiary does not need it, such support is meaningless.

A *weak subsidiary* owned by a *strong parent* will usually, although not always, enjoy a stronger rating than it would on a stand-alone basis. Assuming the parent has the ability to support the subsidiary during a period of financial stress, the spectrum of possibilities still ranges from ratings equalization at one extreme to very little or no help from the parent's credit quality at the other. The greater the gap to be bridged, the more evidence of support is necessary.

(The parent's rating is, of course, assigned when the parent guarantees or assumes subsidiary debt. Guarantees and assumption of debt are different legal mechanisms that are equivalent from a rating perspective. Cross-default and cross-acceleration provisions in bond indentures also can be important rating considerations. They can provide a powerful incentive for a stronger entity to support debt of a weaker affiliate, since they trigger default of the stronger unit in the event of a default by the weaker affiliate. It should be kept in mind, however, that cross-default provisions can disappear if the debt whose indentures contain them is retired or renegotiated.)

A *strong subsidiary* owned by a *weak parent* generally is rated no higher than the parent. The key reasons for this are:

- The ability of and incentive for a weak parent to take assets from the subsidiary or burden it with liabilities during financial stress; and
- The likelihood that a parent's bankruptcy would cause the subsidiary's bankruptcy, regardless of its stand-alone strength.

Both factors argue that, in most cases, a "strong" subsidiary is no further from bankruptcy than its parent, and thus cannot have a higher rating. Experience has shown that bankrupt industrial firms file with their subsidiaries more often than not.

(For rating purposes, the risk of "substantive consolidation" is a side issue. Consolidation in bankruptcy, sometimes referred to as "substantive consolidation," occurs when assets of a parent and its subsidiaries are thrown together by the bankruptcy court into a single pool and their value allocated to all creditors without regard for any distinction between the two legal entities. In such cases, creditors of a subsidiary may lose all claim to any value associated with that particular subsidiary. Much more often, a parent and its subsidiaries will all file, but each legal entity will be kept separate in the bankruptcy proceeding. Creditors keep their claim to the assets of the specific legal entity to which they extended credit. Since ratings address primarily default risk, the key issue is not consolidation, but rather whether a bankruptcy filing will occur.

Nonconsolidation opinions are, therefore, of little use, since they address the likelihood of substantive consolidation, rather than the likelihood of simultaneous bankruptcies for parent and subsidiary. The usefulness of a nonconsolidation opinion is limited to the fact that willingness to obtain such an opinion might serve as some evidence of management intent regarding a subsidiary's independence.)

Protective covenants apparently protect a subsidiary from its parent by restricting dividends or asset transfers. In general, this type of covenant is given very limited weight in a rating determination. Reasons for limited value of protective covenants are:

- They do not affect the parent's ability to file the subsidiary into bankruptcy;
- It is very difficult to structure provisions that cannot be evaded; and
- Ultimately, courts usually cannot force a company to obey the covenant. During severe financial stress, especially prior to a bankruptcy, a weak parent may have a powerful incentive to strip a stronger subsidiary. The court can, at best, only award monetary damages after the fact to a creditor who has incurred a loss (when the issue defaults) and chooses to sue.

Joint ventures/nonrecourse projects

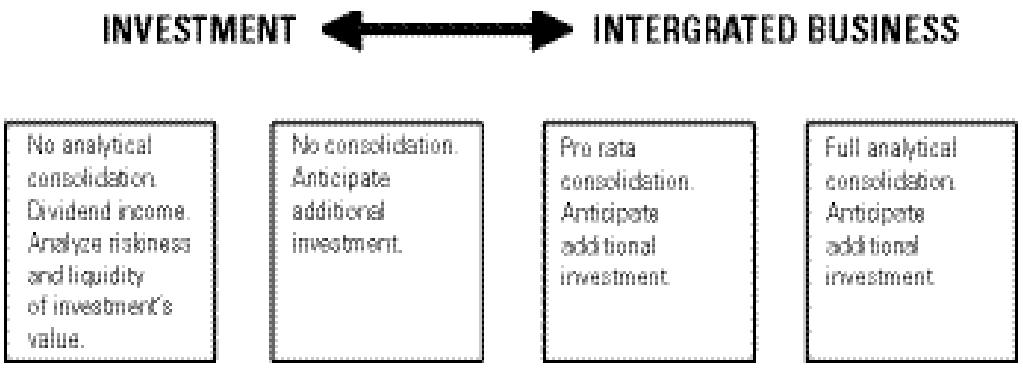
Companies regularly invest in joint ventures that issue debt in their own name. Similarly, firms may choose to finance various projects with nonrecourse debt. In addition, they sometimes take pains to finance some of their wholly owned subsidiaries on a stand-alone, nonrecourse basis, especially in the case of noncore or foreign operations.

With respect to the parent's credit rating, these businesses' operations and their debt may be treated analytically in several different ways depending on the perceived relationship between the parent and the operating unit. These alternatives are illustrated by the spectrum below.

Sometimes, the relationship may be characterized as an investment. In that case, the operational results are carved out; the parent gets credit for dividends received; the parent is not burdened with the operation's debt obligations; and the value, volatility, and liquidity of the investment are analyzed on a case-specific bases. The quality of the investment dictates how much leverage at the parent company it can support.

At the other end of the spectrum, operations may be characterized as an integrated business. Then, the analysis would fully consolidate the operation's income sheet and balance sheet; and the risk profile of the operations is integrated with the overall business risk analysis. Or, the business may not fall neatly into either category; it may lie somewhere in the middle of the spectrum. In such cases, the analytical technique calls for partial or pro rata consolidation and usually the presumption of additional investment, that is, the money the company would likely spend to bail out the unit in which it has invested.

This characterization of the relationship also governs the approach to rating the nonrecourse debt of the subsidiary or the project. The size of the gap between the stand-alone credit quality of the project or unit and that of the sponsor or parent is a function of the perceived relationship: the greater the integration, the greater the potential for parent or sponsor support. The reciprocal of burdening the parent with the nonrecourse debt is the attribution of support to that debt. The notion of support extends beyond formal or legal aspects—and can narrow, and sometimes even close, the gap between the rating level of the parent and that of the issuing unit.



(If the credit quality of a subsidiary is higher than that of the parent, the ability of the parent to control the unit typically caps the rating at the parent level. Exceptions are made in the case of bankruptcy-remote special purpose vehicles for securitization, regulated entities, independent finance subsidiaries, and the rare instances that have extremely tight covenant protection. The measure of control that the parent can exercise is very much a function of ownership, so the percent of ownership of a joint venture or project and the nature of the other owner are critical rating criteria in such situations. Where two owners can prevent each other from harming the credit quality of a joint venture, the debt of the venture can be rated higher than either one's rating, if justified on a stand-alone basis.)

Formal support, such as a guarantee (not merely a comfort letter), by one parent or sponsor ensures that the debt will be rated at the level of the support provider. Support from more than one party, such as a joint and several guarantee, can lead to a rating higher than that of either support provider.

Determining factors

No single factor determines the analytical view of the relationship with the business venture in question. Rather, these are several factors that, taken together, will lead to one characterization or another. These factors include:

- Strategic importance—linked lines of business or critical supplier;
- Percentage ownership (current and prospective);
- Management control;
- Shared name;
- Domicile in same country;
- Common sources of capital;
- Financial capacity for providing support;
- Significance of amount of investment;
- Investment relative to amount of debt at the venture or project;
- Nature of other owners (strategic vs. financial; financial capacity);
- Management's stated posture;
- Track record of parent firm in similar circumstances; and
- The nature of potential risks.

Some factors indicate an economic rationale for a close relationship or debt support. Others, such as management control or shared name, pertain also to a moral obligation, with respect to the venture and its liabilities. Accordingly, it can be crucial to distinguish between cases where the risk of default is related to commercial or economic factors, and where it arises from litigation or political factors. No parent company or sponsor can be expected to feel a moral obligation if its unit is expropriated!

Percentage ownership is an important indication of control, but it is not viewed in the same absolute fashion that dictates the accounting treatment of the relationship. Standard & Poor's also tries to be pragmatic in its analysis. For example, awareness of a handshake agreement to support an ostensibly nonrecourse loan would overshadow other indicative factors.

Clearly, there is an element of subjectivity in assessing most of these factors, as well as the overall conclusion regarding the relationship. There is no magic formula for the combination of these factors that would lead to one analytical approach or another.

Regulated companies

Normal criteria against rating a subsidiary higher than a parent do not necessarily apply to a regulated subsidiary. A regulated subsidiary is indeed rated higher than the parent if its stand-alone strength warrants and restrictions are sufficiently strong. However, the nature of regulation has been changing—and deregulation is spreading to new sectors. Regulators are more concerned with service quality than credit quality. As competition enters utility markets, the providers are no longer monopolies—and the basis of regulation is completely different.

Still, some regulated utilities are strong credits on a stand-alone basis, but are often owned by firms that finance their holding in the utility with debt at the parent company (known as double leveraging) or that own other, weaker business units. To achieve a rating differential from that of the consolidated group requires evidence, based on the specific regulatory circumstances, that the regulators will act to protect the utility's credit profile. *(See sidebar, page 46-47.)*

The analyst makes this determination case-by-case, since regulatory jurisdictions vary. Implications of regulation are different for companies in Wisconsin and those in Florida or those subject to the scrutiny of the Securities and Exchange Commission under the 1935 Public Utilities Act. Also, regulators might react differently depending on whether funds that would be withdrawn from the utility were destined to support an out-of-state affiliate, the parent company that needed to service its

own debt, or another in-state entity, such as a cellular telephone unit. Finally, regulators may be relied on to a greater extent to support 'BBB' credit quality; in most cases, there is little basis to think regulators would insist that a utility maintain an 'A' profile. Their mandate is to protect provision of services, which is not directly a function of the provider's financial health. In fact, if a utility has little debt, the overall cost of capital, and therefore the cost of service, can be higher.

There is a corollary that negatively affects the parent and weaker units whenever a utility subsidiary is rated on its stand-alone strength. If the regulated utility is indeed insulated from the other units in its group, its cash flow is less available to support them. To the extent, then, that a utility is rated higher than the consolidated group's credit quality, the parent and weaker units are correspondingly rated *lower* than the group rating level.

Foreign ownership

Parent/subsidiary considerations are somewhat different when a company is owned by a foreign parent. The foreign parent is not subject to the same bankruptcy code, so a bankruptcy of the parent would not, in and of itself, prompt a bankruptcy of the subsidiary. In most jurisdictions, insolvency is treated differently from the way it is treated in the U.S., and various legal and regulatory constraints and incentives need to be considered. Still, in all circumstances, it is important to evaluate the parent's credit quality. The foreign parent's creditworthiness is a crucial factor in the subsidiary's rating to the extent the parent might be willing and able either to infuse the subsidiary with cash or draw cash from it. A separate parent rating will be assigned (on a confidential basis) to facilitate this analysis.

Even when subsidiaries are rated higher than foreign parents, the gap usually does not exceed one full rating category. It is difficult to justify a larger gap, since that would entail a clear-cut demonstration that, even under a stress scenario, the parent's interest would be best served by keeping the subsidiary financially strong rather than using it as a source of cash.

In the opposite case of weak subsidiaries and strong foreign parents, the ratings gap tends to be larger than if both were domestic entities. Sovereign boundaries impede integration and make it easier for a foreign parent to distance itself in the event of problems at the subsidiary.

"Smoke-and-mirrors" subsidiaries

Some multibusiness enterprises controlled by a single investor or family are characterized by:

- Unusually complex organizational structures;
- Opportunistic buying and selling of operations, with little or no strategic justification;
- Cash or assets moved between units to achieve some advantage for the controlling party; and
- Aggressive use of financial leverage.

By their nature, these types of companies tend to be highly speculative credits, and it is inadvisable to base credit judgments on the profile of any specific unit at any particular point in time.

The approach to rating a unit of such an organization still begins with some assessment of the entire group. Some of the affiliated units may be private companies; nonetheless, at least some rough assessment must be developed. In general, no unit in the group is rated higher than the consolidated group would be rated, if such a rating were assigned. Neither indenture covenants nor nonconsolidation opinions can be relied on to support a higher rating for a particular subsidiary.

At the same time, there is no reason for all entities in a "smoke-and-mirrors" family to receive the identical rating. Any individual unit can be notched down as far as needed from the consolidated rating to reflect stand-alone weakness. This reflects the probability that a weak unit will be allowed to fail if the controlling party determines that no value can be salvaged from it. Complex structures are developed in order to maximize such flexibility for the controlling party.

Finance Subsidiaries' Rating Link to Parent

Finance units are unlike other subsidiaries from a criteria perspective. In turn, there are two types of finance subsidiaries—independent and captive—that are very distinct in terms of the analytical approach that Standard & Poor's employs.

Independent finance subsidiaries

Independent finance subsidiaries can receive ratings higher than those of the parent, due to the high degree of separation between these subsidiaries and the parent. A finance company's continuous need for capital at a competitive cost creates a powerful incentive to maintain its creditworthiness. Therefore, it can be argued that the parent would be better served, in a stress scenario, by divesting the still-healthy subsidiary than by weakening it or risking drawing it into bankruptcy. In addition, there may be evidence of the parent company's willingness to leave the subsidiary alone, including a history of reasonable dividend and management fee payouts to the parent and covenants that limit the nature and/or degree of financial transactions between the parent and its subsidiary.

Nonetheless, a finance company subsidiary rating still is linked to the credit quality of the company to which it belongs. If the finance company's credit fundamentals are stronger than those of the consolidated entity, one cannot rule out the risk that this strength could be siphoned off to support weaker affiliates or service the debt burden of the parent. In this case, the rating would be lower than its stand-alone assessment. Indeed, it is unlikely that an independent finance subsidiary would ever be rated more than one full rating category above the parent rating level. To the extent that part of the receivables portfolio were related to parent company sales, there would be an additional tie to the parent risk profile.

Conversely, if the consolidated entity's rating is higher than the subsidiary's, due to stronger creditworthiness of the other affiliates, the analysis would attribute some of that strength to the finance company, making possible a higher rating than it could receive on its own. Assessing the degree of credit support usually includes subjective factors, such as management intentions and shared names of the parent and subsidiary. In the case of a subsidiary that has been formed or acquired only recently, a demonstrable record of support is lacking and questions might remain concerning the long-term strategy for the subsidiary. Some formal support is likely to be required. The most frequently used support agreement commits the parent to maintain some minimum level of net worth at its subsidiary. Frequently, the parent will also agree to assume problem assets and to maintain minimum fixed-charge coverage.

Captive finance companies

Debt of a captive finance company—that is, a finance subsidiary with over 70% of its portfolio consisting of receivables generated by sales of the parent's goods or services—is always assigned the same rating as the parent. Captive finance companies and their operating company parents are viewed as a single business enterprise. The finance company is a marketing tool of the parent, facilitating the sale of goods or services by providing financing to the dealer organization (wholesale financing) and/or the final customer (retail financing).

The business link between a parent and captive is a key consideration supporting the subsidiary's rating at the parent company level, apart from any support arrangements between the two. The parent's investment in the captive (in the form of equity and advances) may also provide economic incentive to maintain the captive's financial health.

Conversely, a captive that appears strong on a stand-alone basis is not rated higher than its parent. Due to the operational tie-in, the parent does not have the same options for divesting a "healthy" captive as in the case of an

independent finance subsidiary. Eventually, then, the captive's bankruptcy risk is closely linked to that of its parent. This viewpoint is based in part on case history. A parent company bankruptcy filing will usually result in a filing by its captive, either simultaneously or soon thereafter. Cross-default provisions are often the key link. Captive finance company debtholders may be better off than the parent debtholders, in a liquidation or reorganization, but bankruptcy would impair the timeliness of payments.

Methodology

While the captive and parent ratings are equalized, the two are not analyzed on a consolidated basis. Rather, the analysis segregates financing activities from manufacturing activities and analyzes each separately, reflecting the different type of assets they possess. No matter how a firm accounts for its financing activity in its financial statements, the analysis creates a pro forma captive to apply finance company analytical techniques to the captive finance activity and correspondingly appropriate analytical techniques to the parent company. Finance assets and related debt liabilities are included in the pro forma finance company; all other assets and liabilities are included with the parent company. Similarly, only finance-related revenues and expenses are included in the finance company.

Debt and equity of parent and captive are apportioned and reapportioned so that both entities will reflect similar credit quality. A tentative rating for the two companies is assumed as a starting point. Next, a leverage factor is determined that is appropriate for the captive at the tentative rating level, based on the quality of the captive's wholesale and retail receivables. With the appropriate leverage determined, the analyst calculates the amount of equity required to support credit quality at the assumed level, and the proper amounts of debt or equity can be transferred either to parent from captive or to captive from parent. No new debt or equity is created.

Next, the analyst determines levels of revenues and expenses reflective of the captive's receivables and debt. The levels will be in line with appropriate profitability for the assumed rating. The higher the tentative rating, the greater the level of imputed fixed-charge coverage and return on assets. For purposes of this analysis, any earnings support payments are transferred back to the parent.

The analyst eliminates the parent's investment in the captive to avoid double leveraging. The captive is an integral part of the enterprise, not an investment to be sold. While its assets can be more highly leveraged than those of the parent, the methodology takes that into account when determining an amount of equity that is apportioned to support its debt.

Following the segregation of the finance activity, the operating company profile may not be consistent with the tentative rating. The methodology is repeated, using parameters of a higher or lower rating level. Several iterations may be needed to determine a rating level that reflects the credit quality of both operating and financing aspects of the firm.

Leverage guidelines

The receivables portfolio of the pro forma captive is analyzed as for any finance company. Both quantitative and qualitative assessments are made. The leverage guidelines matrix *(see table below)* is used as a starting point when assessing appropriate leverageability of each type of asset being financed. Portfolios that are deemed of average quality include consumer credit card, commercial working capital, and agricultural wholesale. Auto retail paper is of higher quality, all other things being equal, while portfolios of commercial real estate and oil credit card assets are generally less leverageable. Adjustments are made to reflect the performance of a given subportfolio. In addition, factors such as underwriting, charge-off policy, and portfolio concentration or diversity are considered.

Debt leverage guidelines

Total debt/equity + loss reserves (%)

Portfolio quality	**—Rating—**			
	'AAA'	**'AA'**	**'A'**	**'BBB'**
Well above average	340	570	730	890
Above average	285	505	655	805
Average	255	465	605	745
Below average	240	445	580	715
Well below average	195	385	505	625

Securitization of finance receivables

An increasingly common funding mechanism for finance companies is the sale or securitization of finance receivables through structured transactions. Where companies sell

finance receivables, Standard & Poor's analytical approach in assessing leverage is not uniformly to add back the sold receivables outstanding and a like amount of debt (in contrast to the case of the sale of regenerating trade receivables of operating companies, as explained on page 25). Rather, Standard & Poor's focuses on the actual economic risks that remain with the company relative to the sold receivables.

Depending on the type of transaction, the residual risks take the form of capitalized excess servicing, spread accounts, deposits due from trusts, and retained subordinated interests. If a company retains the subordinated piece of a securitization, or retains a level of recourse close to the expected level of loss, essentially all of the economic risk remains with the seller. There is no rating benefit that is deserved because there is no significant transfer of risk—and there is no point in analyzing such a company differently from the way it would be analyzed if it had kept the receivables on its balance sheet.

Another serious concern is "moral recourse," the reality that companies feel they must bail out a troubled securitization although there is no legal requirement for them to do so. Companies that depend on securitization as a funding source may be especially prone to taking such actions. In many situations, this expectation undermines the notion of securitization as a risk-transfer mechanism.

Retiree Obligations: Pension and Medical Liabilities

Pensions

Defined benefit pension plans pose risks to their corporate sponsors since insufficient funding, deterioration in the value of plan assets, or the granting of improved benefits can give rise to significant unfunded pension liabilities. (Defined contribution plans are generally not problematic since they must be funded on a current basis and the corporate sponsor does not bear investment performance risk.) These unfunded pension liabilities are viewed by Standard & Poor's as debt equivalents—with two important qualifications: there is uncertainty with respect to estimating the ultimate size of the liability and the company has considerable discretion over what has to be paid in a given year.

Pension analysis varies by country. Government's role in providing for pensioners can complicate the situation. In some countries the flexibility for companies in distress to shift the burden to government—or to alter the obligation itself—is greater than in other countries. Moreover, pension disclosure varies, making it extremely difficult to gauge a company's pension obligations accurately in many countries.

Given the difficulties with estimation of the liability—especially when interest rates fluctuate dramatically—the object of the exercise is not to quantify precisely an amount to represent the pension obligation. Sensitivity analysis is a better way to try to capture a firm's exposure than to focus on a single figure.

The degree of discretion over payments is indeed critical. While the cash requirements for U.S. corporate sponsors are significantly shorter term than the underlying disbursals to retirees, ERISA usually affords considerable flexibility in the year-to-year timing of contributions. Near-term minimum funding requirements are often sufficiently low that issuers can sharply curtail contributions temporarily, if this is necessary to maintain liquidity. In those instances that funding is required in the near term to comply with ERISA guidelines, the amounts involved are viewed in a different, more severe, light.

Key assumptions

The first step in analyzing pension obligations is to examine key assumptions used to quantify pension obligations and plan assets. Standard & Poor's scrutinizes the discount rate and wage appreciation assumptions and the gap between them. The investment performance assumption also is a key element of expense estimation. These three assumptions are required to be disclosed under U.S. accounting principles. Choice of actuarial assumptions regarding mortality, dependency status, and turnover can also lead to more or less conservative estimations. These assumptions are not disclosed directly in financial reporting; however, large unrecognized losses relating to actuarial assumptions are an indication that further investigation is warranted.

Standard & Poor's approach in assessing assumptions is to focus on differences among companies. Assumptions are considered in light of an issuer's individual characteristics, but also are compared to those of industry peers and general industrial norms.

Quantitative adjustments may be made to normalize assumptions. For example, one rough rule of thumb is that for each percentage point increase/decrease in the discount rate, the liability decreases/increases by 10%-15%. At the very least, any liberal or conservative bias is taken into account when looking at the reported plan obligations and assets.

Financial statement adjustments

The next step, then, is to compare the current value of a firm's plan assets to the projected benefit obligation (PBO)—or to the various estimates of the PBO. A firm's plan assets as a percent of PBO is a simple, basic measure of plan solvency. Standard & Poor's uses PBO instead of the accumulated benefit obligation

(ABO) to reflect pension obligations because PBO better captures the level of benefits that will ultimately be paid, assuming the firm is a going concern and will continue to grant compensation increases. ABO does not include such a compensation growth factor.

Where companies have "flat-benefit" pension plans (that is, the pension benefit is a fixed dollar amount per year of service, as opposed to "pay-related" plans, where the benefit for each retiree is derived from a formula tied to compensation received over a specified period) even the PBO is likely an understatement of the true economic liability. This is due to the fact that for these plans, the PBO does not take account of future pension benefit improvements, unless such improvements are provided for in the current labor agreement. In such cases, the analyst seeks to estimate the additional economic liability, based on the issuer's past pattern of granting benefit improvements and management's current strategies with respect to compensation.

When PBO exceeds plan assets, the difference is added back to the balance sheet as a debt-like component. Equity is revised downward, net of any tax considerations arising from recognition of the pension liabilities. Conversely, when plan assets exceed liabilities, the difference is added back to the balance sheet as an asset, and equity is boosted likewise. After financial statements are adjusted, financial ratios are recalculated. Of course, before incorporating these adjustments into the financial statements, any pension-related liability, intangible, or prepaid asset already on the balance sheet is reversed.

(In any event, the analyst would reverse the intangible asset created to recognize an unfunded liability when ABO exceeds plan assets. This asset resulted from adoption of FASB 87 accounting principles or from plan amendments that sweeten existing benefits. FASB argues that these enhancements motivate increased future productivity, and this future benefit should be recognized as an intangible asset to be amortized over the employee's remaining service life. In reality, though, plan amendments often are only a defensive measure to stay competitive with industry norms, or to prevent a labor strike. The future benefit is at best nebulous and more likely nonexistent. Even if a future benefit were identifiable, it would only last until the next labor negotiation. Thus, amortizing over any longer duration seems unjustifiable. Moreover, if unfunded plans actually did create intangible benefits, fully funded amended plans must foster even greater intangible benefits! It seems inconsistent to recognize an intangible asset when plans are underfunded, and not to recognize an intangible asset for fully funded plans.)

A large concern may have several pension plans serving various constituencies. Should a specific plan's ABO exceed plan assets, FASB requires recognition of a liability regardless of how overfunded the corporation's other plans are. However, Standard & Poor's adjustment nets a firm's overfunded plans against its underfunded plans when determining the pension liability or asset. In theory, the corporate sponsor of an overfunded plan has the ability to avail itself of the surplus by terminating the plan, satisfying benefit obligations through the purchase of annuity contracts, and retaining any plan assets remaining. In practice, such reversions are now prohibitively expensive given their treatment under the federal tax code. Nonetheless, over time, reduced cash outflows for overfunded plans will be counterbalanced by increases to future cash outflows for underfunded plans. For highly speculative credits that may not have time to "shift" resources to underfunded plans, the analysis will differ.

Beyond the determination of the plans' current level of funding, the analyst must consider the likelihood of significant changes in the liability or assets in the future. The potential for workforce downsizing, for example, is a major issue in the current environment. The potential for changes in benefits is largely a function of the labor climate and the level of benefits relative to those of direct competitors and other regional employers. Similarly, to take a prospective view of plan assets requires the sponsor's input regarding its strategies, asset allocation guidelines, and concentration limits (including its inclination to contribute its own equity and debt securities up to the regulatory limits).

Retiree medical liabilities

Since 1993, U.S. companies have been required to implement a new FASB standard: "Employers' Accounting for Post-retirement Benefits Other than Pensions" (FAS 106). FAS 106 requires companies to treat retiree medical, life insurance, and other nonpension benefits (commonly referred to as OPEBs) as a form of deferred compensation. The cost of these benefits is accrued over the period that employees render the services necessary to earn them, instead of the prior prevalent practice of expensing these costs as incurred during retirement (i.e., the pay-as-you-go or cash method).

Under FAS 106, the actuarial present value of all post-retirement benefits attributed to employee service rendered to a particular date is termed the "accumulated postretirement benefit obligation" (APBO). The unfunded, and previously unrecognized, APBO as of the date a company adopts FAS 106 is referred to as the "transition obligation." Under FAS 106, companies had the choice either to take an immediate charge to income and book the transition obligation on the balance sheet, or to delay recognition by amortizing the transition obligation over a period of up to 20 years.

Most companies opted for immediate recognition. OPEB-related expense is higher than under the previous pay-as-you-go accounting treatment, since all companies have to recognize the current cost of benefits attributable to current service, as well as interest expense on the obligation.

Financial statement analysis

Standard & Poor's regards unfunded OPEBs, similar to pension liabilities, as debt-like obligations. However, OPEBs are not viewed quite as negatively as straight debt, since amounts to be paid in future years are less clearcut, and are subject to change. Nonetheless, Standard & Poor's believes that, for analytic purposes, the entire unfunded APBO should be reflected in the balance sheet as a liability—regardless of whether a company opted for immediate or delayed recognition under FAS 106.

To have one basis for analysis and allow comparisons between companies, Standard & Poor's makes balance-sheet adjustments so that the unfunded APBO is fully recognized. Initially, this involved restating the balance sheets of companies that opted for delayed recognition to put them on an immediate recognition basis. Subsequently, even companies that opted for immediate recognition face upward adjustments where the total unfunded APBO comes to exceed the recognized liability. This occurs, for example, as a result of benefit enhancements or changes in assumptions, which FAS 106 requires to be recognized over an extended period.

Likewise, in assessing profitability, Standard & Poor's believes it is appropriate to consider as an operating expense the accrued cost of OPEBs earned during a particular reporting period, rather than the cash outlays for previously earned benefits. Under FAS 106, the accrued cost is termed the "net periodic post retirement cost." Income statement adjustments are consistent with the balance sheet approach outlined above: that is, those portions of the expense accrual that relate to liabilities amortization are eliminated from the total expense accrual.

Reported OPEB liability and expense amounts are highly sensitive to differences in the underlying assumptions. FAS 106 requires the same types of assumptions about employee turnover, retirement age, mortality, dependency status, and discount rates that are used in pension accounting. However, FAS 106 also entails the use of additional and speculative assumptions about changes in health-care costs, taking into account such considerations as changes in health-care inflation, health-care utilization or delivery patterns, medical technology, and the status of plan participants. It is important to assess the underlying assumptions.

In cases where a company's retiree medical liability burden is material, Standard & Poor's does not rely on any single figure as a definitive representation of the OPEB obligation. Rather, sensitivity analysis may consider several alternative estimates and financial ratios based on each.

In assessing the significance of OPEBs and other debt-like obligations to a company, the ratio of total liabilities to net worth becomes a more significant ratio.

Beyond the balance sheet

There are more important aspects to the OPEB issue than balance-sheet analysis, though. The level of cash outlays has the most immediate impact on a company's financial health. Given the trend of increases in spending for these benefits, Standard & Poor's

focuses on prospective cash outlays. Information about a company's workforce, the makeup of its retiree population, and its insurance plan characteristics helps the analyst gain a better understanding of the likely direction of future cash outlays. The analyst will also pay close attention to management's cost-cutting strategies.

Equally significant is the ability to pass along the additional expense, which is a function of a firm's competitive situation.

Most problematic are those situations where peers face different retiree costs. Firms that have been relatively generous, have an older workforce, or a relatively large number of retirees cannot raise prices more than competitors. Likewise, competitors in different countries often are not saddled with similar costs, due to differences in health-care systems and benefits in their respective countries. Any company that is more burdened with such retiree costs than its competitors is penalized in the assessment of its overall cost position. The implications for its competitiveness are no less than if it had older, less efficient manufacturing facilities. Such competitive advantage or disadvantage is an important rating consideration.

Funding

Apart from limiting costs, some companies may seek to minimize the impact of FAS 106 on financial reporting by funding their OPEB obligations. Under FAS 106, plan assets and related investment earnings reduce the liability and expense, respectively, for reporting purposes. The fund must be segregated, usually in a trust, like a pension fund. However, existing tax-advantaged vehicles for funding OPEB plans—including 401(h) plans and voluntary employees' beneficiary associations—are limited in their applicability.

Funding offsets the liability for analytic purposes as well—just as with pensions. However, if a company incurs debt to fund the benefits, it might be better off not funding. The company gives up flexibility in the course of replacing one liability with the other, since debt is a more onerous liability than unfunded benefits—and plan assets are not easily reverted. Moreover, efforts to rein in benefits can be undermined by the existence of funded plans.

In contrast to pension benefits, OPEBs need not be funded as a matter of law or business practice. This is a critical distinction that affects how Standard & Poor's views the trade-off of funding vs. nonfunding and also how it views the obligations themselves in the hierarchy of debt and debt-like liabilities.