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STANDARD
&POOR'S

Corporate Ratings Criteria

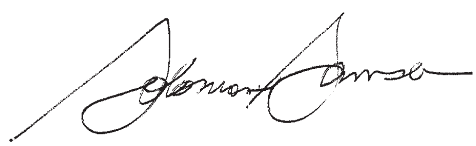
2006

For the most complete and up-to-date ratings criteria, please visit
Standard & Poor's Web site at www.corporatecriteria.standardandpoors.com.

To Our Clients

Standard & Poor's Ratings Services' 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 our rating product has the most value if users appreciate all that has gone into producing the letter symbols.

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



Solomon B. Samson
Chief Rating Officer, Corporate Ratings

Analytical Contacts

Solomon B. Samson
New York (1) 212-438-7653

Scott Sprinzen
New York (1) 212-438-7812

Emmanuel Dubois-Pelerin
Paris (33) 1-4420-6673

Kenneth C. Pfeil
New York (1) 212-438-7889

The McGraw·Hill Companies

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Standard & Poor's Role in the Financial Markets

Standard & Poor's Ratings Services traces its history back to 1860. It currently 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 is now a business unit of McGraw-Hill. In matters of credit analysis and ratings, Standard & Poor's Credit Market Services operates entirely independently of McGraw-Hill. Investment Services and Corporate Value Consulting are the other units of Standard & Poor's. 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 $13 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 21 world financial centers.

Despite its tremendous growth over the years, 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 company, bank, or similar organization.

Standard & Poor's recognition as a rating agency ultimately depends on investors' willingness to accept its judgment. We believe it is important that all users of our ratings understand how we arrive at those ratings, and regularly publish ratings research and detailed reports on ratings criteria and methodology.

Credit Ratings

Standard & Poor's began rating the debt of corporate and government issuers decades ago. Our 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); asset-backed securities (1985); and secured loan recovery (2003).

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. 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. 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, we have developed credit ratings that may apply to an issuer's general creditworthiness or to a specific financial obligation. Standard & Poor's historically has 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. There is an additional scale exclusively for medium-term municipal notes.)

Credit ratings are based on information furnished by the obligors or obtained by us from other sources we consider 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.

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 an issuer's credit quality 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, we revised our criteria to define external rather than 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. Because rating coverage now has expanded to a growing range of emerging-market countries, the analysis of political, economic, and monetary risk factors are even more important.

Long-term Credit 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; and
- Preferred stock and deferrable payment debt.

Recovery Ratings (1-5)

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

Short-Term Ratings ('A-1+', 'A-1'...'D'):

- Commercial paper programs;
- Put bonds/demand bonds; and
- Certificate of deposit programs.

Issuer Credit Ratings

Long-Term Ratings and Short-Term Ratings

- Corporate credit ratings;
- Counterparty ratings; and
- Certificate of deposit programs.

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; and
- National-scale credit ratings.

Issuer Credit Ratings

In response to a need for rating evaluations on a company when no public debt is outstanding, Standard & Poor's provides an issuer 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, because 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 to a specific obligation.

Counterparty ratings, corporate credit ratings, and sovereign credit ratings are all forms of issuer credit ratings.

Because a corporate credit rating provides an overall assessment of a company's creditworthiness, 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 that salient qualitative and quantitative issues are considered. For example, with industrial companies, the qualitative categories are oriented to business analysis, such as the company'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 institution's ability 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 conducting the rating process. Members of the analytical team meet with the organization's management 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 many rating decisions.

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 subsequently is 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. In the U.S., Standard & Poor's assigns and publishes its ratings irrespective of issuer request, if the financing is a public deal. In the case of private transactions, the company has publication rights. (Most 144A transactions are viewed as public deals.) In most markets outside the U.S., ratings are assigned only on request, so 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 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 ratings are monitored, including continual review of new financial or economic information. Our surveillance is ongoing, which means staying abreast of all current developments. Moreover, it is routine to schedule annual review meetings with management, even in the absence of the issuance of new obligations. These meetings enable analysts to 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 reassess a rating. When this occurs, the analyst undertakes a review, which may lead to a CreditWatch listing, if the likelihood of change is sufficiently high. This is followed by a comprehensive analysis—including, if warranted, a meeting with management—and a presentation to a 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 common 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. We 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 do 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 our continued performance as an independent rating agency.

Standard & Poor's guidance also is sought on credit quality issues that might affect the rating opinion. For example, companies solicit our 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 a 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 our view of what was prudent.

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 may be worthwhile as part of an overall financial strategy. Beyond that, we do 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.

Ratings Definitions

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.

Commercial paper ratings pertain to the program established to sell these notes. There is no review of individual notes. Nonetheless, such program ratings characterize the notes as "rated paper."

Short-term ratings also are 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 (MTNs) are assigned long-term ratings. A rating is assigned to the MTN program and, subsequently, to individual notes, as they are identified.

Issue and issuer credit ratings use the identical symbols (shown below), and the definitions closely correspond to each other. Issuer ratings and short-term issue ratings focus entirely on the default risk of the entity. Long-term issue ratings also take into account risks pertaining to loss-given-default. However, both the issuer and issue rating definitions are expressed in terms of default risk, which refers to the capacity and willingness of the obligor to meet its financial commitments on time, in accordance with the terms of the obligation. As noted, 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.

Therefore, in the cases of junior debt and secured debt, the rating may not conform exactly with the category definition. Junior obligations typically are rated lower than the issuer credit rating (i.e., default risk) 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 good prospects for ultimate recovery (such as secured debt) often is rated higher than the issuer credit rating.

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 conditions 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 likely will have some quality and protective characteristics, these may be outweighed by large uncertainties or major exposure 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 likely will impair the obligor's capacity or willingness to meet its financial commitment on the obligation.

'CCC': An obligation rated 'CCC' currently is vulnerable to nonpayment and is dependent on 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' currently is highly vulnerable to nonpayment.

'C': The 'C' rating may be used when 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 when a default actually has occurred—not when 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 we believe 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 we expect 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 distressed 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 clearly is less than par; or
- In the case of ratings on preferred stock or deferrable payment securities, upon nonpayment of the dividend, or deferral of the interest payment.

With respect to issuer credit ratings (i.e., 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'. Ordinarily, an issuer's distress leads to general default, and the rating is 'D'. 'SD' (selective default) is assigned when an issuer can be expected to default selectively, i.e., 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 distressed or coercive exchange with respect to one or some issues, while intending to honor its obligations regarding 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 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: In 1994, Standard & Poor's initiated a symbol to be added to an issue credit rating when the instrument could have significant non-credit risk. The symbol "r" was added to such instruments as mortgage interest-only strips, inverse floaters, and instruments that pay principal at maturity based on a non-fixed source, such as a currency or stock index. The symbol was intended to alert investors to non-credit risks and emphasizes that an issue credit rating addressed only the credit quality of the obligation. Use of the r was discontinued in 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.

Standard & Poor's is currently experimenting with an expanded short-term rating scale for the speculative-grade part of the rating spectrum. The 'B' short-term rating category has been divided into 'B-1', 'B-2', and 'B-3'. A full explanation of this rating product extension can be found in the last chapter of this book: Short-Term Speculative Grade Rating Criteria.

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

'D': The same as the definition of 'D' under "Long-term credit ratings."

Investment and Speculative Grades

The term "investment grade" originally was 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 use throughout the investment community. Issues rated in the four highest categories—'AAA', 'AA', 'A', and '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 an irreverent expression for this category of more risky debt. Neither term indicates which securities we deem worthy of investment, because 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 & 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.

Currency

Standard & Poor's devised two types or ratings in order to comment on the risks associated with payment in currencies other than the entity's home country. These ratings types are defined as follows:

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 national 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 meet 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.

National Scale Ratings

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 rating 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 Listings 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 we also recognize 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, whenever possible—the range of alternative ratings that could result is shown.

An issuer cannot automatically appeal a CreditWatch listing, but analysts are sensitive to issuer concerns and the fairness of the process.

Rating changes also can occur without the issue appearing on CreditWatch beforehand. In fact, if all necessary information is available, ratings should immediately be changed to reflect the changed circumstances; there should be no delay merely to signal via a CreditWatch placement that a ratings change is to occur.

A rating outlook is assigned to all long-term debt issuers and assesses the potential for a rating change. Outlooks have a longer time frame than CreditWatch listings—typically, two years—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 likely will not be changed, but it should not be confused with expected stability of the company's financial performance.

The 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., we assign and publish ratings for all public corporate debt issues over $100 million—with or without a request from the issuer. Public transactions are defined as those registered with the SEC, those with future registration rights, and other 144A deals that have broad distribution.)

In all instances, Standard & Poor's 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. Our analysts generally 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 (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. We neither encourage nor discourage their use: it is entirely up to management whether advisors assist in the preparation for meetings, and whether they attend the meetings.

Scheduling

Management meetings usually are scheduled at least several weeks in advance, to assure mutual availability of the appropriate participants and to allow adequate preparation time for our credit 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, we 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 credit 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 management in appreciating the analytic perspective. However, Standard & Poor's prefers not to provide detailed, written lists of questions, because 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 also may 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, our credit 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 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 we typically expect 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 our assessment of the company's prospects. However, management's financial projections are a valuable tool in the rating process, because 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. Our 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, we welcome the company's questions regarding our 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 methodology section of Corporate Ratings Criteria. 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 our 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., within a day or two. The committee reconvenes to consider the new information. After notifying the company, the rating is disseminated via 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 those who sat on a rating committee are kept confidential, and 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, press releases, and bank documents, including compliance certificates.

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. We also encourage companies to discuss hypothetically—again, in strict confidence—transactions that perhaps are only being contemplated (e.g., acquisitions, new financings), and we endeavor to provide frank feedback about the potential ratings implications of such transactions.

In any event, management meetings routinely are 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 critical facilities; and achieve a better understanding of the company by spending more time reviewing the business units in depth. While we actively encourage meetings on company premises, time and scheduling constraints on both sides dictate that arrangements for these meetings be made some time in advance.

Because the staff is organized by specialty, credit analysts typically meet each year with most major companies in their assigned area to discuss the industry outlook, business strategy, and financial forecasts and policies. This way, competitors' forecasts of market demand can be compared with one another, and we can assess implications of competitors' strategies for the entire industry. The credit 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 and 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 credit 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 our internal schedule for reviews. ■

Rating Methodology: Industrials & Utilities

Standard & Poor's uses a format that divides the analytical task, so that all salient issues are considered. The framework we use looks first at fundamental business analysis; then comes financial analysis.

Credit ratings often are identified with financial analysis, and especially ratios. But it is critical to realize that ratings analysis starts with the assessment of the business and competitive profile of the company. Two companies with identical financial metrics are rated very differently, to the extent that their business challenges and prospects differ.

Standard & Poor's developed the matrices shown below to make explicit the rating outcomes that are typical for various business risk/financial risk combinations.

Business Risk/ Financial Risk Matrix

Table 1 illustrates the relationship of business and financial risk profiles to the issuer credit rating. Table 2 shows the financial risk ratios for industrial companies.

How can one use the matrices to better understand rating conclusions? Here is one illustration:

Company ABC is deemed to have a 'satisfactory' business risk profile. (It is typical, in that respect, of investment-grade industrial corporates—what we previously labeled 'average'.)

If ABC's financial risk were 'intermediate', the expected rating assignment should be 'BBB'. The table of indicative ratios can be used as a simple starting point. ABC's ratios of cash flow to debt of 35% and debt leverage of 40% are characteristic of 'intermediate' financial risk. In reality, of course, the assessment of financial risk is not so simplistic! It encompasses financial policies and risk tolerance; several perspectives on cash flow adequacy, including free cash flow and the degree of flexibility regarding capital expenditures; and various measures of liquidity, including coverage of short-term maturities.

Company ABC can aspire to being upgraded to the 'A' category, by reducing its debt burden to the point that cash flow to debt is over 60% and debt leverage is only 25%. Conversely, ABC may choose to become more financially aggressive—say, to reward shareholders by borrowing to repurchase shares. It can expect to be rated in the 'BB' category if its cash flow to debt ratio is 20% and debt leverage remains below 55%, and there is a commitment to keeping finances at these levels.

The rating outcomes indicated are not meant to be precise. There can always be small positives and negatives that would lead to a notch higher or lower than the typical outcomes. Moreover, there will always be exceptions—cases that do not fit neatly into this analytical framework: For example, liquidity concerns or litigation could pose overarching risks.

The matrix does not address the lowest rungs of the credit spectrum, i.e., the 'CCC' category and below. Those ratings always reflect some impending crisis or extraordinary vulnerability. The balanced approach that underlies the matrix framework just does not work well for such situations.

Standard & Poor's strives for transparency around the rating process. It should be apparent, however, that the ratings process cannot be entirely reduced to a cookbook approach: Ratings incorporate many subjective judgments, and remain as much an art as a science.

Corporate credit analysis factors.

There are several categories underlying both the business and financial risk assessments. These can vary by industry, in order to focus on the most relevant factors.

Business risk

- Country risk
- Industry characteristics
- Company position
- Product portfolio/Marketing
- Technology
- Cost efficiency
- Strategic and operational management competence
- Profitability/Peer group comparisons

Financial risk

- Accounting
- Corporate governance/Risk tolerance/Financial policies
- Cash-flow adequacy
- Capital Structure/Asset Protection
- Liquidity/Short-term factors

Industry risk

Each rating analysis begins with an assessment of the company's environment. The degree of operating risk facing a participant in a given business depends on 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"*). It is critical, for example, to determine vulnerability to technological change, labor unrest, or regulatory interference. Industries that have long lead times or that require fixed plant of a specialized nature face heightened risk. The implications of increasing competition obviously are 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 can be a key factor in determining the rating to which any participant in the industry can aspire. It would be hard to imagine assigning 'AA' and 'AAA' debt 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, home-builders, 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

Table 1—**Business Risk/Financial Risk**

	Financial Risk Profile				
Business Risk Profile	**Minimal**	**Modest**	**Intermediate**	**Aggressive**	**Highly Leveraged**
Excellent	AAA	AA	A	BBB	BB
Strong	AA	A	A-	BBB-	BB-
Satisfactory	A	BBB+	BBB	BB+	B+
Weak	BBB	BBB-	BB+	BB-	B
Vulnerable	BB	B+	B+	B	B-

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 companies, and publishing and broadcasting. 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.

Again, the industry risk assessment sets the stage for analyzing specific company risk factors and establishing the priority of these factors in the overall evaluation. For example, if technology is a critical competitive factor, R&D prowess is stressed. If the industry produces a commodity, cost of production 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, of course, crucially affected 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.

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 normally is regarded as an area of vulnerability. Similarly, reliance on one product creates risk, even if the product is highly successful. For example, a pharmaceutical company has reaped a financial bonanza from just two medications. The company'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.

A 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 company, because its success was still determined substantially by one line of business.

Limited credit is given if the various lines of business react similarly to economic cycles. For example, diversification from nickel into copper cannot be expected to stabilize per-

Table 2—**Financial Risk Indicative Ratios***

	Cash flow (Funds from operations/Debt) (%)	Debt leverage (Total debt/Capital) (%)
Minimal	Over 60	Below 25
Modest	45-60	25-35
Intermediate	30-45	35-45
Aggressive	15-30	45-55
Highly leveraged	Below 15	Over 55

* Fully adjusted, historically demonstrated, and expected to consistently continue

formance; similar risk factors are associated with both metals.

Most critical is a company's ability to manage diverse operations. The 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 companies rushed to diversify into financial services, only to find themselves saddled with unfamiliar businesses they had difficulty managing.

Some companies 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 turns out to be significantly correlated to ratings. The reason: size often provides a measure of diversification, and/or affects competitive position.

Small companies also can possess the competitive benefits of a dominant market position, although that is not common. 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.

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 comparably sized participants, none may have a particular advantage or disadvantage. Conversely, if an industry is highly fragmented, even the large companies may lack pricing leadership potential. The textile industry is an example.

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 companies. 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 companies. Adverse developments that would simply be a setback for companies with greater resources could spell the end for companies with limited access to funds.

There is a controversial notion that small, growth-oriented companies represent a better credit risk than older, declining companies. While this is intuitively appealing to some, it ignores some important considerations. Large companies 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 companies may be quite extensive, creating a reluctance to abandon them. Moreover, such companies often have accumulated a lot of peripheral assets that can be sold. In contrast, the promise of small companies 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 often is subject to poor execution, even if the idea is well conceived. There also is the risk of overambition. Moreover, some companies 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 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 companies especially have been 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 business-risk 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 are 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 may reflect skepticism until management has established credibility. Credibility can become a critical issue when a company is faced with stress or restructuring, and the analyst must decide whether to rely on management to carry out plans for restoring creditworthiness.

Other organizational/corporate culture considerations

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

- The company has a highly aggressive business model, e.g., growing through large acquisitions or expansion into unproven markets;
- The company has made frequent and significant changes to its strategy;
- The company has a history of retrenchment and restructuring;
- There is significant organizational reliance on an individual, especially one who may be nearing retirement;
- The transition from entrepreneurial or family-bound to professional management has yet to be accomplished;
- Management compensation is excessive or poorly aligned with the interests of stakeholders;
- There is excessive management turnover;
- The company is involved in legal, regulatory, or tax disputes to a significantly greater extent than its peers;
- The company has an excessively complex legal structure, perhaps employing intricate off-balance-sheet structures;
- The relationship between organizational structure and management strategy is unclear;
- Shareholders impose constraints on management prerogatives;
- The finance function and finance considerations do not receive high organizational recognition;
- The company is particularly aggressive in the application of accounting standards, or demonstrates a lack of opaqueness in its financial reporting (*see also "Accounting Characteristics," below*), and;
- Management's financial policy is exceptionally aggressive, as evidenced by heavy debt usage or a history of aggressive actions to directly reward shareholders (*see also "Financial Policy," below*).

(*See also "The Evolving Role of Corporate Governance in Credit Rating Analysis."*)

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. Profitability benchmarks vary greatly by industry, but broad measures of financial risk are correlated to the company's level of business risk (which incorporates both the industry and position within the industry).

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.

Accounting characteristics and information risk

Financial statements (and related disclosures) serve as our primary source of information regarding the financial condition and financial performance of industrial or utility companies. The analysis of financial statements begins with a review of accounting characteristics. The purpose is to determine whether ratios and statistics derived from the statements can be used appropriately to measure a company's performance and position relative to both its direct peer group and the larger universe of corporates. The rating process is, in part, one of comparisons, so it is important to have a common frame of reference.

The starting point of accounting quality analysis is an understanding of different national and international accounting frameworks, as these vary widely. Recent moves to adopt International Financial Reporting Standards (IFRS) in many countries—including Australia, Canada, and across the European Union—as well as an ongoing effort to effect convergence between U.S. GAAP and IFRS, ultimately could enhance comparability among companies. However, this ought not be seen as a panacea. Within IFRS, just as within the separate national accounting systems, companies are called upon to chose among numerous alternative methods—for example, cost as opposed to fair-value methods—and the resulting differences can have a significant effect on comparability among peers. In addition, even in applying the same methods within the same accounting frameworks, companies show varying degrees of aggressiveness in the underlying estimates and judgments they employ. Moreover, the carrying value of assets can be greatly influenced by the historical development of a company—for example, whether it has grown primarily through internal development or through acquisitions, or whether it previously underwent a leveraged buyout or bankruptcy reorganization—and this also affects many of the quantitative measures employed in financial analysis.

Some of the accounting issues to be reviewed include:

- Consolidation basis. The accounting approach to consolidation may differ from how we define the economic entity for analytical purposes.
- Revenue and expense recognition. For example, percentage of completion compared with completed contract in the construction industry;
- Cash and investments. For example, are investments valued at cost or market?
- Receivables—trade and finance. For example, how conservative are loss provisions?
- Inventory valuation methods. For example, FIFO or LIFO;
- Fixed assets—including depreciation methods and asset lives;
- Intangible assets, including treatment of goodwill;
- Postretirement benefits obligations (*see discussion in the "Criteria Topics" section*);
- Other liabilities and contingent obligations, recognized on the balance sheet and otherwise, such as operating leases, environmental liabilities, asset retirement obligations, guarantees, litigation;
- Derivatives and hedges;
- Foreign currency;
- Inflation accounting;
- Cash-flow matters. For example, to what extent are R&D and interest costs expensed rather than capitalized? To what extent is operating cash flow affected by nonrecurring items?
- Segment reporting. How are segments defined, and how are transfer prices for transactions between segments determined?

To the extent possible, analytical adjustments are made to better portray reality and to level the differences among companies. Although it is rarely possible to completely recast a company's financial statements, it is important to at least have some notion of the extent to which different financial measures are overstated or understated. Apart from its importance to the quantitative aspects of the analysis, conclusions regarding accounting characteristics and financial transparency can also influence qualitative aspects of the analysis, such as the assessment of management, including financial policy and internal information systems.

As part of its surveillance process, Standard & Poor's closely monitors the potential impact of pending changes in accounting standards. Such changes do not have any direct impact on credit quality; however, accounting changes may reveal new information about a company—information that then needs to be factored into our understanding of the company. For example, the ratings for a few U.S. companies were lowered following the implementation of new accounting for retiree medical liabilities in the early 1990s, because little information previously was available about these obligations. It also is possible accounting changes could trigger financial covenant violations or regulatory or tax consequences, and could even influence changes in business behavior, such as a change in hedging policy.

Standard & Poor's typically relies on audited financial statements, and does not view its role as "auditing the auditors." However, a rating can sometimes be assigned even in the absence of audited statements. This especially is the case when a new company is formed from a division of another company that did produce audited financials. In other cases, there may be unaudited physical data—such as oil-production data—that corroborates company results. In any event, to the extent "information risk" exists, it can influence the level of the rating assigned. In cases where the information uncertainty is so significant that it precludes a meaningful analysis, we would decline to assign a rating.

An increasing number of companies are faced with the finding of accounting and financial reporting irregularities of various types. Their auditors may identify "material weakness" in the accounting systems. Actual mistakes—or even fraud—may have been uncovered. The SEC or other regulatory agencies may order "formal" or "informal" investigations of the accuracy and/or adequacy of financial reporting. In many instances, there is no way for us to immediately know how serious any of these troubling events will turn out to be. The underlying reality can range from an almost trivial problem to complete audit and financial failure. (And, occasionally, a small problem can turn into a large one, as "headline risk" takes a toll on the company's access to financing.)

Standards & Poor's seeks to assess the potential ramifications, possibly through further discussions with management, in-house or external legal counsel, auditors, independent members of the board and the audit committee. However, in some such cases, detailed information may not be available for some time, and we will react, if necessary, based on the best available information, through CreditWatch actions, intermediate rating changes or in extreme cases with the suspension or withdrawal of the ratings.

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.

Even companies that have set goals may 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 a 35% debt-to-capital ratio, we factor that into our 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 company 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 company 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 company's "conservative financial philosophy" must be consistent with its 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 company's assets, as well. In fact, a company's profit performance offers a litmus test of its fundamental health and competitive position. Accordingly, the conclusions about profitability should confirm the assessment of business risk.

The more significant measures of profitability are:

- Pretax, pre-interest 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 our perception of its 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 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 also are viewed in relation to a company's burden of fixed charges. Such ratios link profit performance with pure financing considerations, such as aggressiveness of debt usage. 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, adjustments to the calculation help capture the company's flexibility in making payments.

To reflect more accurately the ongoing earnings power of the company, reported profit figures are adjusted. These adjustments remove the effect of foreign-exchange gains and losses; litigation reserves; writedowns and other nonrecurring or extra-ordinary gains and losses; and unremitted equity earnings of a subsidiary.

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 is a material part of a company's aggregate earnings, Standard & Poor's segregates those earnings to assess the profitability of the core business. We also may view with skepticism the ability to realize such profits on a sustained basis and may treat them like nonrecurring gains.

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 in "Finance Subsidiaries' Rating Link to Parent".

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 regulation—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"—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.

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, because 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.

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, we focus on net debt to capital—and, similarly, net interest coverage, and cash flow to net debt. When a company consistently demonstrates such excess liquidity, debt leverage is 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. This approach also is used, for example, in the case of cash-rich U.S. pharmaceutical companies that enjoy tax arbitrage opportunities with respect to these cash holdings.

What is considered "debt" and "equity" for the purpose of ratio calculation is not always so simple (*See "Equity Credit: What*

It Is, And How To Get It"). In the case of hybrid securities, the analysis is based on their features—not the accounting or the nomenclature. Pension and retiree health obligations are similar to debt in many respects. Their treatment is explained in "Postretirement Obligations."

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, we believe 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, we analyze each separately. This is the basis for our methodology for analyzing captive finance companies (*See "Finance Subsidiaries' Rating Link to the Parent"*).

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 the assets' book values are materially undervalued or overvalued relative to economic value. Standard & Poor's considers the profitability of an asset as an appropriate 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. We attempt 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 company's equity base. Intangible assets are no less "valuable" than tangible ones. But comparisons are still distorted, because other companies cannot record their own valuable business intangibles, i.e., those that have been developed, rather than 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

Analysis of liabilities is not limited to those shown on the company's balance sheet. Off-balance-sheet items factored into the leverage analysis include:

- Operating leases;
- Guarantees, debt of joint ventures, and unconsolidated subsidiaries;

- 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 to reflect the potential burden of this contingent liability. 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, however, the parent likely would 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.

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 (i.e, whenever such assets continue to be generated on an onging basis for the company). If proceeds are used to reduce 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 using an off-balance-sheet technique and allows better comparison with other companies that have chosen other avenues of financing. Similarly, if a company uses proceeds from receivables sales to invest in riskier assets—and not to reduce other debt—the adjustment will reveal this 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 in "Equity Credit." Preferred stocks with a maturity receive diminishing equity credit as they progress toward maturity. 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 usually are 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's payment date.

A preferred that may eventually be 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 also would take into account 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.

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 usually is 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 financing to cover temporary cash 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 company's needs. Because 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);
- Debt/EBITDA;
- 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 straightforward; 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, because of 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 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.

Measuring cash flow

Discussions about cash flow often suffer from lack of uniform definition of terms. Table 1 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

Table 3—**Measuring Cash Flow**

Cash flow summary: XYZ Corp.

	Year One	Year Two
(Mil. $)		
Funds from operations (FFO)	18.6	22.3
Dec. (inc.) in noncash current assets	(33.1)	1.1
Inc. (dec.) in nondebt current liabilities	15.1	(12.6)
Operating cash flow	0.5	10.8
(Capital expenditures)	(11.1)	(9.7)
Free operating cash flow	(10.5)	1.0
(Cash dividends)	(4.5)	(5.1)
Discretionary cash flow	(15.0)	(4.1)
(Acquisitions)	(21.0)	0.0
Asset disposals	0.7	0.2
Net other sources (uses) of cash	(0.4)	(0.1)
Prefinancing cash flow	(35.7)	(4.0)
Inc. (dec.) in short-term debt	23.0	0.0
Inc. (dec.) in long-term debt	6.1	13.0
Net sale (repurchase) of equity	0.3	(7.1)
Dec. (inc.) in cash and securities	6.3	(2.0)
	35.7	4.0

be met with a combination of additional borrowings and a drawdown of its own cash.

The need for capital

Standard & Poor's 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 companies and growth companies. Most companies seeking working capital are able to finance a significant portion of current assets through trade credit. However, rapidly growing companies typically experience a buildup in receivables and inventories that cannot be financed internally or through trade credit.

Improved working-capital management techniques have, over the recent past, 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 we evaluate companies as ongoing enterprises, our analysis assumes companies continually will provide funds 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. To quantify the requirements for capital maintenance, data typically 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 their existing businesses, but that are known to be acquisition-minded. Their choice of acquisition as an avenue for growth means this activity must also be anticipated in the credit analysis. Management's stated acquisition goals and past takeover bids—including those not consummated—provide a basis for judging prospects for future acquisitions.

Liquidity analysis: Key factors for consideration

Debt characteristics:
- Maturity structure;
- Dependence on commercial paper and other confidence-sensitive forms of debt;
- Exposure to interest rate fluctuations—i.e., fixed/floating mix;
- Credit triggers;
- Rating triggers;
- Financial covenants;
- Material adverse change (MAC) clauses; and
- Defined events of default.

Other potential calls on cash:
- Postretirement benefits obligations;
- Environmental liabilities;
- Asset retirement obligations;
- Take or pay obligations;
- Obligations arising from guarantees and support agreements;
- Obligations arising from derivatives;
- Litigation; and
- Other contingent liabilities.

Operating sources of liquidity:
- Expected near-term free cash flow;
- Ability to liquidate working capital; and
- Flexibility to curtail spending.

Bank credit facilities:
- Total amount of facilities;
- Nature of bank commitments;
- Availability under facilities;
- Facility maturities;
- Bank group quality;
- Evidence of support/lack of support of bank group; and
- Credit triggers (see above).

Other alternative sources of liquidity:
- Cash and other liquid assets;
- Ability to tap debt and equity markets;
- Ability to sell nonstrategic assets;
- Flexibility to curtail common and preferred stock dividends; and
- Parental support.

Financial flexibility and liquidity

The previously discussed financial factors (profitability, capital structure, cash flow) and liquidity considerations 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 company at the mercy of its bankers. The potential impact of such contingencies is considered, along with the company's contingency plans. Access to various capital markets, affiliations with other entities, and ability to sell assets are important factors in determining a company's options under stress.

Flexibility can be jeopardized when a company 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. In general, a company's experience with different financial instruments gives management better access to capital markets. A company's size and its financing needs can play a role in whether it can raise sufficient funds in the public debt markets. Similarly, a company's role in the national economy—and this is particularly true outside the U.S.—can enhance its access to bank and public funds.

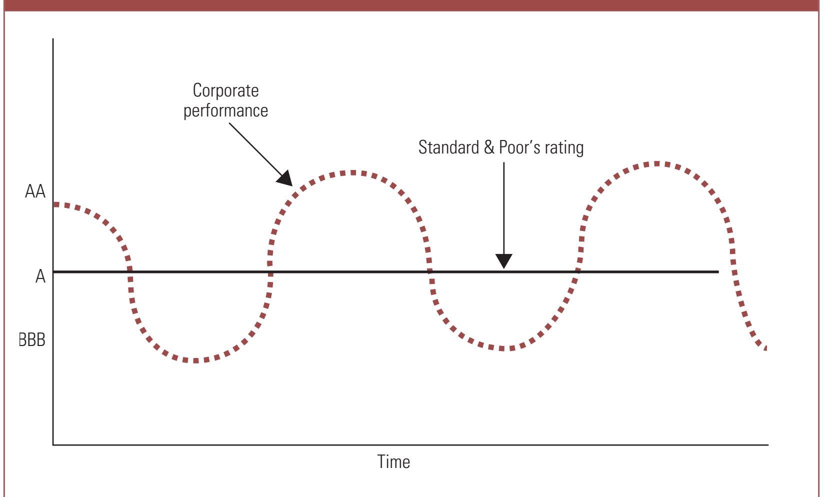
Access to the common stock market may primarily be a question of management's willingness to accept dilution of earnings per share, rather than a question of whether funds are available. (However, in some countries, including Japan and Germany, equity markets may not be so accessible.) When a new common 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. For example, 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 a company, suppliers or customers may be reluctant to continue doing business, and the company's access to capital may also be impaired, at least temporarily.

Rating in an Ideal World...



Factoring Cyclicality into Corporate Ratings

Standard & Poor's credit ratings are meant to be forward-looking, and 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. Ratings should never be a mere snapshot of the present situation. Accordingly, ratings are held constant throughout the cycle, or, alternatively, the rating does vary—but within a relatively narrow band.

Cyclicality and business risk

Cyclicality is, of course, a negative incorporated in the assessment of a company'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 analysis then focuses on a company'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."

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.

However, rating through the cycle requires an ability to predict the cyclical pattern—usually, difficult to do. The phases of a cycle probably will be longer or shorter, steeper or less severe, than just repetitions of earlier cycles. Interaction of cycles from different parts of the globe and the convergence of secular and cyclical forces are further complications.

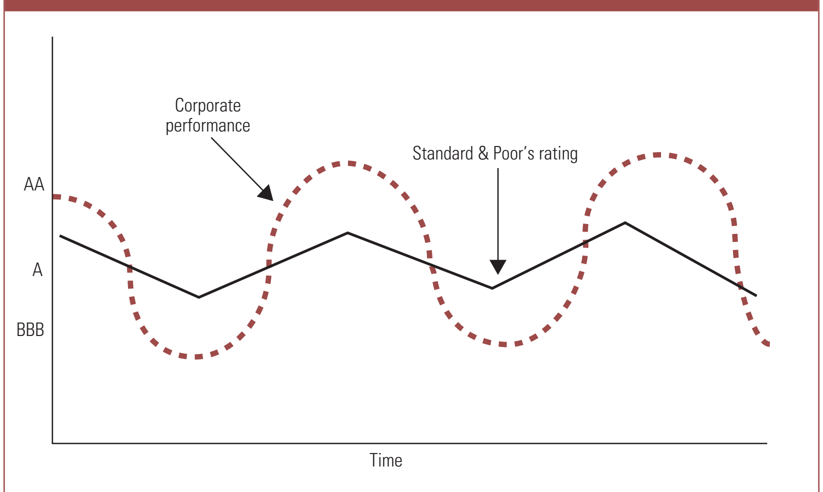
Moreover, even predictable cycles can affect individual companies in ways that have a lasting impact on credit quality. For example, a company may accumulate enough cash in the upturn to mitigate the risks of the next downturn. (Auto manufacturers have been able—during cyclical upswings—to accumulate huge cash hoards that should exceed cash outflows anticipated in future recessions.) Conversely, a company'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. In most cases, then, the typical relationship of ratings and cycles might look more like that below.

Sensitivity to cyclical factors—and ratings stability—also varies considerably along the rating spectrum. As the credit quality of a company becomes 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. In such situations, cyclical fluctuations usually will 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—i.e., those enjoying investment-grade ratings—are unlikely to see their ratings changed significantly because of 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.

...And in the Real World



Analytical challenges

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, e.g., 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: 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 the peak has been reached—or 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 effect on sales of consumer durables such as autos. 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 industrywide acquisition activity or capacity expansion.

Standard & Poor's understands that public sentiment about cyclical credits may fluctuate between extremes over the course of the cycle, with important ramifications for financial flexibility. Whatever our 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.

Loan Covenants

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, because of 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, i.e., those that might allow management more leeway to cause a deterioration in credit quality. In general, however, covenant packages are more relaxed than in the past, because liquidity has increased, and financial markets broadened.

Covenants' intended functions include:

- Preservation of repayment capacity. Some covenants limit new borrowings or assure lenders that cash generated both from ongoing operations and from asset sales will not be diverted from servicing debt. Credit quality is preserved by share-repurchase and dividend restrictions, which seek to maintain funds available for debt service.
- 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. 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.

Enforcement is dubious. A company 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 usually will 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. As long as the company continues to pay principal and interest, the court is unlikely to recognize any damages as having occurred. In the event of a breach of the covenant, the usual 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 or to get additional collateral, to raise rates, to obtain a waiver fee, or to provide more input into the company's decisions. In reality, these are the benefits of covenant protection.

Covenants and ratings

Covenants play a limited enhancing role in determining the corporate credit rating:

- Covenants do not address fundamental credit strength. Covenants do not and cannot affect the potential for facing business adversity, competitive reverses, and other risks that are outside the control of the company.
- 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'.
- In practice, lenders 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. The bankers normally waive the covenant for a fee, or extract higher interest rates. This benefits the banker, without enhancing the credit quality for the benefit of all creditors.
- 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 particular covenant or group of covenants can improve a particular borrower's ability to meet its obligations in a timely fashion.

The main reason to be aware of a rated entity's covenants is quite the opposite: Tight covenants could imperil credit quality by causing a default that might otherwise have been avoided. When bankers have the discretion to accelerate debt because of a covenant breach, they might do so to preserve the advantage held (e.g., based on being secured).

Covenants can, however play a valuable role in a more limited fashion. First, they may protect the specific debt issue that includes the covenants—particularly with respect to ultimate recovery. Second, they may prevent certain deliberate actions that could hurt credit quality, and that would be meaningful in cases where the credit-rating assessment is specifically concerned about the potential for those actions.

Covenants may be more effective at protecting the credit quality of a subsidiary from its parent company or group. Nonetheless, the parent could always choose to file the subsidiary into bankruptcy, unless it were legally structured to be "bankruptcy remote." The benefit would then be in terms of better recovery for the creditors of the subsidiary. We usually would not rate a subsidiary based on its strong "stand-alone" profile, even if there were significant covenant restrictions, because of the concerns noted above.

Moreover, 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.

Country Risk

It has long been Standard & Poor's view that country risk plays a critical role in determining all ratings within a given domicile. Sovereign-related stress can have an overwhelming impact upon company creditworthiness, both direct and indirect. This was demonstrated vividly most recently in the Republic of Argentina (2001-2002), as well as in the Russian Federation (1998-1999) and in the Republics of Indonesia (1997-1998) and Ecuador (1998-1999).

Sovereign credit ratings are suggestive of general risk faced by local entities, but they may not fully capture risk applicable to the private sector. As a result, when rating corporate or infrastructure companies or projects, we look beyond the sovereign ratings to evaluate the specific economic or country risk that may impact the entity's creditworthiness. Such economic or country risk pertains to the impact of government policies upon the obligor's business and financial environment, and a company's ability to insulate itself from these risks.

Economic risk

The macroeconomic factors most relevant to corporate credit analysis when determining economic risk include:

- Country growth prospects;
- Volatility of the economy;
- Inflation and real interest rate trends;
- Devaluation/overvaluation risk;
- Political stability;
- Banking-system and payment-system risk;
- Local capital-market depth; and
- The extent of integration into global trade and capital markets, and relative sensitivity of foreign direct investment and portfolio flows.

Industry risk

Country risk analysis also covers industry risk specific to corporates, including:

- Labor issues;
- Infrastructure challenges;
- Accounting and transparency; and
- Institutional risk (i.e., legal and regulatory risk and credit culture issues, tax risk, and corruption levels).

Depending on the country, there can be strong, creditworthy companies that demonstrate they are significantly sheltered from sovereign and country risk, and would be unlikely to default on their local currency obligations during a sovereign local- and foreign-currency default scenario. On the other hand, we also would expect there to be cases where default levels will be much higher than the sovereign rating benchmark would indicate. Therefore, depending upon the country, the degree of country risk, and relative strength of the corporate sector in a given jurisdiction, there can be cases where a company's local currency ratings can exceed the foreign currency, or even the local currency, sovereign credit rating. Otherwise, where country risk is very high, most corporate ratings will be below that of the sovereign. In all cases, local currency ratings are determined in reference to our country risk framework.

It should be noted that in recent cases of sovereign stress, corporate default levels have been very high. The most notable example is Argentina, where a rather extreme sovereign default scenario has ensued. Nearly every entity rated by Standard & Poor's has defaulted on bond, bank, or supplier debt. The key country risk factors in that case were:

- Maxi-devaluation of the currency;
- Price controls in the form of frozen utility tariffs;
- Frozen bank deposits, and a banking system in crisis;
- Currency controls that restricted the ability of companies to make payments abroad and interrupted supply chains; and
- A recession more than four years old.

Regulated utilities were perhaps the most affected, although exporters also suffered both a severe contraction in credit and multiple levels of taxes imposed by a government in desperate need of revenue sources.

Foreign exchange-rate risk/ Foreign-exchange controls

There are many risk factors in this category, related to both the rate and availability of foreign exchange. Exposure to exchange-rate risk includes:

- Operating margin. Where costs have a significant dollar/hard currency component while revenue is denominated in the local currency, the company will suffer margin compression in a currency devaluation. Examples would be manufacturing companies that must import raw materials, media companies that import content, or wireless companies that import handsets. Assuming the devaluation occurs during a time of economic recession—as often is the case—the company typically will not be able to pass on increased costs directly, at least not immediately. The flip side of this is where costs are in the local currency while revenue is in or linked to a hard currency; these companies will be affected when the currency is overvalued. Commodity exporters based in countries with overvalued local currencies have been harshly affected by this risk, particularly when it coincided with periods of weak commodity prices. Analysts should carefully evaluate any currency mismatch between revenue and expenses.
- Capital expenditures. A related risk is where companies generate local currency cash flows, but have hard currency capital expenditures, e.g., must rely on imported capital equipment.
- Mismatch between local currency revenue and foreign debt. Companies with largely local currency cash flows, but depend on dollar or dollar-linked debt (or another hard currency) are most vulnerable.

Most recent cases of sovereign distress have included sharp currency devaluations, including Argentina (where the currency lost nearly 75% of its value against the U.S. dollar, with the exchange rate falling from a fixed 1:1 at Dec. 31, 2001, to near 3.6 Argentine pesos per U.S. dollar by October 2002); Russia (where the currency lost 65% of its value in U.S. dollar terms between July 1998 and November 1998); and Indonesia (where the currency lost 58% of its value over a three-month period in early 1998).

Exposure to foreign-exchange availability risk pertains when a company is heavily dependent on imported supplies or imported capital equipment. The company's operations could be interrupted if foreign-exchange controls are imposed by the sovereign (which is plausible in the case in event of a sovereign foreign-currency default). For example, the imposition of exchange controls in Argentina, together with a prolonged period of uncertainty over the implementation of controls and relevant exchange rate, caused widespread disruption in distribution chains because of sharply curtailed imports (and exports).

Hedging/Financial policy

Does the company hedge foreign-exchange risk, to the extent it is within its control to do so? In many emerging markets, it is not practicable to hedge foreign-exchange exposure over the long term because of the unavailability or cost of long-term hedging instruments. 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?)

Political risk

Is there a history or likelihood of civil unrest in the region or country where the company operates that could disrupt operations? Does the company operate in a politically sensitive industry that could be subject to expropriation?

Macroeconomic volatility risk

Are the company's prospects tied to local economic conditions? Volatile growth rates or extended periods of economic recession/depression could reduce predictability of cash flows or severely hamper sales volumes, pricing power, etc.

Institutional risk: Legal system risk/ Credit culture/Corruption

How dependable is the rule of law? Is there an independent judicial system? Are creditors' rights respected? Is the bankruptcy code transparent? Are there credit-culture issues whereby companies have a cultural incentive to default on debt? Are corruption levels generally high in the country?

Accounting and reporting transparency

Is there a strong regulatory enforcement agency for publicly reporting companies in the country? Are accounts generally audited by top international accounting companies? Are quarterly and annual financial statements typically available within a reasonable time after a period closes? Are disclosure levels generally adequate, or is significant supplemental information required? In jurisdictions where majority family ownership is common, disclosure often lags. In addition, particularly where there is majority family ownership, the entire family group of companies should be analyzed, and intercompany operations and relationships should be scrutinized.

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 micromanaging the current account balance through changing taxes or duties on imports/exports/foreign borrowings?

Government regulation

Is there a particular risk to the company that the government may change the rules 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; changing antitrust legislation; changing the maximum percentage level of foreign ownership participation; or changing terms to concession contracts for utilities? For extractive industries, is there a risk of government contract renegotiation?

Infrastructure and labor problems

To what extent might the company be vulnerable to the reduced public services and labor strife that could accompany the sovereign default scenario? Are there potential bottlenecks, poor transport, high-cost/inefficient port services? Is there a need to supply electricity or other basic services/infrastructure?

Inflation risk

Where existing or potential high/accelerating inflation is an issue, does the company have the pricing flexibility, systems, and know-how to keep revenue increasing in line with or ahead of costs? How much price elasticity is typical for the product of the company, particularly during times of economic weakness?

Price controls particularly are a threat for regulated industries, such as telephone/electric services, and possibly for some basic commodities such as gasoline sales. At times of rising inflation, governments often try to appease consumers by failing to allow full-cost passthroughs on prices in regulated industries, and under severe stress may freeze all prices in an effort to control inflation. For example, Argentina froze utility tariffs for gas, electric, and local telephone services in January 2002, which effectively cut the earnings power of those companies by 60%-75% relative to their dollar debt, because of the concurrent currency devaluation. In other cases, sovereigns have more indirectly constrained price increases on politically sensitive goods or services, or have moved to impose even broader price controls (such as Venezuela did in mid-1994).

Interest-rate risk

Does the country have a history of high real interest rates, which can make local borrowing expensive? If local borrowings are indexed to local reference (such as bank deposit rates or inflation) or foreign exchange rates, the company can be subject to sudden and large rate hikes at times of sovereign stress. Such borrowings may originally have appeared cheaper, only in that the risk was not fully recognized.

Restricted access to capital

Does the company have a large concentration of assets in a particular emerging market country? The risk that access to cash flows of foreign subsidiaries could be constrained by potential transfer/convertibility risk should be reviewed.

Access to capital

Is the company a top-tier name in the local market, that would benefit from a "flight to quality" from local bank lending during crises? Does the company have committed lines of credit from international banks that are not subject to sovereign-related "material adverse change" clauses? Does the company have ample access to trade credit? Can the company withstand the cuts in trade lines and increase in costs that typically occur during periods of sovereign stress? (An example was the sharp reduction in trade-line availability from foreign banks for Brazilian corporates during 2002). Where short-term debt can be rolled over, it should be assumed that substantially higher interest rates would be incurred in a stress scenario. Limited access to capital often is a key constraint for emerging-market issuers: it broadly penalizes their credit quality relative to those of companies in developed markets. Even the strongest Latin American private-sector issuers had difficulties accessing local or international capital markets during periods of stress. Companies are affected by volatile international investor confidence in emerging markets. While economic problems may originate in a particular country or region, we have seen many cases of regional or emerging market contagion. Thin domestic capital markets also prevent companies from accessing local markets at reasonable rates; in times of stress, the local banking system would be suffering illiquidity because of high capital flight. A weak or poorly regulated local banking system can introduce additional volatility. Moreover, many emerging-market-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. This risk is highest for companies with large upcoming bullet maturities on capital market debt, although the quality and likelihood of continued bank support also is analyzed. Emerging-market companies partially can mitigate this risk by prefunding the refinancing of large bullet maturities well in advance. It cannot be assumed availability under uncommitted lines—or programs such as euro-denominated commercial paper or medium-term notes—where pricing and availability always are subject to market sentiment.

Liquidity

Is the company's near-term financial flexibility supported by substantial liquidity? If so, 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 in times of stress on the sovereign? Local banks broadly are affected by sovereign stress scenarios, with the extreme case demonstrated by Argentina's bank-deposit freeze. Similarly, Ecuador froze deposits in 1998 in an effort to halt a run on its banks. Ideally, the company should have liquidity positions that are well diversified among top local and foreign financial institutions. Having liquidity outside the country of domicile is also a significant enhancement (although the risk that companies may be required by the sovereign to repatriate funds/export proceeds is also be considered).

Foreign-currency ratings

The local-currency credit rating, by definition, excludes the risk of direct sovereign intervention that may constrain payment of foreign currency debt. The foreign-currency credit rating is a current opinion of an obligor's overall capacity to meet its obligations in foreign currency. In many cases, sovereign default and sovereign intervention risk are assumed to be roughly equivalent, and most foreign-currency credit ratings in these jurisdictions are limited by that of the sovereign. However, in some countries, we may determine that sovereign intervention risk is different than sovereign default risk. In these cases, foreign-currency credit ratings for private-sector entities may be higher than that of the sovereign. Examples include currency unions such as the European Monetary Union (EMU), where the 'AAA' rating of the European Central Bank indicates an 'AAA' ability to convert euros to foreign currency and transfer foreign currency. Thus, no ratings of entities within the EMU are constrained by transfer and convertibility risk. There are other company- or issue-specific reasons why the entity's foreign-currency rating may be higher than that of the sovereign. For example, companies domiciled in a given country but with substantial offshore operations, or companies that are subsidiaries of offshore parents, could have a rating higher than the country of domicile. In addition, transactions can be structured to reduce transfer and convertibility (T&C) risk by capturing transaction flows off shore, through insurance for T&C risk, or using other structural techniques, and therefore receive a rating higher than the foreign-currency sovereign credit rating. *(For additional comments, see "Sovereign Risk and Ratings Above the Sovereign," July 23, 2001, and "Rating Above The Sovereign: Criteria Update," Nov. 3, 2005, both published on RatingsDirect, Standard & Poor's Web-based research and credit analysis system.)* ■

Ratings And Ratios: Ratio Medians

The key ratio medians for U.S. corporates by rating category and their definitions are displayed below. The ratio medians are purely statistical, and are not intended as a guide to achieving a given rating level. They are not 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 differences in method of ratio computation, importance of industry or business risk, and the impact of mergers and acquisitions. Because ratings are designed to be valid over the entire business cycle, ratios of a particular company 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, because of differences in accounting principles, financial practices, and business environments.

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 because of 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 also are 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 those that lease

Table 1—Key Industrial Financial Ratios, Long-Term Debt

Three-year (2002 to 2004) medians

	AAA	AA	A	BBB	BB	B	CCC
EBIT interest coverage (x)	23.8	19.5	8.0	4.7	2.5	1.2	0.4
EBITDA interest coverage (x)	25.5	24.6	10.2	6.5	3.5	1.9	0.9
FFO/total debt (%)	203.3	79.9	48.0	35.9	22.4	11.5	5.0
Free operating cash flow/total debt (%)	127.6	44.5	25.0	17.3	8.3	2.8	(2.1)
Total debt/EBITDA (x)	0.4	0.9	1.6	2.2	3.5	5.3	7.9
Return on capital (%)	27.6	27.0	17.5	13.4	11.3	8.7	3.2
Total debt/total debt + equity (%)	12.4	28.3	37.5	42.5	53.7	75.9	113.5

Table 2—Key Utility Financial Ratios, Long-Term Debt

Three-year (2002 to 2004) medians

	AA	A	BBB	BB	B
EBIT interest coverage (x)	4.4	3.1	2.5	1.5	1.3
FFO interest coverage (x)	5.4	4.0	3.8	2.6	1.6
Net cash flow/capital expenditures (%)	86.9	76.2	100.2	80.3	32.5
FFO/average total debt (%)	30.6	18.2	18.1	11.5	21.6
Total debt/Total debt + equity (%)	47.4	53.8	58.1	70.6	47.2
Common dividend payout (%)	78.2	72.3	64.2	68.7	(4.8)
Return on common equity (%)	11.3	10.8	9.8	4.4	6.0

Table 3—Key Ratios

Formulas	
1. EBIT interest coverage	Earnings from continuing operations* before interest and taxes/Gross interest incurred before subtracting capitalized interest and interest income
2. EBITDA interest coverage	Adjusted earnings from continuing operations** before interest, taxes, depreciation, and amortization/Gross interest incurred before subtracting capitalized interest and interest income
3. Funds from operations (FFO)/total debt	Net income from continuing operations, depreciation and amortization, deferred income taxes, and other non-cash items/Long-term debt§ + current maturities + commercial paper, and other short-term borrowings
4. Free operating cash flow/total debt	FFO – capital expenditures – (+) increase (decrease) in working capital (excluding changes in cash, marketable securities, and short-term debt)/Long-term debt§ + current maturities, commercial paper, and other short-term borrowings
5. Total debt/Total debt + equity	Long-term debt§ + current maturities, commercial paper, and other short-term borrowings/Long-term debt§ + current maturities, commercial paper, and other short-term borrowings + shareholders' equity (including preferred stock) + minority interest
6. Return on capital	EBIT/Average of beginning of year and end of year capital, including short-term debt, current maturities, long-term debt§, non-current deferred taxes, minority interest, and equity (common and preferred stock)
7. Total debt/EBITDA	Long-term debt§ + current maturities, commercial paper, and other short-term borrowings/Adjusted earnings from continuing operations before interest, taxes, and D&A

*Including interest income and equity earnings; excluding nonrecurring items. **Excludes interest income, equity earnings, and nonrecurring items; also excludes rental expense that exceeds the interest component of capitalized operating leases. §Including amounts for operating lease debt equivalent, and debt associated with accounts receivable sales/securitization programs.

part or all of their operating assets. The lease adjustment affects all ratios.

The net debt adjustment affects median ratios largely for the 'AAA' rating category, composed almost entirely of cash-rich pharmaceutical companies.

The captive-finance adjustment has a great effect, mainly on automobile, department store, and some capital goods companies.

The adjusted ratio median universe for industrials includes about 1,000 companies. The data exclude transportation companies that exhibit different financial-ratio profiles.

The medians themselves are affected by economic and environmental factors, as well as mergers and acquisitions. The universe of rated companies constantly is changing, and in certain rating categories, adding or deleting a few companies also can affect 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 (*see Tables 1, 2, and 3*). ■