

STANDARD  
&POOR'S

# Corporate Ratings Criteria

**2006**

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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.

A handwritten signature in black ink, appearing to read "Solomon B. Samson". The signature is fluid and cursive, with a long horizontal stroke extending to the left.

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# Standard & Poor's Role in the Financial Markets

**S**tandard & 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 nomencla-

tures 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 finan-

cial 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 weak-

ened 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 of 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 expe-

rienced 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 policies 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

**S**tandard & 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.

## Rating Methodology

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

Business Risk Profile	Financial 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 com-

panies. 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 to be seen as a panacea. Within IFRS, just as within the separate national accounting systems, companies are called upon to choose 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 ongoing 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.

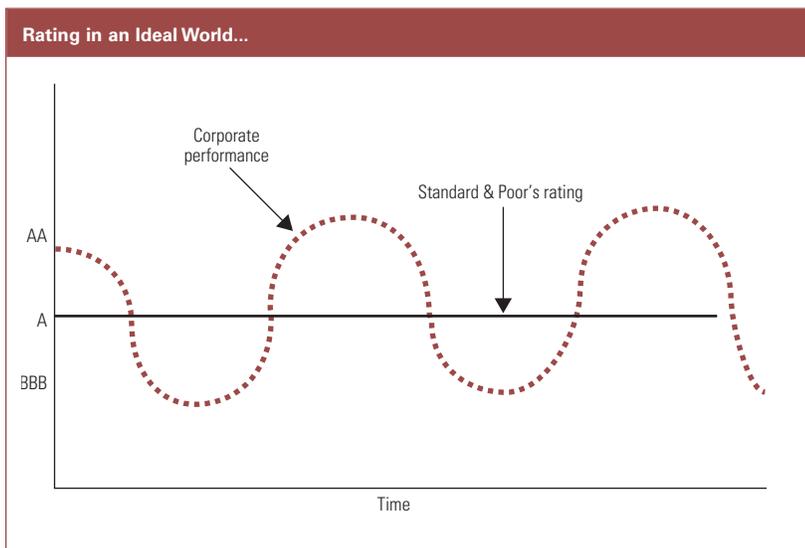
When there is a major lawsuit against a company, suppliers or customers may be reluctant to continue doing business, and the company's access to capital may also be impaired, at least temporarily.

## Factoring Cyclicity 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.

### Cyclicity and business risk

Cyclicity 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!

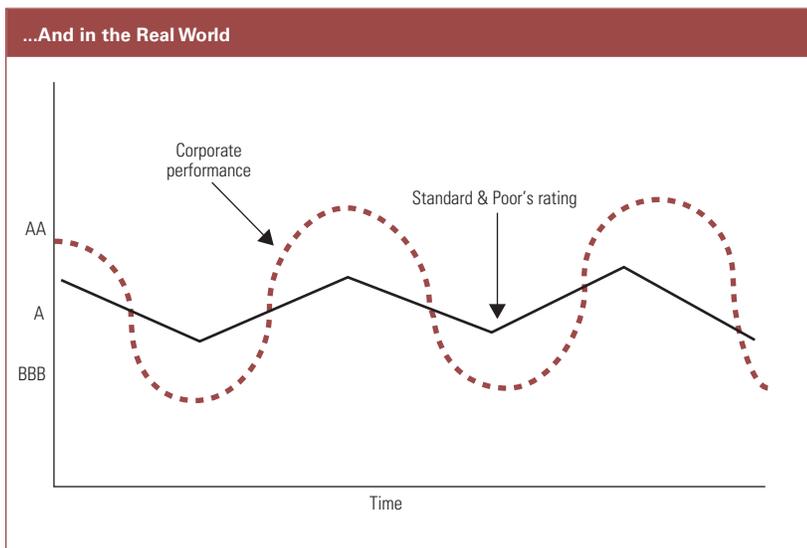
Accordingly, ratings may well be adjusted with the phases of a cycle. Normally, however, the range of the ratings would not fully mirror the amplitude of the company's cyclical highs or lows, given the expectation that a cyclical pattern will persist. The expectation of change from the current performance 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.

### Analytical challenges

Cyclicity 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 discre-

tion 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 indi-

cate. 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 emerg-

ing-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

**T**he 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**

<b>Three-year (2002 to 2004) medians</b>							
	<b>AAA</b>	<b>AA</b>	<b>A</b>	<b>BBB</b>	<b>BB</b>	<b>B</b>	<b>CCC</b>
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**

<b>Three-year (2002 to 2004) medians</b>					
	<b>AA</b>	<b>A</b>	<b>BBB</b>	<b>BB</b>	<b>B</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**

<b>Formulas</b>	
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.

## Ratings and Ratios

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*). ■

## Rating Each Issue: Distinguishing Issuers and Issues

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

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

Standard & Poor's also assigns credit ratings to specific issues. In fact, the vast majority of credit ratings pertain to specific debt issues. Issue ratings are a blend of default risk (sometimes referred to as "timeliness") and the recovery prospects associated with the specific debt being rated. Accordingly, junior

debt is rated below the corporate credit rating. Preferred stock is rated still lower (*see “Preferred Stock”*). Well-secured debt can be rated above the corporate credit rating.

Recovery ratings were added in 2003. These ratings address only recovery prospects, using a scale of one to five, rather than the letter ratings.

### Notching Down; Notching Up

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

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

As default risk increases, the concern over what can be recovered takes on greater relevance and, therefore, greater rating significance. Accordingly, the loss-given-default aspect of ratings is given more weight as one moves down the rating spectrum. For example, subordinated debt can be rated up to two notches below a noninvestment grade corporate credit rating, but one notch at most if the corporate credit rating is investment grade. In the same vein, the ‘AAA’ rating category need not be notched at all, while at the ‘CCC’ level the gaps may widen.

There is also an important distinction between notching up and notching down. Whenever a financial obligation is judged to have a materially worse recovery prospect than other debt of that issuer—by being unsecured, subordinated, or because of a holding-company structure—the issue rating is notched down. Thus, priority in bankruptcy is considered in broad, relative terms; there is no full-blown attempt to quantify the potential severity of loss. And, because the focus is relative to the various obligations of the issuer, no comparison between unsecured

issues of different companies is warranted. For example, the fact that a senior issue of company A is not notched at all does not imply anything about its recovery prospects relative to the junior debt of company B—with the same corporate credit rating—which is notched down.

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

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

### Junior Debt: Notching Down

When a debt issue is judged to be junior to other debt issues of the company, and, therefore, to have relatively worse recovery prospects, that issue is assigned a lower rating than—i.e., it is “notched down” from—the corporate credit rating. As a matter of rating policy, the differential is limited to one rating designation in the investment-grade categories. For example, when the

corporate credit rating is 'A', junior debt may be rated 'A-'. In the speculative-grade categories, where the possibility of a default is greater, the differential is up to two rating designations.

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

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

#### Guidelines for Notching

To the extent that certain obligations have a priority claim on the company's assets, lower-ranking obligations are at a disadvantage because a smaller pool of assets will be available to satisfy the remaining claims. One case is when the issue is contractually subordinated—that is, the terms of the issue specifically provide that debt holders will receive recovery in a reorganization or liquidation only after the claims of other creditors have been satisfied. Another case is when the issue is unsecured, while assets representing a significant portion of the company's value collateralize secured borrowings.

A third form of disadvantage can arise if a company conducts its operations through an operating subsidiary/holding-company structure. In this case, if the whole group declares

bankruptcy, creditors of the subsidiaries—including holders of even contractually subordinated debt—would have the first claim to the subsidiaries' assets, while creditors of the parent would have only a junior claim, limited to the residual value of the subsidiaries' assets remaining after the subsidiaries' direct liabilities have been satisfied. The disadvantage of parent-company creditors owing to the parent/subsidiary legal structure is known as "structural subordination." Even if the group's operations are splintered among many small subsidiaries, the individual debt obligations of which have only dubious recovery prospects, the parent-company creditors may still be disadvantaged compared with a situation in which all creditors would have an equal claim on the assets (*see table 1*).

As a rough generic measure of asset availability, we look at the cumulative percentage of priority debt and other liabilities relative to all available assets. When this ratio reaches certain threshold levels, the next, more junior, debt is considered disadvantaged debt, and is rated one or two notches below the corporate credit rating. These threshold levels take into account that it normally takes more than \$1 of book assets—as valued today—to satisfy \$1 of priority debt. (In the case of secured debt—which limits the priority to the collateral pledged—the remaining assets are still less likely to be sufficient to repay the unsecured debt, inasmuch as the collateral ordinarily consists of the company's better assets and often substantially exceeds the amount of the debt.)

For investment-grade companies with a typical asset mix, the threshold is 20%. That is, if priority debt and liabilities equal 20%

Table 1—Investment-Grade Example

Corporate credit rating: 'A'		Issue ratings
Assets \$100	Priority debt \$30	A
	Lower-priority debt \$10	A-
	Equity \$60	

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

or more of the company’s assets, the lower-priority debt (unsecured, subordinated, or holding company) is rated one notch below the corporate credit rating (see table 2).

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

The concept behind these thresholds is to measure material disadvantage with respect to the various layers of debt. At each level, as long as the next layer of debt still enjoys plenty of asset coverage, we do not consider the priority of the top layers as constituting a real disadvantage for the more junior issuers. Accordingly, the nature of the individual company’s asset is important: If a company has an atypical mix of assets, the thresholds could be higher or lower to reflect the relative amounts of better or worse assets.

The relative size of the next layer of debt also is important. If the next layer is especially large—in relation to the assets assumed to remain after satisfying the more senior layers—then coverage is impaired. There are numerous LBOs financed with outsized issues just below the senior layers. Although the priority debt issues may be small (below the threshold levels), they pose a real disadvantage for the junior issues, given the paucity of coverage remaining—so the junior debt should be notched down.

**Multiple Layers**

A business entity can have many levels of obligations, each ranking differently with

respect to priority of claim in a bankruptcy. For analytical purposes, debt levels are ranked as follows, from highest priority to lowest:

- Debt secured with higher-quality operating asset collateral;
- Debt secured with lesser-quality operating asset collateral;
- Lease obligations/securitizations;
- Senior debt of the operating company;
- Senior liabilities (ranked pari passu with senior debt);
- Subordinated debt;
- Junior subordinated debt;
- All other operating company liabilities;
- Senior debt of the holding company; and
- Subordinated debt of the holding company.

Once a notching threshold level is crossed—aggregating successive layers of priority claims—notching applies to the remaining, lower-ranking issues (see chart 1).

The reason notching is constrained to one notch for investment-grade companies and two notches for speculative-grade companies is to maintain the important weighting of timeliness in all ratings. Remember, notching pertains only to differentiating recovery prospects: it is presumed a default will interrupt payment on all of a company’s debt issues. The very highest-ranking issues receive the corporate credit rating, or sometimes a higher rating, if full recovery is confidently expected; the lowest-ranking issues will never be rated lower than one notch under the investment-grade corporate credit rating, or two notches in the case of noninvestment-grade corporate credit ratings.

This rating convention often results in debt issues of significantly different standing being rated the same. If, for example, a two-notch

**Table 2—Speculative-Grade Example**

Corporate credit rating: 'BB+'		Issue ratings
Assets \$100	Priority debt \$35	BB+
	Lower-priority debt \$20	BB-
	Equity \$45	

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

distinction is indicated for a senior subordinated issue, that issue and the worse-positioned issues at the holding company are all rated at the same two-notch gap relative to the corporate rating. No distinction is made to highlight the differences between junior issues (see table 3).

### Senior Secured Debt

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

In general, secured debt is notched according to the expected recovery associated with its specific collateral (see “Bank Loan Methodology” and “Recovery Ratings”). If the collateral that secures a particular debt issue is of dubious value, while the more valuable collateral is pledged to another loan, even secured debt may be notched down from the corporate credit rating.

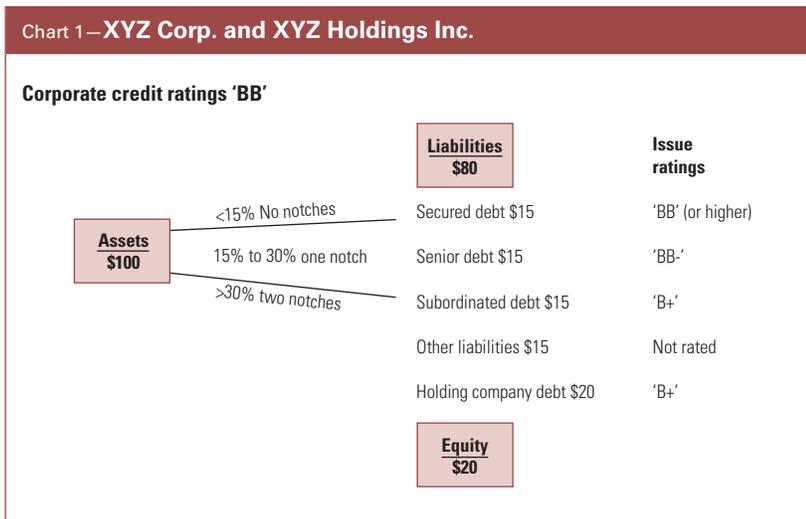
### Application of Guidelines

- *Perspective.* Notching takes into account expected future developments. For example, a company may be in the process of refinancing secured debt so that it would

have little or no secured debt within a year. If there is confidence that the plan will be carried out, a notching differential should not be needed, even currently. Conversely, if companies have open first-mortgage indentures or the leeway to increase secured borrowings under negative pledge covenants (or if no negative pledge covenants are in place), Standard & Poor’s attempts to determine the likelihood that the company will incur additional secured borrowings. But the analyst would not automatically base notching on the harshest assumptions.

If an issuer has a secured bank credit facility, such borrowings would be reflected in notching to the extent that the issuer was expected to draw on the facility. Typically, as a company approaches a financial crisis, it will need to tap its sources of financing. In the absence of expectations to the contrary, Standard & Poor’s takes a conservative approach, assuming available bank borrowing capacity is fully utilized. Likewise, if a company typically uses bank borrowings to fund seasonal working capital requirements, we focus on expected peak borrowing levels, rather than the expected average amount.

- *Adjustments.* Book values are used as a starting point; analytic adjustments are made if assets are considered significantly overvalued or undervalued for financial accounting purposes. This analysis focuses on the varying potential of different types of assets to retain value over time and in the default context based on their liquidity characteristics, special-purpose nature, and dependence on the health of the company’s business. Goodwill especially is suspect, considering its likely value in a default scenario. In applying the notching guidelines, Standard & Poor’s generally eliminates from total assets goodwill in excess of a “normal” amount—10% of total assets. The particular characteristics of specific intangibles, as distinct from goodwill, are considered. (For example, some credit typically is given for the enduring value of well-established brands in the consumer products sector.) We do not, however, perform detailed asset appraisals or attempt to postulate specifically about how market



## Rating Each Issue: Distinguishing Issuers and Issues

values might fluctuate in a hypothetical stress scenario (except in the case of secured debt).

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

- **Local- and foreign-currency issue ratings.**

In determining local-currency issue ratings, the point of reference is the local-currency corporate credit rating: local-currency issue ratings may be notched down one notch from the local-currency corporate credit rating in the case of investment-grade issuers, or one or two notches in the case of speculative-grade issuers. A company’s

foreign-currency corporate credit rating is often lower than its local-currency corporate credit rating, reflecting the risk that a sovereign government could take actions that would impinge on the company’s ability to meet foreign-currency obligations. But junior foreign-currency issues are not notched down from the foreign-currency corporate credit rating, because the government action would apply regardless of the senior/junior character of the debt. Of course, the issue would never be rated higher than if it had been denominated in local currency. For example, if a company’s local-currency corporate credit rating were ‘BB+’ and its foreign-currency corporate credit rating were ‘BB-’, subordinated foreign-currency-denominated issues could be rated ‘BB-’. But, if a company’s local-currency corporate credit rating were ‘BB+’ and its foreign-currency corporate credit rating were ‘BB’, subordinated foreign-currency-denominated issues would be rated ‘BB-’, as would subordinated local-currency-denominated issues. (See chart 1).

- **Short-term ratings.** All short-term ratings, including commercial paper ratings, are linked to the issuer’s corporate credit rating. Although commercial paper generally is unsecured, commercial paper ratings focus exclusively on default risk. For example, if an issuer has an ‘A’ corporate credit

**Table 3—Speculative-Grade Example**

**Corporate credit rating: ‘BB+’**

		<b>Issue ratings</b>
Assets \$100	Priority debt \$25	BB+
	Lower-priority debt \$15	BB
	Equity \$60	

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

		<b>Issue ratings</b>
Assets \$100	Priority debt \$25	BB+
	Lower-priority debt \$30	BB-
	Equity \$45	

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

rating and secured debt issue rating, and an ‘A-’ unsecured rating, its commercial paper rating would still be ‘A-1’—the commercial paper rating associated with the ‘A’ issuer default rating—not ‘A-2’, the commercial paper rating ordinarily appropriate at the ‘A-’ default risk rating level.

#### Parents and Subsidiaries: Structural Subordination

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

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

Parent-level debt issues are notched down to reflect structural subordination when the priority liabilities create a material disadvantage for the parent’s creditors, after taking into account all mitigating factors. In considering the appropriate rating for a specific issue of parent-level debt, priority liabilities encompass all third-party liabilities (not just debt) of the subsidiaries—including trade payables, pension and retiree medical liabilities, and environmental liabilities—and any relatively better-positioned parent-level liabilities. (For example, parent-level borrowings collateralized by the stock of the subsidiaries would

be disadvantaged relative to subsidiary liabilities, but would rank ahead of unsecured parent-level debt.)

Potential mitigating factors include:

- **Guarantees.** Guarantees by the subsidiaries of parent-level debt (i.e., upstream guarantees) may overcome structural subordination by putting the claims of parent company creditors on a *pari passu* basis with those of operating company creditors. Such guarantees have to be enforceable under the relevant national legal system(s), and there must be no undue concern regarding potential allegations of fraudulent conveyance (see “*Upstream Guarantees*”). Although joint and several guarantees from all subsidiaries provide the most significant protection, several guarantees by subsidiaries accounting for a major portion of total assets would be sufficient to avoid notching of parent debt issues in most cases.
- **Operating assets at the parent.** If the parent is not a pure holding company, but rather also directly owns certain operating assets, this gives the parent’s creditors a priority claim to the parent-level assets. This offsets, at least partially, the disadvantage that pertains to being structurally subordinated with respect to the assets owned by the subsidiaries.
- **Diversity.** When the parent owns multiple operating companies, more liberal notching guidelines may be applied to reflect the benefit the diversity of assets might provide. The threshold guidelines are relaxed (but not eliminated) to correspond with the extent of business and/or geographic diversification of the subsidiaries. For bankrupt companies that own multiple, separate business units, the prospects for residual value remaining for holding company creditors improve as individual units wind up with shortfalls and surpluses. Also, holding companies with diverse businesses—in terms of product or geography—have greater opportunities for dispositions, asset transfers, or recapitalization of subsidiaries. If, however, the subsidiaries are operationally integrated, economically correlated, or regulated, the

## Rating Each Issue: Distinguishing Issuers and Issues

company's flexibility to reconfigure is more limited.

- **Concentration of debt.** If a parent has a number of subsidiaries, but the preponderance of subsidiary liabilities are concentrated in one or two of these, e.g., industrial groups having finance or trading units, this concentration of liabilities can limit the disadvantage for parent-company creditors. Although the net worth of the leveraged units could well be eliminated in the bankruptcy scenario, the parent might still obtain recoveries from its relatively unleveraged subsidiaries. In applying the notching guideline in such cases, it may be appropriate to eliminate the assets of the leveraged subsidiary from total assets, and its liabilities from priority liabilities. (The analysis then focuses on the assets and liabilities that remain, but the standard notching guideline must be substituted by other judgments regarding recovery prospects.) However, to the extent the company is viewed as one consolidated entity, the presumption that the healthier subsidiaries would remain healthy is questionable. This also would dilute the value of guarantees from individual subsidiaries.
- **Downstream loans.** If the parent's investment in a subsidiary is not just an equity interest, but also takes the form of downstream senior loans, this may enhance the standing of parent-level creditors because they would have not only a residual claim on the subsidiary's net worth, but also a debt claim that would generally be *pari passu* with other debt claims. Standard & Poor's gives weight to formal, documented

**Table 4—Single Economic Entity Example**

<b>Parent—corporate credit rating: 'BB+'</b>	
Debt type*	Issue rating
Senior secured	BB-
Senior unsecured	BB-
Subordinated	BB-
<b>Subsidiary—corporate credit rating: 'BB+'</b>	
Debt type*	Issue rating
Senior secured	BB+
Senior unsecured	BB
Subordinated	BB-
Different Default Risk Example	
<b>Parent—corporate credit rating: 'BB+'</b>	
Debt type*	Issue rating
Senior secured	BB+
Senior unsecured	BB
Subordinated	BB-
<b>Subsidiary—corporate credit rating: 'B+'</b>	
Debt type*	Issue rating
Senior secured	B+
Senior unsecured	B
Subordinated	B-

\*Debt types are used here merely as illustrative of typical results for different priority debt; notching actually depends on the guidelines explained above. In the first example, because the parent and subsidiary are viewed as having the same default risk, the lowest rating at either is two notches below the single corporate credit rating. If the parent is a holding company without assets other than its ownership interest in the subsidiary, the parent's debt is viewed as junior and notched down. In contrast, in the second example, the parent and subsidiary are viewed as having different default risks, so each has a different corporate credit rating (assumed to be 'BB+' at the parent and 'B+' at the subsidiary), and the two-notch limit is relative to the corporate credit ratings at each entity; there is no limit on the span of ratings that applies across the two legal entities.

loans—not to informal advances, which are highly changeable. (On the other hand, if the parent has borrowed funds from its subsidiaries, the resulting inter-company parent-level liability could further dilute the recoveries of external parent-level creditors.) As with guarantees, the assessment of downstream advances must take into account the applicable legal framework.

- **Adjustments.** Additional adjustments are necessary in assessing structural subordination. We eliminate from the notching calculations subsidiaries' deferred tax assets and liabilities and other accounting accruals and provisions that are not likely to have clear economic meaning in a default (*see table 4*).

#### Exceptions to the Rule

If the recovery prospects for a specific junior issue equate to the level associated with senior debt generally, notching is dispensed with. As long as recovery of 80 cents on the dollar reasonably can be anticipated, the junior debt is not notched below the senior debt.

Only a handful of rated junior issues provide for such good recovery prospects. In each case, the junior debt is secured, and the value of the assets that serve as collateral is independent of the fate of the issuer. As in all cases of secured debt, the specific collateral is subjected to analysis of its recovery prospects.

With respect to these and similar cases, we do not presume any specific level of recovery for the senior creditors of the company in question. The senior debt could still, in the end, fare better than the collateralized subordinated issue. The key: As long as the subordinated debt should recover as much as the vast majority of defaulted senior debt, it is not discernibly disadvantaged and does not deserve to be notched down. After all, recovery of 75%-85% would compare favorably with that experienced by roughly three-quarters of senior creditors.

Note that it is not necessary to conclude that holders will be made whole to eliminate the notching down of subordinated obligations. Obligations that are likely to provide full ultimate recovery are rated

above the corporate credit rating (*see "Notching Up"*).

#### Upstream Guarantees

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

Accordingly, we consider upstream guarantees valid if any of these conditions are met:

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

Accordingly, there will be cases where we decline to recognize the upstream guarantee at the time of issuance—because of legal risk—but would upgrade the issue a year (or two) later. Standard & Poor's accepts an upstream guarantee whenever the guar-

antor obtained value. As long as the guarantor is the recipient of the funds, it meets this test.

### Well-Secured Debt: Notching Up

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

#### Economics

Will the "second way out" provide 100% recovery? Of principal only, or interest, as well? When the collateral value exceeds the amount of the claim, the creditor could receive postpetition interest. Managing the legal nuances of bankruptcy would be an important aspect of achieving postpetition interest. Although accurately predicting this outcome is extremely difficult, the criteria recognize the potential for such payment. (If all accrued interest, from before and after the default, can be recovered, the length of any delay in recovery is less consequential.)

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

#### How long will the delay be?

The time it takes to realize ultimate recovery of the loan obligation can be critical. At best, the recovery would be highly valued because of its nearly timely character—almost like a grace period. At worst, we would not give any credit for a very delayed payment. In estimating the length of any delay in recovery, the analysis would focus on:

- *How the legal system resolves bankruptcies or provides access to collateral.* This varies by legal jurisdiction. In the U.S., 18 to 24 months typically is needed to resolve a Chapter 11 filing. (The analysis would

identify and differentiate cases that might take longer than usual because of perceived complexities, such as litigation.) In jurisdictions that are more creditor-oriented, the access to collateral may be expedited.

- *The structure of an obligation.* The analysis could distinguish between a bond, a lease obligation, and certificates governed by Section 1110 of the U.S. Bankruptcy Code, which provides specific legal rights to obtain certain transportation assets during a bankruptcy proceeding.
- *The terms of an obligation.* For example, in the case of a guarantee that provided for ultimate—but not necessarily timely—payment, it would be important to know within what period payment must be made.

#### Weighting

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

#### Guidelines for notching

To get even one notch above the corporate rating, a debt issue must have at least reasonable prospects for full recovery. As the prospects improve, based on the nature and/or amount of the collateral, another notch may be added. If the analysis indicates great confidence in full recovery, three or four notches are possible. This reflects the highest expectations for full recovery, following more rigorous stressing of collateral values in various scenarios. This level of strong collateral protection ordinarily would imply decent prospects for recovering post-petition interest, as well.

These guidelines pertain to the speculative-grade portion of the rating spectrum. At the upper end, notching generally is less generous. For example, in the case of first mortgage bonds of investment-grade companies, it

takes greater enhancement to achieve the same notch or two.

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

To reiterate, the policy of enhancing issue ratings based on ultimate recovery prospects applies only if the expected recovery is 100%. Standard & Poor's does not attempt to differentiate unsecured debt, even though some defaults will result in recovery of 80 cents on the dollar, and others will result in only 30 cents.

### Commercial Paper

Commercial paper (CP) consists of unsecured promissory notes issued to raise short-term funds. CP ratings pertain to the program established to sell such notes. There is no review of individual notes. Typically, only companies of strong credit standing can sell their paper in the money market, although there periodically is some issuance of lesser-quality, unrated paper (notably, prior to the junk bond market collapse late in 1989). Alternatively, companies sell commercial paper backed by letters of credit (LOC) from banks. Credit quality of such LOC-backed paper rests entirely on the transaction's legal structure and the bank's creditworthiness. As long as the LOC is structured correctly, credit quality of the direct obligor can be ignored.

#### Rating criteria

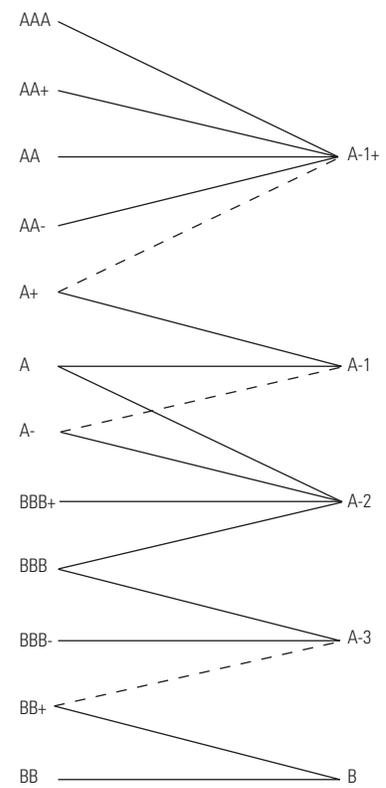
Evaluation of an issuer's commercial paper reflects Standard & Poor's opinion of the issuer's fundamental credit quality. The analytical approach is virtually identical to the one followed in assigning a long-term corporate credit rating, and there is a strong link between the short-term and long-term rating systems (*see chart 2*).

Indeed, the time horizon for CP ratings is not a function of the typical 30-day life of a commercial-paper note, the 270-day maximum maturity for the most common type of commercial paper in the U.S., or even the one-year tenor typically used to determine which instrument gets a short-term rating in the first place.

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

Conversely, knowing the long-term rating will not fully determine a CP rating, considering the overlap in rating categories. However, the range of possibilities is always narrow. To the extent that one of two CP ratings might be assigned at a given level of long-term credit quality (e.g., if the long-term rating is 'A'), overall strength of the credit within the rating category is the main

Chart 2—Correlation of CP Ratings with Long-Term Corporate Credit Ratings\*



\*Dotted lines indicate combinations that are highly unusual.

consideration. For example, a marginal ‘A’ credit likely would have its commercial paper rated ‘A-2’, whereas a solid ‘A’ would almost automatically receive an ‘A-1’.

Exceptional short-term credit quality would be another factor that determines which of two possible CP ratings are assigned. For example, a company may possess substantial liquidity—providing protection in the near or intermediate term—but suffer from less-than-stellar profitability, a longer-term factor. Or, there could be a concern that, over time, the large cash holdings may be used to fund acquisitions. (Having different time horizons as the basis for long- and short-term ratings implies either one or the other rating is expected to change.)

### Backup policies

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

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

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

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

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

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

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

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

- The different likelihood of the issuer’s ever losing access to funding in the commercial-paper market; and
- The timeframe presumed necessary to arrange funding should the company lose access. A higher-rated entity is less likely to encounter business reverses of significance and—in the event of a general contraction of the commercial-paper market—the higher-rated credit would be less likely to lose investors. In fact, higher-rated companies could actually be net beneficiaries of a flight to quality.

In 1999, Standard & Poor’s introduced a new approach that offers companies greater flexibility regarding the amount of backup they maintain, if they are prepared to match their maturities carefully with available liquidity. The new approach differentiated between companies that are rolling over all their commercial paper in just a few days and those that have a cushion by virtue of having placed longer-dated paper. The basic idea was that companies—if and when they lose access to commercial paper—should have sufficient liquidity to cover any paper coming due during the time they would require to arrange additional funding.

However, companies encountered practical difficulties in implementing the new approach. Moreover, changes in the banking environment have since made us more leery about a company arranging new facilities when under stress. Still, notes that come due only 11-12 months from now do not

require backup so far in advance.

Companies should begin to actively arrange liquidity backup approximately six months prior to maturity. Similarly, 12-month notes that automatically extend their maturity month by month do not require back-up arrangements from day one. They will be able to arrange backup when and if the extensions stop, leaving a full 12 months to do so (*see table 5*).

Extendible commercial notes (ECN) provide built-in backup by allowing the issuer to extend for several months if there is difficulty in rolling over the notes; accordingly, there is no need to provide backup for them—i.e., until the extension is effected. However, there is no way to prevent the issuer from tapping backup facilities intended for other debt and use the funds to repay maturing ECNs, instead of extending. This risk is known as leakage. Accordingly, for issuers that provide 100% backup, unbacked ECNs must not exceed 20% of extant backup for outstanding conventional commercial paper.

All issuers—even if they provide 100% backup—must always ensure that the first few days of upcoming maturities are backed with excess cash or funding facilities that provide for immediate availability.

For example, a bank backup facility that requires two-day notification to draw down will be of no use in repaying paper maturing in the interim. The same would hold true if foreign exchange is needed, and the facility requires a few days to provide it. Moreover, if a company issuing commercial paper in the U.S. were relying on a bank facility in Europe, differences in time zones or bank holidays could prevent availability when needed. Obviously, a bank facility in

**Table 5—Guidelines for U.S. Industrials and Utilities**

	% of total outstanding
A-1+/AAA	50
A-1+/AA	75
A-1	100
A-2	100
A-3	100

the U.S. would be equally lacking with respect to maturing euro-denominated commercial paper. So-called “swing lines” typically equal 15%-20% of the program size to deal with the maximum amount that will mature in any three- to four-day period.

#### Quality of backup facilities

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

Standard & Poor’s expects all backup lines to be in place and confirmed in writing.

Preapproved lines or orally committed lines are viewed as insufficient. Specific designation for commercial-paper backup is of little significance.

Contractually committed facilities are desirable. In the U.S., fully documented revolving credits represent such contractual commitments. The weaker the credit, the greater the need for more reliable forms of liquidity. As a general guideline, if contractually committed facilities cover 10-15 days’ upcoming maturities of outstanding paper, that should suffice.

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

In the absence of a contractual commitment, payment for the facility—whether by fee or balances—is important because it generally creates some degree of moral commitment on the part of the bank. In fact, a solid business relationship is key to whether a bank will stand by its client. Standardized criteria cannot capture or assess the strength of such relationships. We therefore are interested in any evidence—subjective as it may be—that might demonstrate the strength of an issuer’s banking relationships. In this respect, the analyst is also mind-

ful of the business cultures in different parts of the world and their impact on banking relationships and commitments.

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

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

There is no analytical distinction to be made between a 364-day and a 365-day facility.

Even multiyear facilities will provide commitment for only a short time as they approach the end of their terms. It obviously is critical that the company arrange for the continuation of its banking facilities well in advance of their lapsing.

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

Banks providing issuers with facilities for backup liquidity should themselves be sound. Possession of an investment-grade rating indicates sufficient financial strength for the purpose of providing a commercial-paper issuer with a reliable source of funding. There is no requirement that the bank’s credit rating equal the CP issuer’s rating.

Nonetheless, Standard & Poor's would look askance at situations where most of a company's banks were only marginally investment grade. That would indicate an imprudent reliance on banks that might deteriorate to weaker, non-investment-grade status.

#### Documentation for Commercial-Paper Program ratings

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

Accordingly, we believe the tenor of any backup facility with a hard maturity needs to be at least 180 days. The rating level of the company while it is still issuing commercial paper is not a consideration.

#### Preferred Stock

Preferred stock carries greater credit risk than debt in two important ways: The dividend is at the discretion of the issuer, and the preferred represents a deeply subordinated claim in the event of bankruptcy. Prior to 1999, Standard & Poor's used a separate preferred stock scale. In February 1999, the debt and preferred stock scales were integrated. Accordingly, now, preferred stock generally is rated below subordinated debt. When a company's corporate credit rating is investment grade, its preferred stock is rated two notches below the corporate credit rating. For example, if the corporate credit rating is 'A+', the preferred stock would be rated 'A-'. (In case of a 'AAA' corporate credit rating, the preferred stock would be rated 'AA+'.) When the corporate credit rating is non-investment grade, the preferred stock is rated at least three notches (one rating category) below the corporate credit rating. Deferrable payment

debt is treated identically to preferred stock, given subordination and the right to defer payments of interest.

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

There are situations in which the dividend is especially jeopardized, so notching would exceed the guidelines above. For example, state charters restrict payment when there is a deficit in the equity account. This can occur following a write-off, even while the company is healthy and possesses ample cash to continue paying. Similarly, covenants in debt instruments can endanger payment of dividends, even while there is a capacity to pay. Also when there is an unusually large dividend burden, there is greater risk to that dividend. If preferred issues total over 20% of the company's capitalization, it normally would call for greater differentiation of the preferred rating from the corporate credit rating.

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

If a company defers a payment or passes on a preferred dividend, it is tantamount to default on the preferred issues. The rating is changed to 'D' once the payment date has passed. The rating usually would be lowered to 'C' in the interim, if nonpayment were predictable—e.g., if the company were to announce that its directors failed to declare the preferred dividend. Whenever a company resumes paying preferred dividends but

remains in arrears with respect to payments it skipped, the rating is, by definition, 'C'.

#### Convertible preferred

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

These issues are viewed very positively in terms of equity credit—assuming conversion will take place in a relatively short time frame and the imbedded floor price of the shares makes it unlikely the company will regret and reverse its decision to sell new common stock.

Ratings on the issue address only the likelihood of interim payments and the solvency of the company at the time of conversion to enable it to honor its obligation to deliver the shares. These ratings do not address the amount or value of the common stock investors ultimately will receive. (We once highlighted this risk by appending an “r” to the ratings of these hybrid securities, but now rely on the market’s familiarity with such instruments and their terms.)

#### Trust-Preferred stock

When using a trust preferred stock, a company establishes a trust that is the legal issuing entity of the preferred stock. The sale proceeds of the preferred stock are lent to the parent com-

pany, and the payments on this intercompany loan are the source for servicing the preferred obligation. In some cases, this financing structure can provide favorable equity treatment for the company, even while the payments enjoy tax-deductibility.

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

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

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

# Secured Debt/Recovery Ratings, Overview

In 1996, Standard & Poor's Ratings Services introduced criteria that allowed for "notching up" certain debt obligations. If a particular obligation had reasonable prospects for full recovery, given a default, it could be rated above the corporate credit rating.

This innovation coincided with the expansion of rating bank loans—an asset class rarely rated previously. The secured position of many of these loans helped make it possible to analyze ultimate recovery prospects on an absolute basis. In some cases, the collateral's value is independent of the company's business fortunes. In many others, the priority of the secured debt allows one to conclude that there will be sufficient value—even making harsh assumptions about the bankruptcy scenario—to allow for full recovery. Furthermore, the legal protection of the secured debt removes much of the uncertainty associated with the bankruptcy process itself (*see table 1*).

We apply the new framework to all secured debt—not just bank loans. This includes first mortgage debt issued by utilities. But, because these issuers primarily are investment-grade companies with more remote likelihood of default, recovery is less relevant as an investment focus, so the weighting of recovery prospects plays a lesser role in the rating. As a corollary, the hurdles for justifying a notch-

up are higher as one rises in the credit-rating spectrum. The table below shows how notching standards change as they pertain to first mortgage bonds of companies in the various investment-grade categories (*see table 2*).

In December 2003, Standard & Poor's launched its recovery ratings for secured debt. Recovery ratings use a new scale—1+ through 5. These ratings do not blend default

risk and recovery given default, as the conventional issue ratings do. Rather, they express only our assessment of an issue's recovery prospects. Each rating category corresponds to a specific range of recovery values (see table 3).

Notice the correlation between the bank loan rating and recovery rating scales. They incorporate a “crosswalk” from the expected recovery percentage to both the degree of notching and the recovery rating level. There are exceptions, however, including cases where we would not notch down even though recovery expectations are rated low, such as poorly secured debt that is the most senior obligation of the entity. Also, there are cases where the notching is less generous—such as secured investment grade debt. It is possible for the secured debt of a highly rated company (i.e., investment grade) to receive a recovery rating of ‘1’ and still not be notched above the corporate rating. Finally, there is a maximum of two notches that are subtracted to reflect the weak recovery prospects of junior debt. Therefore, debt issues with recovery ratings of four and five both get the same two notches when it comes to the conventional rating.

#### Absolute trumps relative

Our more recent recovery analysis focuses on the absolute values that may be expected in a

potential default scenario. This contrasts with the long-standing convention in the assignment of issue ratings, which differentiated senior and junior debt of a company merely in relative terms. Junior issues were rated a number of notches below the corporate rating based on the relative position of the debt issues of that particular company.

Now, notching up secured debt and notching down junior debt take absolute values into account. For example, if the absolute recovery prospect for a specific junior issue is 80 cents on the dollar or more, notching is dispensed with. In recovery terms, if such recovery can be reasonably anticipated, the junior debt is not considered so disadvantaged that it should be notched below the corporate rating. After all, this level compares favorably with recovery associated with senior debt generally.

Note, however, that we still will not rate the senior-most debt—and particularly bank loans collateralized with first liens—below the corporate ratings, based on low expected recovery. To do so—and be consistent about it—Standard & Poor's would have to be prepared to rate all senior unsecured debt—even where there is no secured debt—lower than the corporate rating, according to its recovery prospects. Analytically, that is in most cases not feasible: Maybe some day. (However, we would notch down even

Table 1—Notching Criteria

Secured, speculative—grade bank loan ratings		
Ultimate recovery of principal	Indicative recovery expectation	Issue rating relative to corporate rating
Highest expectation of full recovery of principal	100% of principal	+ 3 or 4 notches
High expectation of full recovery of principal	100% of principal	+ 1 or 2 notches
Substantial recovery of principal	80-100% of principal	No notching
Meaningful recovery of principal	50-80% of principal	-1 notch—unless most senior
Marginal recovery of principal	25-50% of principal	-2 notches—unless most senior
Negligible recovery of principal	0-25% of principal	-2 notches—unless most senior

such bank debt when indicated, by the ‘threshold’ method. For example, if lease assets and/or securitizations exceed the 15%/20% or 30% thresholds.)

### Bank Loan Rating Methodology

Both syndicated bank loans and privately placed debt frequently provide collateral designed to protect the lender against loss if the borrower defaults. In assigning ratings to bank loans and private placements—both the conventional debt ratings and the more recent recovery ratings—Standard & Poor’s takes loss-given-default into account when analyzing the recovery prospects of a specific loan. To the extent a loan is well-secured or contains other loan-specific features that enhance the likelihood of full recovery, the debt rating on that loan can be higher than the borrower’s corporate credit rating—and it will receive a high recovery rating.

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

Highly rated issuers generally are not expected to provide much collateral or other post-default protection when raising funds in public

or private debt markets. Because the probability of their defaulting is low, post-default recovery is of little relevance. For these reasons, it would be unusual to find bank loans of investment-grade companies that deserved a rating higher than the entity’s corporate credit rating.

### Determining ratings

The starting point for assigning a bank loan rating is determining the borrower’s default risk, based on an analysis of the company’s business strength and financial risk. The result is the corporate credit rating. The analysis then proceeds to the recovery aspects of a specific debt issue. Regarding recovery ratings, which purely address the recovery prospects, the likelihood of default is irrelevant. Still, the circumstances surrounding a potential default are highly germane to the recovery outcome. So comprehending the default scenario is part of every analysis.

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

When the collateral value exceeds the amount of the claim, the creditor could also receive post-petition interest. This excess collateral value is referred to as an “equity cushion.” The creditor must carefully manage his legal posture to take advantage of this cushion and

Table 2—Notching Criteria

First mortgage bonds of investment-grade utilities		
Corporate rating	Asset value/secured debt (x)	Notches above corporate rating
A and above	2	1
BBB	2	2
	1.5	1
B and BB	2	3
	1.5	2
	1	1

receive interest—while still asserting entitlement to the court’s “adequate protection” of the collateral. Accordingly, our rating criteria recognize the advantage of a specific issue that may be a candidate to be paid post-petition interest, even though it is almost impossible to accurately predict such an outcome.

### Default scenarios

The analysis of recovery prospects for secured debt—which underpins the assignment of both conventional issue ratings and recovery ratings—focuses exclusively on the value of collateral in the post-default scenario. The current value of the collateral—even if stressed for various economic contingencies—is not relevant. The only meaningful stress scenario is the one consistent with the default. This is true whatever method is used to appraise the collateral’s value, be it discounted cash flow of the enterprise, transaction prices of discrete assets, market-multiple conventions, capitalization rates, or some other approach.

Comprehending the default scenario is perhaps the most challenging aspect of loss-given-default analysis. In a limited number of situations, the default may be imminent, so the context is already set. But in most cases, it is necessary to make certain assumptions. The analyst must be creative, but avoid engaging in excessive conjecture or speculation. The higher the company’s corporate rating, the more remote its risk of default—and the more obscure the default scenario.

In the absence of a more specific view, we use a generic model for default scenarios: the company’s projected cash flow (EBITDA) will have fallen below its financial burden of pro-

jected interest and debt amortization. (When a company engages in significant leasing of assets, the appropriate measure is coverage of interest and rental expense by EBITDAR.) The model sets a base level for post-default cash flow, while the risk of a still-lower level must be taken into account, as well. The validity of this tool is intuitive, and is also supported by some empirical evidence.

However, the potential cause of such decline in a company’s current EBITDA—to the level of EBITDA associated with default—needs to be understood. The implications for the collateral values will vary, depending on the underlying reasons for the company’s decline. Figuring all this out—especially well in advance of a company experiencing problems—can be analytically challenging. Moreover, there often are several factors, rather than a single factor, that together cause a default. Accordingly, cash-flow multiple valuations works best for companies that are presently highly leveraged. Their default can be expected to result from the high level of financial burden, even while the company’s business fundamentals are not drastically impaired.

The model is less accurate where default risk is associated with potential declines in the business fundamentals. And the model does not apply wherever the risk of default is associated with vulnerabilities such as litigation, acquisition activity, or liquidity crisis. In all such situations, the analysis must substitute other approaches to model a default scenario that is consistent with the thinking behind the current rating. For example, many companies have low ratings because of a perceived propensity to use debt for acquisitions

Table 3—Recovery Ratings

Secured Debt		
Ultimate recovery of principal	Indicative recovery expectation	Recovery rating
Highest expectation of full recovery of principal	100% of principal	1+
High expectation of full recovery of principal	100% of principal	1
Substantial recovery of principal	80%-100% of principal	2
Meaningful recovery of principal	50%-80% of principal	3
Marginal recovery of principal	25%-50% of principal	4
Negligible recovery of principal	0%-25% of principal	5

of other businesses—or to buy the company's common stock. In these instances, the company's ability to service its current debt is greater than its rating would indicate. The real concern is that the company will take on more debt, and subsequently lack the cash flow to service that increased corpus of debt. Accordingly, the default scenario to be used in loss-given-default analysis—and the related EBITDA/interest ratio—must focus on the projected increased debt level, rather than the current amounts.

Similarly, in the current low-interest-rate environment, many companies' risk of default—and, in turn, their credit ratings—is based on the assumption that interest rates will rise (unless they have locked in low rates with fixed rate, long-tenor debt). Indeed, current coverage ratios for many companies would otherwise seem out of line with their low ratings. Default scenarios for loss-given-default analysis relating to these companies will, therefore, reflect an inability to service the potentially higher interest amounts.

In these two examples, the enterprise value in the default scenario would be appreciably higher than if current debt or interest amounts are used in the calculation.

In the same vein, a default could occur if creditors accelerate their loans or force a restructuring upon breach of covenants—well before the company 'runs out of money', so to speak. The creditors' motivation would be to preserve recovery values by precipitating an 'early' default, i.e., prior to potential further declines in the business' cash-generating capacity. Default would then be linked to covenant levels—ordinarily a multiple of interest expense—rather than actual interest expense levels.

However, the reality is that bankers normally waive covenant breaches (although they could well extract a payment or obtain security for doing so). It is exceptionally difficult to predict in advance the minority of companies that will find their bankers taking the more radical position of pulling the plug.

Similarly, companies might default if they cannot refinance a large maturity—and, indeed, such a risk does occasionally drive the rating outcome. Yet, most companies that generate enough EBITDA to service

their debt do manage to refinance. Especially in the current flush financial markets, it is rare to see companies that cannot attract new debt financing.

Note, too, that if the default scenario were based on presumed intervention upon breach of covenants, the corporate rating would also have to reflect this expectation. As pointed out before, there must be consistency regarding the default scenario underlying the corporate rating and the recovery analysis. The effect of this would be greater default risk and lower corporate ratings. (Any 'notching up' would then be from a lower base.)

### Collateral Value Analysis

Collateral can consist of discrete assets (such as accounts receivable, real estate, or vehicles) that have value independent of the business, discrete assets that are linked—directly or indirectly—to the business' fortunes (inventory, production equipment), or the business enterprise itself. Bank loans to below-investment-grade issuers tend to have a first-priority lien on substantially all of a company's operating assets: receivables, inventory, trademarks, patents, plants, property, equipment, and pledges of subsidiary stock. In effect, they have the entire enterprise as collateral. Indeed, the whole is usually worth more than the sum of its parts, as long as the business enterprise continues as a going concern. (Private-placement debt issues are more likely to be secured by one or more discrete asset types.)

All types of collateral can enhance a creditor's rights and help ensure loan recovery, even though it is rare that a creditor will be able to simply foreclose and seize the collateral to liquidate it. In the U.S. at least, a bankruptcy filing imposes a stay on a creditor's right to the collateral during what is often a long and tortuous reorganization process. Moreover, the bankruptcy judge often has wide discretion (although seldom exercised) to substitute collateral. Indeed, most large company bankruptcies never result in liquidation: the company is usually reorganized. (The decision of whether to reorganize is influenced by a myriad of factors, including the legal system, industry trends, perceived

long-term viability of the business, and regulatory or political considerations.) The form the reorganization takes, including the resolution of creditors' claims, is the result of a negotiated process worked out before or after an actual bankruptcy filing.

Nonetheless, the outcome for creditors ultimately is a function of the collateral's value going into the reorganization process. For example, bankruptcy judges can substitute collateral, but they must adhere to the principle of "adequate protection" by providing collateral of comparable value to that of the original. So, knowing the value of the collateral—relative to the amount owed—provides an approximation of just how well a creditor is secured.

Consequently, the bank-loan analysis focuses on determining the value of the various asset types. The valuation analysis that produces the higher asset value should be used in determining the bank loan rating. Generally, if the business operating assets are all part of the security package, thinking of the collateral as a going-concern business would yield the highest values. That explains why the enterprise-value analysis is performed regularly. However, given the nature of the enterprise-value methodology, this appropriately is used only when the default scenario can be reasonably visualized, e.g., for highly leveraged companies. In these instances, the business presumably continues without drastic changes, while the financial overextension leads to default when the company can no longer service its entire fixed-charge burden. The enterprise value analysis cannot usually be used for investment-grade companies or for speculative-grade companies with conservatively leveraged balance sheets (and whose default risk is based on some serious business vulnerability). Instead, a liquidation analysis is conducted to determine the projected value of the specific assets that constitute such companies' collateral.

#### **Enterprise-Value analysis**

Enterprise value is established by using a discounted cash flow calculation, or, as a shortcut, a general market-multiple approach. The company's EBITDA (or, where applicable, EBITDAR) at the hypothetical point of

default is multiplied by a representative valuation multiple. (The value established assumes investors would finance the unit with a combination of debt, leasing, and equity). Appropriate discounts are applied to stress both cash flow and capitalization rates used to determine the value of the business.

EBITDA is projected to reflect the decline in cash flow at the time the company defaults. For this analytical exercise, the analyst simulates default scenarios. First, a base case is constructed that represents the minimum decline in EBITDA associated with a potential default. In this scenario, EBITDA falls short of the company's periodic interest and debt amortization payments. This scenario results in maximum cash flow consistent with a default and, therefore, equals the highest potential value for the defaulted company. Second, an alternative scenario is proposed, under which normalized EBITDA is reduced to a greater extent—usually 50% or more—to reflect other possible, more stressful default scenarios. Additional scenarios, with different reductions, can reflect company-specific default factors, such as sector risk, political, regulatory, or other factors. The more negative scenario is not automatically used in the rating determination; analysts must judge which scenario is appropriate based on the company's individual circumstances.

As explained earlier, a borrower with a respectable business position but a risky financial profile would be more likely to default (if a default occurs at all) because of its leverage than because of a decline in its business strength. Such an entity would be viable over the long term if it were more appropriately capitalized. The base-case scenario would be weighed more heavily. By contrast, a borrower with a weak business is more likely to default because of a decline in its business (failure to keep up with competition, changes in technology, etc.). The impairment of its business associated with the default scenario could more seriously affect its cash flow and market value. Accordingly, the weighting would lean toward the downside risks—or we would decide to abandon the enterprise-value approach altogether.

The cash-flow multiple used in the enterprise valuation model takes into account the

market multiple of the borrower's peer group. (This market multiple would always have to be adjusted to incorporate the negative effect a bankruptcy filing.) Cash-flow multiples, of course, change. If for no other reason, they should fluctuate with prevailing interest rates. For rating purposes, 5x has some empirical validity over the long term—and we cannot predict interest rates at the unspecified time of the simulated default. Actual experience with sales of distressed companies shows the 5x multiple to be widely applicable.

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

To be conservative, any priority claims—such as product or environmental liabilities—that are material would be deducted from the enterprise value. Similarly, the value of other existing secured debt, such as industrial revenue bonds or mortgage debt, is subtracted from the enterprise value. In some instances, trade creditors could have a perfected first-priority interest in merchandise, and the bank creditors would have a lower-priority claim on inventory. Importantly, to the extent the company relies on operating leases to generate its cash flow, an amount must be subtracted from the capitalization to represent the ongoing lease obligation.

The enterprise value analysis also assumes any revolving portion of a bank credit facility is fully drawn at the time of default. (However, this harsh assumption is not automatically made regarding notching down any unsecured issues.) In some cases, assumed borrowings under the rated facilities are earmarked for acquisitions. In these instances, the default EBITDA levels would be adjusted for the additional cash flow from these acqui-

sitions. The effect is adequately dealt with in the base-case scenario, but adjustment is called for in the downside case. Given the likelihood that most acquisitions will not be totally productive, the full amount of cash flow normally attributable to the borrowings is not added to EBITDA. The conservative position is to add 50% of the new cash flow to the EBITDA figure.

Standard & Poor's default scenario is modeled on EBITDA being insufficient to cover interest and amortization payments. As noted, other scenarios may affect the timing of a default. For example, a company may not be able to meet its amortization schedule or a bullet maturity, precipitating a default. Other large required outlays—including nondiscretionary capital expenditure—could have a similar effect on a wobbly company. In such cases, the cash flow associated with the default scenario should be higher than the usual base-case default assumptions. However, (re)financing risk ultimately is related to a company's prospects. As long as prospects for a company suggest an ongoing ability to service its debt, lenders should make financing available. The distressed-EBITDA default scenario generally reflects conditions that preclude refinancing.

#### **Discrete-Asset value analysis**

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

The analytical starting point is the assets' current value. Market value is key, and therefore appraisals often are required. Several methods are used to determine the market value, including recent sales of comparable assets and the assets' replacement cost, adjusted to reflect their age and technology. Other valuation techniques include discounting cash flow, industry norms and multiples of earnings and cash flow, and replacement value and fixed prices per unit of production (for natural resources). Although all valuation methodolo-

gies rely on some subjective aspects, the more objective the valuation, the better. (As noted, however, the relevant value is the value of the asset in a distressed scenario. To one degree or another, the company's asset values normally will be affected by the default scenario, when it is not business as usual.)

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

The assets' potential to retain value over time is critical. Even if not directly linked to the company's fortunes, asset values fluctuate and need to be stressed. Therefore, collateral is judged according to volatility, liquidity, special-purpose nature, and any correlation of its value with the health of the issuer's industry. Even assets that have value independent of the specific owner may still be correlated to industry or market factors. Because the relevant context is the default of the assets' owner, the analyst must be mindful that the circumstances leading to a default might also affect the assets' values. For example, if the borrower were a supermarket chain and the collateral were its fleet of trucks, the assets' value would not be reduced by the company's default. But, if the borrower were an offshore contract driller and the collateral were its fleet of vessels, there might well be a strong correlation between the events leading to the company's default and the market value of its drilling ships.

Also, if proper upkeep is critical to the assets' value, there might be some doubt about how much maintenance a failing company would provide. Any costs that would have to be expended to realize asset values also must be taken into account. These include dismantling installation, transportation, foreclosure, and remarketing costs, among others. On the other hand, the analysis would be based on an orderly liquidation scenario, rather than a fire sale.

### Springing liens.

"Springing liens," as the name implies, are liens that become effective once a company's credit quality deteriorates to a predetermined level. This level normally reflects the point at which creditors would become concerned about the possibility of default and bankruptcy. Often, the trigger for springing the lien is tied to a reduction in Standard & Poor's rating.

As far as rating criteria for corporate ratings, these liens ordinarily are considered identical to liens that already have been perfected, because they likely will be in effect by the time that security is relevant—i.e., in bankruptcy. (In the case of structured entities and hybrids, the approach we take is radically different because such entities might well preemptively file for bankruptcy protection to avoid an elevation in the status of claims against their assets by becoming secured.)

The corporate approach applies to both notching up and notching down. Bank loans containing springing liens can be notched up immediately; unsecured issues are to be notched down immediately to reflect their ultimately disadvantaged position in bankruptcy to loans that contain springing liens.

However, one can never completely take for granted the ability to perfect a lien. This legal risk would force some distinction between security that already has been perfected and security that still requires perfection. In practice, this factor could serve as a damper against assigning a rating two or more notches above the corporate credit rating in cases that would otherwise deserve such substantial enhancement.

A lien also cannot be perfected when a company is in bankruptcy, and problems regarding preference may apply if the lien springs close to a filing. That makes it important to have the trigger level correspond to a point in time that presumably will come well before a default. If a rating trigger for springing the lien is 'BB-' or higher, we would expect the lien to be legally enforceable, expecting such a rating to apply well ahead of any bankruptcy filing.

Conversely, some liens are designed to fall away. The effect of this potential removal of the security feature should be reflected

immediately. A typical example would be a five-year loan secured only for the first year or two. In that instance, the rating should ignore the security, given its temporary nature (unless the corporate credit rating is very low, in anticipation of imminent default). Another arrangement allows the lien to fall away when the corporate credit rating is raised. In that case, the loan rating can be enhanced at the outset—to the extent that it would remain at that level even after the security lapses, consistent with the higher corporate credit rating at that point.

### Second liens

The bank loan rating for second-lien debt can range from being notched above the corporate credit rating, to the same as the corporate credit rating, to below the corporate credit rating by one or two notches.

The key is to analyze the expected recovery following any potential default in absolute terms. The methodology outlined below supercedes our earlier approach, which merely addressed the relative disadvantage of the second-lien debt by considering the amount of priority debt.

These steps are followed:

- Analysts should compute coverage levels for the first-lien debt.
- Next, compute the coverage for the aggregate of first- and second-lien debt. The coverage levels will indicate—as a first pass—how confident we are about the recovery for the second-lien debt.
- However, the second-lien debt is not as well protected as the aggregate numbers would suggest, given the priority of the first-lien debt. One way to think about it: There is greater sensitivity to coming up short for the second-lien debt—which is at the bottom rung—than would be the case for one aggregate debt amount. Put differently, even if the coverage levels for the first- and second-lien debt are close—i.e., in the arithmetic sense, for this one crude measure—the actual protection levels are very different in qualitative terms.
- This leads to a simple rule, which can serve as a reality check: We do not rate the first- and second-lien debt the same, for conventional ratings that are above

the corporate credit rating. (However, it is acceptable to have the same recovery ratings, given the range of outcomes represented by those ratings. And it is also acceptable to be notched down by the same degree when taking into account the maximum gapping allowed by Standard & Poor's for the various classes of junior debt.)

Once the bank loan rating is assigned based on the steps above, the recovery perspective carries over to the recovery ratings.

Some examples:

If the first-lien debt is two notches above the corporate credit rating, the second-lien debt can be as high as one notch above, assuming we are confident they too would recover 100%. The recovery ratings would be '1' for both.

If the first-lien debt is one notch above the corporate credit rating, the second-lien debt can be the same as the corporate credit rating—as long as we are confident of 80% recovery. The recovery ratings would be '1' for the first-lien debt, and '2' for the second-lien debt. Even if the raw numbers indicate 100% recovery for the second-lien debt, the best it can be rated is equal to the corporate credit rating, i.e., one notch lower than the first-lien debt: therefore, a recovery rating of '2'.

In cases where the first-lien debt is rated at the same level as the corporate credit rating, the second-lien debt can be rated at that level—at least theoretically; it could also be rated lower, depending on the fact pattern. The best case would be one where the first-lien debt is relatively small in comparison to the assets of the company, so that the disadvantage it poses to the second-lien debt is below Standard & Poor's typical threshold levels. If the amount of the second-lien debt also is small, relative to the corporate assets, that could translate into recovery ratings of '2' for both the first- and second-lien debt—i.e., at least 80% recovery.

Normally, however, the second-lien debt recovery prospects would be viewed as worse—the result of coming behind the priority debt or the lack of valuable collateral in the first place. They then could be rated one or more notches behind the first-lien debt. If the analysis indicates they can be expected to

recover 50% to 80%—thus corresponding with a recovery rating of ‘3’—then the bank loan rating would presumably be at least one notch down (from a noninvestment grade corporate credit rating). If the recovery prospects were deemed still worse—only 25% to 50%—the recovery rating would be ‘4’; the bank loan rating normally would be two notches below the corporate credit rating.

In some cases, the first-lien debt also may be viewed as weak in terms of recovery prospects, and so might have a recovery rating of ‘3’ or ‘4’. Nonetheless, the first-lien debt—as the senior-most debt—would not be notched down, as noted above.

#### **Borrowing bases**

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

Ideally, as oil is produced or inventories are sold and receivables are collected, the proceeds must be used to repay bank borrowings, and renewal of borrowing means once again meeting the tests. But often, this is not the case. Nonetheless, the proximity of the valuation to the time of the ultimate default, as well as potential limitation of exposure to further deterioration are advantages. Periodic monitoring allows the banker to exercise some control. It is therefore important to know how frequently compliance with the borrowing base is calculated and what remedies are available if the base is exceeded. The definition of eligible assets obviously is critical.

The path to bankruptcy could involve a major drop in asset values, even if the default scenario incorporates an inventory buildup

resulting from a decline in sales. Unit value may slip as inventory piles up. Accumulation of aging, uncollectible receivables also is possible, but less common. Credit agreements often have sublimits on inventory borrowings in relation to total borrowings, to guard against just such unfavorable shifts in the collateral mix.

#### **Stock as collateral**

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

The criteria, however, do not preclude assigning value when shares are the collateral. Shares of the borrower—which would be bankrupt in the relevant scenario—presumably would have little value. The same would apply to the shares of major subsidiaries of a bankrupt borrower, especially if the companies are in the same general line of business. However, shares of a subsidiary in a different line of business, or of a subsidiary abroad that has independent business prospects, may retain value, even if that subsidiary is drawn into the bankruptcy.

(Standard & Poor’s Ratings Services’ legal team has researched the risk of substantive consolidation, and concluded that it is remote in nearly all cases.)

The key analytical issue would be the risk the subsidiary is weakened financially by actions of its parent as the parent struggles to stave off its own default. Even if that unit has few liabilities now, there must be legal or regulatory restrictions that prevent incurring additional debt—or the residual value of the shares could be diminished.

Subsidiary stock has been an effective way of providing valuable security in cases when assets could not be pledged directly—e.g., certain licenses and contracts. The licenses are set aside in dedicated subsidiaries, typically as their sole assets—while liabilities are strictly limited.

#### **Tenor/amortization**

Long-term concerns that could constrain a corporate credit rating may extend beyond the time horizon of an issue or bank loan

facility. Therefore, a short final maturity may be favorable. (Unsecured debt issues do not benefit similarly from shorter maturities, because they normally are repaid by refinancing. The issue's long-term risk profile would affect the refinancing risk.)

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

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

#### Legal considerations

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

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

#### "Tight" covenants

Covenants alone—in the absence of collateral—seldom result in a higher debt rating,

although there could be a boost for the recovery rating.

As far as default risk, if the covenant breach were to arise from deterioration in the business, the bank's enforcement will only compound the problem. If the bank refuses to provide more funds—and especially if it requires immediate repayment—the company's liquidity will suffer and the risk of default increases. The best-case scenario would be one in which the bank waives or renegotiates the covenant without penalizing the company by way of compensation or tougher terms.

If the potential covenant breach is linked to a proposed credit-harming transaction that is discretionary, the bank could force the company to abandon the transaction. But, if the bank waives the covenant, or if the company manages to refinance the bank loan as part of its deal, the covenant will not have benefited the company's default-risk profile.

Accordingly, tight covenants theoretically could benefit the corporate credit rating, but more often do not. Rating enhancement would apply only when:

- Concern over a deliberate credit-harming event is the specific rating factor that prevents a higher rating (situations in which the rating explicitly takes into account such an expectation or event risk are uncommon—except in the context of a parent tapping the financial potential of a subsidiary); and
- The covenants would have to be tight enough to prevent any transaction inconsistent with the higher rating level; and
- We could be confident in advance that the bank would not waive the covenant, and could not (easily) be replaced. In reality, the bank's waiver or alternative financing should be available for reasonable credits—i.e., wherever the rating outcome following the transaction is 'BB-' or better.

Enforcement of the covenants and precipitating a bankruptcy might indeed benefit the bank in terms of ultimate recovery of principal from a deteriorating situation. The bank would be seeking repayment early on, while the business retained greater value. However, the rating outcome for the bank loan would not necessarily be higher than it would be without the tight covenants—and might even be lower: Increased notching would presum-

ably be from a lower corporate credit rating, given the increased risk of default.

If the covenant breach arises from a discretionary transaction, the bank could avoid risk—if not by preventing that transaction—by insisting that it be taken out by other financing. The rating benefit to the bank loan itself would still depend on the extent to which such a potential credit-harming transaction plays a role as a rating factor in the first place. The more prominent the transaction's role in the rating—i.e., to the exclusion of concern for ordinary, fundamental risks—the more the potential that tight covenants could mitigate risk and enhance the assigned rating.

### Debtor-In-Possession (DIP) Financing

Because adequate funding is key to a company's potential for reorganization and emergence from bankruptcy as a viable entity, the U.S. Bankruptcy Code provides incentives for lenders to finance companies operating under the protection of Chapter 11. Such post petition financing is known as debtor-in-possession (DIP) financing.

Our criteria for rating DIP loans extended to companies in bankruptcy employs the conceptual framework developed for bank loan ratings. The analysis for these DIP loans consists of two parts:

- The first focuses on timely repayment; and
- The second focuses on the particulars of the specific loan and the potential for recovery on that loan in the event liquidation (a shift to Chapter 7) becomes necessary.

#### Timely payment

In the case of DIP loans, timely payment of principal occurs through the debtor-in-possession's reorganization, its emergence from Chapter 11, and repayment of the DIP loan. Such payment is considered "timely" and in accordance with the terms of the agreement—not withstanding the possibility of a stated earlier maturity—in keeping with the normal expectations. DIP lenders generally are tied in for the duration of the reorganization process.

This part of the analysis considers the likelihood of reorganization. A favorable assess-

ment is likely for viable companies, particularly for large, established entities. If the operation is fundamentally healthy, but the company is saddled with debt because of a leveraged buyout (LBO), a recapitalization, or an overpriced acquisition, its ability to service a more appropriate debt load via reorganization might be quite strong.

However, if there were any significant doubt about the company's viability, the result probably would be a speculative-grade outcome. A failed company in an industry with poor fundamentals or with a seriously flawed business model would be a lesser candidate for rehabilitation and refinancing.

Accordingly, much of the analysis is identical to the fundamental corporate credit analysis relating to a company in the context of its particular industry. This analysis focuses on the supply-and-demand forecasts for the company's products, its market position, operating history, current cash flow, and ability to operate profitably once it has a manageable capital structure. These factors are much the same as would be considered in assigning a credit rating to a non-bankrupt company. Of course, the impact of the bankruptcy itself—on the company's business relationships with its customers, its vendors, and its employees—is critical in the case of a DIP loan.

One important difference from other rated instruments is the relatively short time horizon for a DIP loan (often six months to two years), which obviates some of the longer-term considerations factored into traditional ratings. In rating a DIP loan, we focus on longer-range factors only to the extent they affect the company's ability to reorganize.

Once the company has filed for Chapter 11 protection, pre-petition debt service usually is suspended. Obviously, there will be debt service on the rated loan and there may be other obligations the court has approved for continuing payment. If there is secured debt, the company generally will accrue post-petition interest—even if no cash payments are being made—to the extent the value of the security exceeds the amount of the debt. It is imperative to be aware of any motions that may be filed on behalf of pre-petition creditors to receive payment of their claims, adequate protection for their position, or otherwise contest

the DIP loan. The company may be planning asset sales, store closings, or lease cancellations, all of which could have a bearing on the level of cash flow the company can generate and its attractiveness as a viable candidate for fresh financing to take out the DIP lenders.

#### **Collateral and ultimate recovery**

The second part of the rating analysis looks at the particulars of the specific loan and its recovery potential in the event of liquidation. As with collateralized loans to non-bankrupt companies, the rating may be enhanced by one or several notches, if there is a reliable, second way out.

Strong legal protection is a hallmark of DIP lending, and so it would be normal to expect some enhancement of the DIP loan rating: Thus, the rating is anchored by the perceived likelihood of reorganization, and supplemented by the potential for recovery through asset liquidation.

We analyze collateral with a focus on its ability to retain value through a liquidation process. A conservative valuation of the collateral should cover the loan by a safe margin (*see “Bank Loan and Private Placement Rating Criteria”*). This would be the case if a company entered Chapter 7. Receivables and inventory often are the collateral supporting typical industrial DIP loans. This collateral is among the most liquid types, and typically governed by conservative borrowing bases.

#### **Legal status**

Section 364 of the U.S. Bankruptcy Code provides for “superpriority” status to be given to a claim for payments on the DIP loan if that is the only way to induce lenders to provide credit. Superpriority status—i.e., the right to be repaid from the unencumbered assets of the company—gives the DIP lender substantially the same recovery rights as a direct security interest in the otherwise unencumbered assets of the company would have. In addition, the bankruptcy court may authorize security for the loan through a lien on the company’s unencumbered property. While a debtor-in-possession may obtain unsecured financing in its ordinary course of business without a court

order, the bankruptcy court must approve any loan agreement that puts payments ahead of other administrative expenses.

By providing clarity on the status of the lender’s claim to be repaid, court orders authorizing application of these provisions of the bankruptcy code give substantial comfort. Analysis of the loan agreement and court orders can determine the priority of the lender’s claim on the company’s payments. It is important to review any other claims, either on par with or prior to the loan. In addition, there may be liens that can affect the lender’s claim: Taxes and ERISA claims may be of such a priority. Pension Benefit Guaranty Corp. (PBGC) claims normally are treated as junior in priority to any DIP claim. To understand the nature of any significant liens against a company, Standard & Poor’s views a Uniform Commercial Code (UCC) search as important. We will discuss the results of any significant findings with the company, as well as whether new liens have been filed.

A DIP loan with superpriority claim status, and a tight loan agreement and court order, can get the full measure of rating enhancement. A strong court order would state that no other claim having priority over or being on par with the DIP loan should be granted while the DIP loan is outstanding. This is important because the lender may have a security interest in unencumbered collateral. In addition, the court order should explicitly established the superpriority status of the DIP lender’s claim and assure that the automatic stay provisions will not be lifted or modified to the detriment of the DIP loan.

#### **Key DIP documents**

The following are the key documents needed for rating a DIP loan:

- Loan agreement, with all modifications and amendments;
- Updated financial information;
- Interim orders and final order;
- Evidence of a UCC search, with e-mail confirmation of new prior claims, and
- Opinion that the order has become final and is unappealable. ■

# Equity Credit: What It Is And How You Get It

(Editor's note: This article updates a Corporate Criteria article originally published on Oct. 28, 2004.)

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

The question of equity credit is not a yes-or-no proposition. The notion of partial credit is very appropriate.

## What is equity?

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

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

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

In any event, the security's economic impact is relevant: its nomenclature is not. A

transaction labeled debt for accounting, tax, or regulatory purposes may still be viewed as equity for rating purposes, and vice versa.

## Attributes of equity

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

date—offers another example of a transaction that falls short in terms of this basic attribute of equity. However valuable it may be to have a call on funds in the future, the business does not have the funds now. And, by making the funds available at the company's discretion, there is the risk that a delay in exercising that option may lead to a situation of “too little, too late.”

- Equity requires no ongoing payments that could lead to default. Equity pays dividends, but has no fixed requirements that could lead to default and bankruptcy if these dividends are not paid. Moreover, there are no fixed charges that might, over time, drain the company of funds that may be needed to bolster operations. A company is under pressure to pay both preferred and common dividends, but ultimately retains the discretion to eliminate or defer payment when it faces a shortage of funds. Of course, a company's reluctance to pass on a preferred dividend is not identical to its reticence to altering its common payout. Accordingly, there is a difference in “equity credit” afforded to common equity relative to preferred equity. Similarly, common equity issued in conjunction with so-called income depository securities (IDSs) is viewed as possessing less discretion over dividends: They are marketed with an expected yield, and investors are promised a payout of virtually all cash flow.

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

Debt instruments can be devised to provide flexibility with regard to debt service. Deferrable payment debt issued directly to investors—i.e., without a trust structure—legally affords the company flexibility regarding the timing of payments that is analogous to trust preferreds. Yet, by being identified as a debt security, the company's practical dis-

cretion to defer payments may be constrained, which diminishes the equity credit attributed to such hybrids compared with deferrable payment preferred stock.

By removing the discretionary element, certain trigger mechanisms can increase comfort that deferral actually will occur when the circumstances of the issuer make this desirable from the creditors' perspective. Income bonds—i.e., where the payment of interest is contingent on achieving a certain level of earnings—were designed with this in mind. However, to the extent that cash flow diverges from earnings measures, income bonds tend to be imperfect instruments. A recent variation on the theme pegs the level of interest payments to the company's cash flow. The equity content of such instruments is a function of the threshold levels used to determine when payments are diminished. If the level of cash flow that triggers payment curtailment is relatively low, that instrument is not supportive of high ratings. Another straightforward concept entails linking interest payments to the company's common dividend, creating an equity-mimicking bond. A number of international financial institutions issued such bonds in the late 1980s. Of course, if a company had an inordinate amount of dividend-linked issues outstanding, this ultimately could increase its reluctance to curtail its common dividend.

- Equity has no maturity or repayment requirement. Obviously, the ability to retain the funds in perpetuity offers the company the greatest flexibility. Extremely long maturities are next best. Accordingly, 100-year bonds possess an equity feature in this respect (and only in this respect) until they get much nearer their maturity. To illustrate the point, consider how much, or how little, the company would have to set aside today to defease or handle the eventual maturity. However, cross-default provisions would lead to these bonds being accelerated.

Preferred equity often comes with a maturity—as a limited-life or sinking-fund preferred—which would constitute a clear shortcoming in terms of this aspect of equity. Limited credit would be given for this type of preferred, even if the security had a 10-year

life or more. Even if it could be assumed the issue successfully is refinanced at maturity, the potential for using debt in the refinancing would be a concern (*see the following discussion on the permanence of equity*).

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

Subordination typically is a secondary consideration compared with other beneficial aspects of equity. Thus, if an instrument is senior, but ongoing payments are deferrable and it has a long-dated maturity, we could well view it as having substantial equity content. On the other hand, if an instrument is subordinated, but lacks the other equity-like traits, it would be viewed as predominantly debt-like. The distinction between subordination and deep subordination generally is not significant in our analysis, although deep subordination incrementally is more supportive.

- Equity is expected to remain a permanent feature of the enterprise's capital structure. At any time, a company can choose either to repurchase equity or to issue additional shares. However, some securities are more prone to being temporary than others. Our analysis tries to be pragmatic, looking for insights as to what may ultimately occur. The ability to call always should give reason for pause; however, we have not placed much emphasis on this feature if the instrument is truly low-cost—such as tax-deductible preferred—and, therefore, should not pressure the company to refinance. Calls exercisable after five years are very common to long-dated hybrids. (We would question the rationale for a call date only two to three years after issuance.) Sometimes the issuer has the right to call the instrument not just on the initial call

date, but on each subsequent coupon date: this weakens equity credit, because it increases the likelihood the issuer ultimately will find conditions attractive for refinancing the instrument with debt. Preferred stock, in particular, likely will have provisions for redemption or exchange, if not an outright stated maturity. Coupon step-ups are designed to motivate calling the issue. Auction or remarketed preferred stock is designed for easy redemption. Even though the terms of this type of preferred provide for its being perpetual, failed auctions or lowered ratings typically prompt the issuer to repurchase the shares.

Our discussions with management regarding a company's financial policies provide insights into its plans for the securities: whether a company will call or repurchase an issue and what is likely to replace it. "Replacement language" in the issue that restricts refinancing to issues of similar equity content can provide additional comfort regarding management intent, even though companies' financial policies can vary over time, future capital market conditions could limit the ability to issue specific types of securities, and legal enforcement is dubious. Another important consideration is the issuer's tax-paying posture. It is difficult for a nontaxpaying issuer to make the case that the company will continue to finance with nontaxdeductible preferred stock once it becomes a taxpayer and can lower its cost of capital by replacing the preferred with debt. Other clues can come from the nature of investors in the issue (e.g., money market, as opposed to long-term fixed-income investors) and the mode of financing that is typical of the company's peer group. For example, utilities traditionally finance with preferred stock, and industry regulators are comfortable with it. Therefore, the usual concern that limited-life preferred stock will be refinanced with debt does not generally apply in the case of utilities.

In the case of so-called tax-deductible equity, risk exists that their favorable tax status is overturned, and—especially with new hybrids—that risk may be substantial. This concern can be mitigated by provisions in the transaction to convert into another

equity-like security in the event of loss of tax-deductibility.

### Rating methodology

While many focus on the leverage ratio in thinking about equity credit, a company's leverage is just one of many components of a rating assessment. (In fact, cash flow adequacy and financial flexibility have long surpassed balance-sheet considerations as important rating factors.)

Standard & Poor's methodology of breaking all the analyses into categories allows each of the several attributes of hybrid securities to be considered separately and in the appropriate analytical category. The aspect of ongoing payments is considered in fixed-charge coverage and cash-flow adequacy; equity cushion in leverage and asset protection; need to refinance upon maturity in financial flexibility; and potential for conversion in financial policy. The before- and after-tax cost of paying for the funds also is a component of both earnings and cash flow analysis.

In practice, the analyst often takes a shortcut approach to reflecting hybrids in credit ratios. In general, the analyst calculates alternative sets of ratios, reflecting that the truth lies in a gray area between two perspectives. *(Please see the "Hierarchy" section at the end of this piece.)*

But we do not simply "haircut" hybrid securities or assign fractional equity credit when calculating financial ratios.

In any event, the relative importance of each equity attribute can vary. The critical issues for companies can differ. Moreover, the factors that delineate 'A' ratings from 'AA' ratings tend to differ from those that determine whether a rating will be 'B' or 'BB'. So, the impact of a hybrid may depend on the specific needs of a given issuer or its place in the rating spectrum. Aspects affecting near-term flexibility usually are of prime importance for low-rated, troubled credits, while long-term considerations are more germane when an already highly rated credit is being reviewed for an upgrade. To illustrate the point: Replacing 20-year debt with 100-year debt is a nonevent for a company facing insolvency in the next several quarters.

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

### Factoring Future Equity Into Ratings

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

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

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

### Predicting the outcome

The first dimension of the analysis is assessing the potential for issuance of, or conversion to, equity, and the likelihood of the company's retaining that equity as permanent capital. The risks vary by the type of instrument and any unique characteristics. The following discussion is arranged in

ascending order, based on the likelihood of a positive outcome.

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

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

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

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

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

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

The most favorable rating consideration is given to issues that are mandatorily convertible in the near term and at a fixed price. Conversion is a certainty. At the end of a very short period, the investor receives one share of common stock, or a fractional share, if the price of the common stock has appreciated beyond a certain point. The company’s decision to issue the equity is based on the locked-in floor price for the common stock. Regardless of the movement in the stock price, there is little reason for the company to reconsider its decision.

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

### Grantor trusts, ESOPs

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

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

### Timing the issuance

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

The rating review of a company making a large, debt-financed acquisition offers a common example. The analysis would not focus on a snapshot view of the issuer’s financial condition; rather, the rating would take into account the company’s plan to restore financial health, if such a plan exists. New equity usually is part of such plans. The company

might issue convertible securities or it might commit to issuing specific amounts of common equity over the short term.

When a positive or negative development is expected farther out in the future, its ratings impact is diminished. As a dynamic entity, the issuer will be affected in many offsetting ways in the interim. To single out one expected event is to take it out of context. To reflect its impact in pro forma financial ratios would be a distortion.

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

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

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

Often, companies combine share issuance programs with share repurchase transactions. A company may incur debt to purchase shares already outstanding that will be reissued through a trust or an ESOP. Another

option is for the ESOP to borrow to buy shares in the market, with the corporate sponsor guaranteeing the debt. This is known as a leveraged ESOP. Or, a company may repurchase shares and issue convertible debt to limit the credit impact.

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

### Tax-Deductible Preferred And Other Hybrids

Texaco Capital LLC issued the first of the so-called “tax-deductible” preferred stocks in 1993. This hybrid equity security was a major innovation in corporate finance, creating a modern-day version of the long-existing preferred stock.

Tax-deductible preferred has since enjoyed tremendous issuance volume. The total is well over \$300 billion. The product has been especially popular with utilities and banks, but has attracted issuers of all stripes.

#### Equity credit

The essence of the new financing vehicle’s success is achieving simultaneous treatment as equity for credit-rating purposes, and treatment as debt for the issuer’s tax purposes.

While the new type of preferred sacrifices some of the equity features of conventional preferred stocks, it retains sufficient equity content to warrant partial equity credit in terms of our rating criteria. Importantly, it is effectively tax deductible, which benefits the company’s after-tax profitability and cash flow. This low cost, in turn, enhances the equity content by increasing the expectations for longevity of the instrument.

The financing structure calls for issuance of the preferred by a subsidiary entity that pays no taxes. The funds are then lent to the parent, with the loan terms closely mirroring the

terms of the preferred. The interest payments on the intercompany loan are tax deductible.

The Texaco deal used a subsidiary located in the Caribbean tax haven of Turks and Caicos to issue the preferred. Subsequently, Delaware LLCs, partnerships, and trusts were used to accomplish the same tax treatment. Since 1995, the trust structure has emerged as the vehicle of choice, hence the term “trust preferred” coming into use to describe the genre.

The essential equity features that have become standard are:

- Deferral of payments for up to 60 months—as long as no common dividends are being paid. (Conventional preferreds have unlimited potential for nondeclaration of dividends, subject only to board representation by preferred holders after six quarters of nonpayment.)
- Deep subordination.
- 30-year life. (Conventional preferreds are perpetual, although many have call provisions. The new-genre preferreds also are nominally perpetual, but terminate when the intercompany loan matures, normally in 30 years.)

We view preferreds that meet these standards as having intermediate equity content. As the remaining life of the specific issue dwindles over time, the equity attribution is reduced. Conventional preferreds, by way of comparison, typically possess equity content that does not diminish over time, given their perpetual tenor.

#### Some history

As this financing instrument became very popular, the U.S. Treasury moved to deny its tax-deductible status. In particular, there were attempts to define long-tenor instruments as “equity,” limiting the life of “debt” to 15 years. This would have discouraged issuance of precisely that type of preferred that warrants credit in the rating process, while the short-life versions would get no rating benefit, eliminating the key motivation for companies to issue such hybrids.

It also put at risk the treatment of many extant issues that provided for unwinding in the event of a change in tax treatment. The continuation of equity treatment then

depended on expectations the tax treatment of outstanding issues would be grandfathered. (Other deals would result in a parent preferred were a change in tax treatment to occur, and were not a problem.)

In the end, however, Congress did not adopt the proposals, and the tax treatment is now viewed as safe. The tax rules are left with extremely broad and very vague definitions of debt/equity—including how an instrument is viewed by credit rating agencies.

Another issue confronting the new preferreds has been accounting treatment. Initially, these preferreds were displayed on the balance sheet as “minority interest.” As of 2003, however, they must appear as a liability, and the dividend payments show up in the same category as interest expense.

This change probably dampens the enthusiasm of companies for issuing these securities. However, the change in accounting does not drastically affect the equity treatment we afford the preferreds.

Nomenclature and accounting can influence the general perception of the instrument, thereby subtly affecting the company’s discretion regarding payment deferral. Still, these factors are secondary to the terms of the instrument and the company’s economic incentives, so the equity content is only slightly reduced because of debt accounting.

(Banks and financial institutions face additional issues regarding the acceptance of these preferreds as regulatory capital. Regulators were first reluctant in this respect, but did eventually allow them, with some modifications, to be treated as Tier 1 capital. In light of changes in accounting, changes to the structure may now be needed to continue to get such capital credit in the future.)

#### **Adding features**

Some trust preferreds add convertibility features to make them more equity-like. Investors can convert to common equity, subject to the stock price appreciating by a certain percentage. Indeed, under Standard & Poor’s criteria, convertible preferreds are typically viewed as having 60% equity content.

To broaden investor appeal, preferreds with variable rates were introduced. This

does not, in our view, alter the equity content, although the exposure to floating rates, if material, can pose a risk that is considered in other aspects of the analysis.

A further “innovation” called for resetting rates after an initial 5- or 10-year period. The idea was to create an incentive for the company to call the issue at that point, to avoid a penalty rate. We regard issues with step-up rates as having an effective maturity at that point, thereby largely undermining their equity content.

A reset that merely captures any change in the issuer’s credit spreads is less troublesome, because the company presumably would have little incentive to refinance the issue. That still could be problematic, if, for example, the issuer dropped to non-investment grade: its cost for long-term funds might be expected to widen to the point that only shorter-term alternatives would be palatable. Alternatively, the reset could be a fixed spread over a floating rate that is higher than the current credit spread. Arguably, the extra spread could be justified as compensation for potential credit deterioration over a long term. Moreover, it cannot be presumed to be higher than the company’s credit spread will be at the reset date.

A miniscule rate reset—say, 25 basis points—is not problematic, nor is moving from a fixed to a floating rate, by itself, a problem. However, adding 50 or more basis points to the fixed rate or the reference rate produces a penalty rate. Similarly, if the rate is the higher of two or more reference rates, there is an effective penalty to the issuer. (There can be exceptions, however, depending on the specific rates involved. For example, there is no concern if one is a 30-day rate and the other a 30-year rate, since one can expect the longer-term rate will apply almost all of the time.)

To mitigate the impact of stepped-up rates on the equity credit afforded to that financing, some issues proffer “replacement language,” promising that any refinancing of the instrument will come from proceeds of an equity issuance or a new instrument of equivalent equity content. The legal enforceability of such terms is highly dubious. Nonetheless, Standard & Poor’s does put

stock in such provisions, as long as the company involved has a decent record of credibility, and the language is highly specific regarding the definition of instruments that would qualify as replacements.

### Global variations

The new genre of preferreds has local variations, reflecting differing capital market preferences and tax considerations.

In the U.K., for example, Inland Revenue allows a tax deduction even if the debt is perpetual and dividends can be deferred without limitation. A handful of deals (notably, from Grand Met PLC and Cadbury PLC) did incorporate those equity enhancements—and the equity content, from our perspective, was boosted.

On the other hand, European investors are less inclined to make very long-term investments. European deals, therefore, are more likely to incorporate reset provisions—making replacement language critical.

Some European deals introduced greater restrictions on the ability to defer dividends. The issuer can defer only after curtailing its common dividend for some period of time. This translated into seriously lower equity credit afforded to those issues. In the case of companies that do not pay a quarterly common dividend—not unusual in Europe—the problem is compounded, because there might be an even longer period between when the company experiences financial distress and when it can defer preferred dividend payments. Similarly, the value of deferability is diminished if the deferral can only occur following a period when the company has reported a net loss, but where the company reports results on a semiannual, rather than quarterly, basis.

In some European instruments, payments are noncumulative. This is incrementally more beneficial than when payments are cumulative, because the need to make up payments previously deferred can otherwise hinder a company's turnaround. We are wary of cases where foregone cash distributions must be replaced by the issuance of common stock, given the potential that the company would be loathe to accept the ensuing dilution.

The Japanese put a toe in the water in 2001 with a version of trust preferred securities. NEC Corp. sold a deal that was perpetual, but, after the first five years, had a rate reset that would reflect changes in credit spreads. Standard & Poor's expressed its reservations about the value of such instruments in the Japanese context. Local business culture involves great reticence with respect to altering dividend payments. Indeed, the whole notion of preferred stock of any type is a novelty in Japan. Accordingly, the equity content of Japanese preferreds will evolve over time as local practices may come to resemble those of Western markets.

### Recent innovations

The quest for enhancing preferreds' equity content continues. One idea is making payment deferral automatic upon reaching certain triggers or occurrence of certain events. Indeed, replacing issuer discretion with a formulaic approach to deferral adds significantly to the equity content—if the threshold for stopping payments is set high. Each issuer's situation would require a unique analysis, making standardization impossible.

Triggers could be based on financial data or ratios or rating levels. Alternatively, the payments could be linked to the company's common dividend. Additionally, it is possible to offer non-cumulative versions that would not require the company to make up for payments skipped because of financial distress. Beyond that, forgiveness of part of the principal in cases of company stress could theoretically be offered.

The rub is that investors would be leery about accepting the risks associated with nonpayment associated with high thresholds. The key is to find the right balance that would be meaningful for the issuer and still acceptable to investors at a reasonable rate.

### Some other hybrids

- **Mandatory exchangeable debt or preferred (e.g., DECs):** If the issue must be settled with the stock of another entity (currently owned by the issuer), the analytical treatment is that of a deferred asset sale. All assets may be positive or negative to credit quality; there is no stan-

standardized impact. The factors that determine the credit impact include price achieved and use of after-tax proceeds. Will the proceeds be distributed to shareholders? Or used to pay down debt on a permanent basis? Or be reinvested? If reinvested, is the new asset more or less risky than that which was sold?

- Mismatched mandatory conversion debt (e.g., FELINE PRIDES): Given the mismatch, the equity issuance is not ordinarily netted against the debt obligation. It is equivalent to a company simultaneously issuing deferred equity plus a like amount of debt. The net impact of these two issues would depend on whether leverage is increased or decreased, which, in turn, depends on the company's financial leverage prior to these two issuances.
- Step-up preferred: If an instrument provides for adjustment of terms, the analyst may consider the adjustment date as the expected maturity, with the related diminution of equity credit. If the adjustment is to above-market rates, it is presumed the instrument will be refinanced—and not necessarily with another equity-like security.
- Remarketed convertible trust preferred (e.g., HIGH TIDES): On balance, this hybrid is viewed negatively, despite the potential for conversion to common stock and the rate savings created by the remarketing feature. The need to remarket at a level above par could lead to terms that are unpalatable to the issuer, prompting a refinancing.
- Auction preferred: These frequently remarketed preferreds virtually are treated as debt. They are sold as commercial paper equivalents, which leads to failed auctions if credit quality ever falls to 'A-3'—or even 'A-2'—levels. While the company has no legal obligation to repurchase the paper—i.e., the last holder could be left with this “perpetual” security—the issuer invariably bows to market pressures, and chooses to repurchase the preferred.

## Streamlining Hierarchy Of Hybrid Securities

Standard & Poor's Ratings Services introduced the equity hybrid hierarchy in 1999, pioneering a quantitative approach to the 'partial credit' associated with equity hybrids issued by corporates. (Given different analytic considerations, another framework applies for financial institutions.) The hierarchy was expressed using a scale of 0% to 100%. Ordinary common equity represented the paradigmatic 100%.

This scale was created to provide greater transparency, as companies and their advisers probed the relative benefits associated with alternative financial products. At the same time, we cautioned users to avoid exaggeration of the differences suggested by the various gradations.

In 2005, we modified the scale by collapsing the hierarchy into three categories, and changing the terminology. This rebalancing of specificity with simplicity was to communicate our views more effectively—not to change the underlying analytical methodology.

### Three categories

The different levels of equity content are grouped into three categories. Hybrids that had been 10/20/30 on the previous scale are classified as possessing “minimal equity content”. Those that were 40/50/60 are classified as possessing “intermediate equity content”; those that were 70/80/90 are classified as having “high equity content”.

### Modified Hybrid Hierarchy

- Minimal Equity Content: This group includes instruments with little or questionable permanence; terms or nomenclature that restrict or discourage discretion over payments; after-tax costs or conversion terms that may become unattractive to the issuer.
- Intermediate Equity Content: This group encompasses most of preferred stock genre, from 30-year trust preferred with five-year cumulative deferral rights to perpetual, tax-deductible preferred (as in the U.K.), with unlimited and/or noncumulative deferral rights.

- **High Equity Content:** This group includes instruments with a mandatory component, either regarding deferral of ongoing payments (at appropriately high trigger levels), or near-term conversion into a fixed number of common equity shares (on a basis that would not be deemed unpalatable to the issuer at the time of conversion).

*(See: “Hybrids’ ‘High Equity Content’ Category Held to High Standards”; published Sept. 7, 2005, and “CreditFAQ: Sundry Equity Hybrid Features”, published Dec. 9, 2005, on RatingsDirect, Standard & Poor’s Web-based research and credit analysis system, for additional criteria.)*

#### **Rating methodology**

The numerical gradations never implied fractional treatment for the purpose of ratio calculation (a point repeatedly stressed). This continues to be the case. (We have never split the amounts of an issue for ratio calculations because the results can be distortive.) Rather, hybrids with minimal equity content are treated as debt for ratio purposes; hybrids

with high equity content are treated as equity for calculating ratios.

For hybrids with intermediate equity content, financial ratios are computed both ways—viewed alternatively as debt and as equity. That is, two sets of coverage ratios are calculated—to display deferrable ongoing payments (whether technically dividends or interest) entirely as ordinary interest and alternatively as an equity dividend. Similarly, two sets of balance-sheet ratios are calculated for the principal amount of the hybrid instruments, displaying those amounts entirely as debt and entirely as equity.

For these hybrids in the middle category, analytical ‘truth’ lies somewhere between these two perspectives. Analysts must interpolate between the two sets of ratios to arrive at the most meaningful depiction of an issuer’s financial profile—normally, by splitting the difference.

Analysts can still note and give effect to each more-equity-like/less-equity-like feature of various hybrids in the same category; however, such nuances play, at most, a very subtle role in the overall rating analysis. ■

## Parent/Subsidiary Links

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

### General Principles

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

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

greater the gap to be bridged, the more evidence of support is necessary.

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

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

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

Both factors argue that, in most cases, a "strong" subsidiary is no further from bankruptcy than its parent, and thus cannot have a higher rating. Experience has shown

that bankrupt industrial companies file with their subsidiaries more often than not.

For rating purposes, the risk of “substantive consolidation” is a side issue.

Consolidation in bankruptcy, sometimes referred to as substantive consolidation, occurs when assets of a parent and its subsidiaries are thrown together by the bankruptcy court into a single pool and their value allocated to all creditors without regard for any distinction between the two legal entities. In such cases, creditors of a subsidiary may lose all claim to the value associated with that particular subsidiary. Much more often, a parent and its subsidiaries will all file, but each legal entity will be kept separate in the bankruptcy proceeding. Creditors keep their claim to the assets of the specific legal entity to which they extended credit. Because corporate ratings address default risk, the key issue is not consolidation, but rather whether a bankruptcy filing will occur. Nonconsolidation opinions are, therefore, of more value with respect to recovery ratings and issue ratings of subsidiary debt, because those opinions address the likelihood of substantive consolidation, rather than the likelihood of simultaneous bankruptcies for parent and subsidiary. Perhaps the willingness to obtain such an opinion might also serve as some evidence of management intent regarding a subsidiary’s independence.

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

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

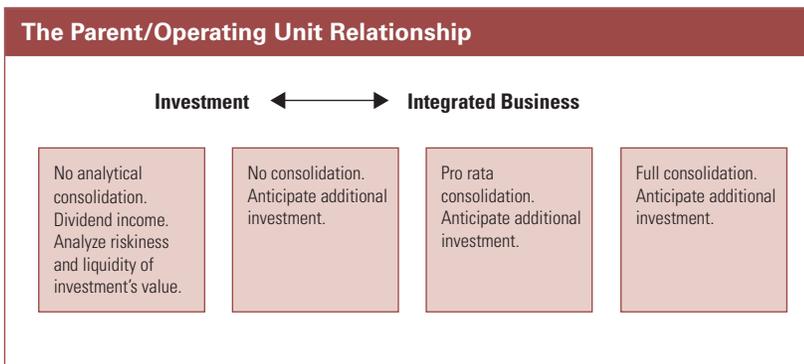
### Subsidiaries/Joint Ventures/ Nonrecourse Projects

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

The same alternatives may apply when companies invest in joint ventures that issue debt in their own name, and when companies choose to finance various projects with nonrecourse debt. These analytical issues also may apply when companies take pains to finance some of their wholly owned subsidiaries on a stand-alone, nonrecourse basis, especially in the case of noncore or foreign operations.

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

At the other end of the spectrum, operations may be characterized as an integrated business. Then, the analysis would fully consolidate the operation’s income sheet and balance sheet; and the risk profile of the operations is integrated with the overall business risk analysis. Or, the business may



not fall neatly into either category; it may lie somewhere in the middle of the spectrum. In such cases, the analytical technique calls for partial or pro rata consolidation and usually the presumption of additional investment, that is, the money the company likely would spend to bail out the unit in which it has invested.

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

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

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

### Determining Factors

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

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

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

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

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

### Regulated Companies

Normal criteria against rating a subsidiary higher than a parent do not necessarily apply to a regulated subsidiary. A regulated subsidiary is indeed rated higher than the parent if its stand-alone strength so warrants and regulatory protection is sufficiently strong. However, the nature of regulation has been changing—and creditors can rely on regulators to a much smaller extent than in the past. For one thing, deregulation is spreading. As competition enters markets, the providers are no longer monopolies—and the basis of regulation is completely different. Most of all, regulators are more concerned with service quality than credit quality.

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

The analyst makes this determination on a case-by-case basis, because regulatory jurisdictions vary. Implications of regulation are different for companies in Wisconsin and those in Florida or those subject to the scrutiny of the Securities and Exchange Commission under the 1935 Public Utilities Act. Also, regulators might react differently depending on whether funds that would be withdrawn from the utility were destined to support an out-of-state affiliate or another in-state entity. Finally, while regulators may be inclined to support investment-grade credit quality, there is little basis to believe regulators would insist that a utility maintain an 'A' profile. Their mandate is to protect provision of services—which is not a direct function of the provider's financial health. In fact, if a utility has little debt, the overall cost of capital, and therefore the cost of service, can be higher.

There is a corollary that negatively affects the parent and weaker units whenever a utility subsidiary is rated on its stand-alone

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

### Foreign Ownership

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

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

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

### "Smoke-and-Mirrors" Subsidiaries

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

- Unusually complex organizational structures;

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

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

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

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

### Finance Subsidiaries’ Rating Link to Parent

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

#### Independent Finance Subsidiaries

Independent finance subsidiaries can receive ratings higher than those of the parent, because of the high degree of separation between these subsidiaries and the parent. A finance company’s continuous need for capital at a competitive cost creates a powerful

incentive to maintain its creditworthiness. Therefore, it can be argued that the parent would be better served, in a stress scenario, by divesting the still-healthy subsidiary than by weakening it or risking drawing it into bankruptcy. In addition, there must be evidence of the parent company’s willingness to leave the subsidiary alone, including a history of reasonable dividend and management fee payouts to the parent.

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

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

#### Captive Finance Companies

A captive finance company—i.e., a finance subsidiary with over 70% of its portfolio consisting of receivables generated by sales of

the parent's or group's goods or services—is always assigned the same rating as the parent. Captive finance companies and their operating company parents are viewed as a single business enterprise. The finance company is a marketing tool of the parent, facilitating the sale of goods or services by providing financing to the dealer organization (wholesale financing) and/or the final customer (retail financing).

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

Conversely, a captive that appears strong on a stand-alone basis is not rated higher than its operating company. Because of the operational tie-in, the parent does not have the same options for divesting a healthy captive as in the case of an independent finance subsidiary. Eventually, then, the captive's bankruptcy risk is closely linked to that of its parent. This viewpoint is based in part on case history. A parent-company bankruptcy filing usually will result in a filing by its captive, either simultaneously or soon thereafter. Captive finance company debtholders may be better off than the parent debtholders with respect to ultimate recovery in a liquidation or reorganization, but bankruptcy would impair the timeliness of payments.

### Methodology

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

in the pro forma finance company; all other assets and liabilities are included with the parent company. Similarly, only finance-related revenues and expenses are included in the pro forma finance company.

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

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

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

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

### Leverage Guidelines

The receivables portfolio of the pro forma captive entity is analyzed, as for any finance company. Both quantitative and qualitative

assessments are made. Portfolios deemed to be of average quality include consumer credit card, commercial working capital, and agricultural wholesale. Auto retail paper is of higher quality, all other things being equal, while portfolios of commercial real estate and oil credit-card assets are generally less leverageable. Adjustments are made to reflect the performance of a given subportfolio. In addition, factors such as underwriting, charge-off policy, and portfolio concentration or diversity are considered.

#### **Securitization of Finance Receivables**

An increasingly common funding mechanism for finance companies is the sale or securitization of finance receivables through structured transactions. Where companies sell finance receivables that are regenerative in nature (such as the operating assets financed by a captive for its parent), Our analytical approach in assessing leverage is to uniformly add back the sold receivables outstanding and a like amount of debt (the same treatment as the sale of regenerating trade receivables of operating companies, as explained in Rating Methodology: Industrials and Utilities).

When the level of assets being financed is truly at the discretion of the finance company, there may be no need to add back receivables sold. The question then is one of

permanence of the level of financial activity. No adjustment is made to add back the sold receivables, if the analyst has concluded the unit will continue to operate at a lower asset level. In those cases, the analysis focuses on the actual economic risks remaining with the company relative to the sold receivables.

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

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

# Operating Lease Analytics

To improve financial ratio analysis, Standard & Poor's Ratings Services uses a financial model that capitalizes off-balance-sheet operating lease commitments and allocates minimum lease payments to interest and depreciation expenses. Not only are debt-to-capital ratios affected: so are interest coverage, funds from operations to debt, total debt to EBITDA, operating margins, and return on capital. This technique is, on balance, superior to the alternative "factor method," which multiplies annual lease expense by a factor reflecting the average life of leased assets.

The operating lease model is intended to make companies' financial ratios more accurate and comparable by taking into consideration all assets and liabilities, whether on or off the balance sheet. In other words, all rated companies are put on a more level playing field, no matter how many assets are leased and how the leases are classified for financial reporting purposes. (We view the distinction between operating leases and capital leases as artificial. In both cases, the lessee contracts for the use of an asset, entering into a debt-like obligation to make periodic rental payments.) The model also helps improve analysis of how profitably a company employs both its leased and owned assets. By adjusting the capital base for the present value of lease commitments, the return on capital better reflects actual asset profitability.

Also, leased assets are not available to corporate creditors in the event of a bankruptcy.

The resulting 'junior' position of creditors relative to lessors may affect our ratings on specific debt issues. (Note, however, that recovery of lessors' claims beyond the value of the leased assets themselves also is limited.) If warranted, the debt may be lowered a notch or two from the corporate rating to reflect differences in loss-given-default prospects. Our lease methodology helps highlight the extent of a company's leasing activity and, therefore, its materiality with respect to such recovery analysis.

## Using The Methodology

Lease commitment data for a company are gathered from the notes to its financial statements. Annual data for the coming five years is required for accounts prepared under US GAAP—plus the aggregate amount for subsequent years. Under IFRS, all years need not

be individually displayed; the analyst must decide how to best allocate the lump sum to individual years. For the remaining lease years, our model assumes the annual lease payments approximate the minimum payment due in year five. The number of years remaining under the lease is simply the amount “thereafter” divided by the minimum fifth-year payment.

The required lease payments generally are taken gross, rather than netting out sublease income; but, when the head-lease and sublease are matched and the counterparty is sufficiently creditworthy, we would use net payments.

For the present value calculation, we generally use as the discount rate the issuer’s average interest rate (that is, interest expense/average debt outstanding) from the most recent annual statements, which is reflective of the issuer’s cost of borrowed funds. (For example, to derive the discount rate for adjusting 2004 financials, we will use 2004 interest expense divided by the average of year-end 2003 and year-end 2004 total debt.) Interest cost is adjusted to eliminate any distorting effects of capitalized interest, interest income, or derivatives-related gains/losses. (Also, if a company’s borrowing cost has soared because of financial distress, we avoid the perverse result of a seemingly shrinking lease obligation. In such a case, we will use the average of several years’ borrowing rates or a market ‘B’ rate, instead of the company’s average borrowing rate from the previous year.)

Ideally, we could use an even better alternative for the discount factor: the interest rates, or “money factors,” imputed in the

company’s actual leases, upon inception. Another alternative might be the company’s average cost of secured debt. Where sufficient information is available and operating lease obligations are material, it is appropriate to use one of these bases instead. However, it is important for the sake of consistency that all companies in an industry peer group be adjusted in a consistent manner.

The resulting present-value figure is added to reported debt to calculate the total-debt-to-capital ratio. The figure also is added to assets to account for the right to use leased property over the lease term. Although less than the cost of the property, this adjustment recognizes that control of the property creates an economic asset.

The implicit interest is calculated by multiplying the average net present value at the end of the current and previous years by the rate used as the discount rate. This figure is then added to the company’s total interest expense. The SG&A adjustment is calculated by taking the average of the first-year minimum lease payments in the current and previous years. SG&A is then reduced by this amount. Depreciation expense is calculated by subtracting the implicit interest from the SG&A adjustment. The lease depreciation is then added to reported depreciation expense. The interest and depreciation adjustments attempt to allocate the annual rental cost of the operating leases. There is ultimately no change to reported net income as a result of applying the lease analytical methodology.

#### Financial ratio effect

- EBIT: The implicit lease depreciation adjustment is added to D&A expense; the adjustment to SG&A expense reduces SG&A expense. The result is to increase EBIT by the difference between the implicit lease depreciation and SG&A adjustments, or \$17.9 million as shown in Table 2, which also is the amount of the implicit interest.
- EBITDA: In this case, only the implicit interest is added to EBITDA. The result is that EBITDA is increased \$17.9 million. The rationale for not including implicit depreciation is that EBITDA is often used as a proxy for cash flow. However, rental

Table 1—Lease Model Calculation\*

Payment period	—Reporting year—	
	2004	2003
Year 1	61.0	65.8
Year 2	54.0	53.3
Year 3	46.1	46.5
Year 4	42.6	41.9
Year 5	38.7	39.6
Thereafter	177.9	177.9
Total payments	420.3	425.0

\* Reported figures: Future minimum lease commitments (mil. \$)

## Operating Lease Analytics

expense is a cash expense, and it seems inappropriate to consider the entire rental expense as being available to pay interest. Moreover, EBITDA interest coverage, a key credit ratio, can be quite distorted by adding both implicit interest and depreciation to the numerator while adding only implicit interest to the denominator.

- Interest expense: The implicit interest figure, \$17.9 million, is added to total interest expense.
- Total debt: The net present value of lease payments, \$336.5 million, is added to total debt.
- Operating income before D&A: Standard & Poor's typical calculation for the operating margin adds D&A back to operating income. When the operating lease adjustment is made, operating income is increased by the adjustment to SG&A expense, \$63.4 million.
- Funds from operations: Funds from operations is increased by the implicit lease depreciation expense, \$45.5 million—which is recharacterized as an increase in capital expenditures.
- Capital expenditures: The portion of the lease payment that represents the actual use of the asset—\$45.5 million in our exam-

ple—is added to capital expenditures, which reduces free cashflow by a like amount. Also, the increase in the net present value of lease payments from year to year is shown as an increase in capital spending—albeit without any effect on net cash. This adjustment highlights situations where a company is increasing its level of asset leasing—presumably in lieu of conventional spending. Without such an adjustment, we might mistakenly conclude, for example, that the company was under-spending for its capital equipment needs. (Since factors other than new lease take-up can lead to that increase—such as changes in foreign exchange rates or the implicit rate used in calculating the net present value—we would try to be mindful of what was actually occurring.)

### Limitations Of The Model

Analysts and investors need to be aware of the limitations of our model. In many cases, our computed lease-related debt is significantly understated. We base our capitalization of the lease obligation on the disclosed stream of minimum future rental payments, even when we expect contingent payments

Table 2—Calculation Of Operating Lease Adjustments For 2004

	2004	2003	2002
Total debt (reported)	659.4	664.9	766.8
Total interest (incl. capitalized interest)	36.2	40.2	
Implied interest rate	5.5	5.6	
<b>Future minimum lease commitments (mil. \$)</b>			
2005	61	65.8	
2006	54	53.3	
2007	46.1	46.5	
2008	42.6	41.9	
2009	38.7	39.6	
2010 - 2014	38.7		
2009 - 2012		39.6	
Net present value (NPV)	336.5	318.7	
2004 implicit interest			Avg. NPV (\$327.6) x interest rate (5.5%) = \$17.9
Lease depreciation expense			Adjustment to SG&A* - implicit interest = \$63.4 - \$17.9 = \$45.5
Adjustment to SG&A—rent			Avg. first-year min. payments (\$61.0 + \$65.8)/2 = \$63.4
*SG&A—Selling, general, and administrative expenses.			

**Table 3—Sample Calculation Results**

	<b>Without capitalization</b>	<b>With capitalization</b>
Oper. income/ sales (%)	18.6	21.2
EBIT interest coverage (x)	8.7	6.2
EBITDA interest coverage (x)	12.3	8.6
Return on capital (%)	18.9	15.6
Funds from oper./ total debt (%)	54.1	40.4
Total debt/EBITDA (x)	1.5	2.1
Total debt/capital (%)	37.6	41.0

to increase actual rental expense significantly above the minimums. Also, by basing our calculation of the liability on the minimum future lease payments, we effectively carve out any consideration of indirect residual risk because, under FAS 13, if the present value of the minimum lease payments is 90% or more of the fair value of the asset, the lease is not classified as an operating lease—but as a capital lease. So at least 10% of the asset value gets overlooked. (If, however, a company extends a residual guarantee for assets under operating leases, this should be reflected in our analysis as a debt equivalent.) IFRS accounting poses similar issues of understatement.

- More broadly, our adjustment model does NOT seek to replicate a scenario in which a company acquired an asset and financed it with debt; rather, our adjustment is narrower in scope: it attempts to capture only the debt-equivalent of a company's lease

contracts in place. Whenever a company leases for five years an asset with a 20-year productive life, the adjustment picks up only the lease period, ignoring the cost of the entire asset that would have been purchased—and depreciated—by a company that chose to buy instead of lease.

Alternate methodologies (known as factor methods) attempt to replicate a debt-financed purchase of the operating asset. The conceptual advantages of these methodologies—especially in terms of comparing companies—are limited by other analytical shortcomings and considerations. The factor methods use multiples of annual expense to estimate the asset value—typically in a crude or arbitrary fashion. Also, while incorporating the equivalent of owning the entire asset, these methodologies lack the ability to differentiate between the first year of the asset's life, the last year, and all points in between. (An asset actually purchased would be depreciated over its life.) And, by putting leasing and ownership on a supposed 'apples-to-apples' basis, they gloss over the potential flexibility associated with leasing only part of an asset's economic life.

Given the alternatives, we prefer our current, present-value methodology. However, there could be merit in using more than one method to capture leasing activity—especially if some of the problems with the 'factor methods' can be addressed. We intend to explore the possibility of introducing a methodology that is more comprehensive (i.e., which would replicate a full asset purchase) to supplement the current methodology. ■

# Postretirement Obligations

**S**tandard & Poor's Ratings Services views unfunded liabilities relating to defined benefit pension plans and retiree medical plans as debt-like in nature. This also is the case with deferred lump-sum payment schemes, such as termination programs for employees in Italy. By accepting a portion of their compensation on a deferred basis, the employees essentially become creditors of the company. As with conventional debt, these liabilities pose risks to their corporate sponsors from the call on future cash flow they represent. (Defined contribution plans generally are not problematic because they must be funded on a current basis, and the corporate sponsor does not bear ongoing investment performance risk.)

A company's postretirement obligations affect its financial position, and also may be germane to its competitive position. Most problematic is when peers face different retiree costs. Companies that have been relatively generous, have an older workforce, or have a comparatively large number of retirees, cannot raise their own selling prices more than those of their competitors'. Likewise, competitors in different countries often are not saddled with similar costs because of differences in pension and health care systems in their respective countries. Any company more burdened with such retiree costs than its competitors will be

penalized in the assessment of its overall cost position. The implications for its competitiveness are no less than if it had older, less efficient manufacturing facilities. Such a competitive advantage—or disadvantage—is an important rating consideration.

## **Distinguishing characteristics**

Various characteristics distinguish unfunded postretirement liabilities from debt obligations. One is the difficulty of measuring their value. Because of the prospective and variable nature of postretirement obligations, their quantification relies on numerous assumptions, including:

- Employee turnover rates and length of service, whereby the length of time the worker is employed by the company determines eligibility for and the size of the retiree benefit;
- Mortality rates, given that the employee's lifespan determines how long he or she receives the benefit;
- Dependency status, if the plan covers surviving dependents;
- Compensation levels, if the employee's wages or salary prior to retirement is a factor in determining the amount of the benefit;
- Discount rate, which is required to calculate a present value of the future required cash outflows; and
- Return on benefit plan investments. To the extent that the benefit is prefunded with investment assets, if positive, the returns realized on those assets will help defray the cost of the benefit.

Because retiree medical benefits are not monetary in nature, but rather are in-kind benefits—i.e., the employee is promised future health care services—there is additional uncertainty. Assumptions must be made about future changes in health care inflation and in health care use and delivery patterns. Not simple matters.

Because of these difficulties, the analytical exercise does not try to quantify a precise amount to represent the postretirement obligation. As discussed below, sensitivity analysis is a better way to capture a company's exposure than by focusing on a single figure.

Further, management's actions to modify plan benefits or regulatory changes could alter the value of the liability over time. Standard & Poor's pays close attention to management's strategies for reducing the cost of the burden and assesses these strategies in the context of the company's labor relations; however, we naturally are reluctant to prejudge the success of any such strategies, particularly if the workforce is tightly unionized, and determined to resist such cost-cutting efforts. Similarly, in theory, there always is the potential that some significant change in the regulatory framework could enable a corporation to shift some portion of its postretirement benefits, burden to the government, but it hardly is

prudent to assume such a solution would emerge. Indeed, there also is the risk governments could tighten funding requirements, as recently did Spain and the Netherlands.

#### National/regulatory differences

Analysis of postretirement benefit obligations must take into account the differences among countries' regulatory systems. In some countries (e.g., France, Italy, and Spain), corporations do not bear such obligations directly to any material extent; pension and other postretirement benefits are provided largely under governmental, rather than corporate, schemes. Corporations generally must support these schemes indirectly through taxes. Obviously, a company's overall tax burden must be considered in the analysis of its cash flow.

In other cases, the benefit is provided directly by corporations. Furthermore, strict regulations require the company to prefund the benefit by making contributions to dedicated trusts well in advance of the ultimate disbursement of funds to retirees or third-party insurers. This insulates retirees from the risk that the company might become unable to honor its commitments. Under such regulations, however, the company typically retains some discretion to decide how much to contribute in a given year. This is the case with defined-benefit plans in the U.S., governed by the Employee Retirement and Income Security Act (ERISA) of 1974 and by the tax code, and with such plans in the U.K. and the Netherlands.

In still other cases (e.g., defined-benefit pensions in Germany and retiree medical benefits in the U.S.), the benefit is provided directly by companies, but there is no regulatory requirement to prefund and, typically, no tax incentive for doing so. In such pay-as-you-go systems, the cash burden on the company may be light for many years if the company has a young workforce and few retirees. On the other hand, if the company has a high ratio of retirees to active employees, the ongoing cash outlays may be onerous. Moreover, under this system, there is virtually no flexibility in the timing of payments: the retirees are owed their benefits.

If a company does business in more than one country, Standard & Poor's pays close attention to the geographic profile of its postretirement benefits obligations and the relevant regulatory requirements.

### Assessing the liability

As a practical matter, the company's financial reporting is the best starting point because of the accessible, timely, and comprehensive nature of financial reporting information compared with other sources. Analysts must be wary, however, of the relatively uncertain nature of accounting for postretirement obligations, given all the assumptions necessary for their measurement, discussed above.

Moreover, in virtually all national accounting systems, as well as under International Accounting Standards (IAS), those setting the accounting standards have sought to avoid volatile swings in earnings and liability values; hence, the extensive use of various smoothing techniques, in which underlying net liability changes and variations in actual performance—rather than assumptions—are recognized on a deferred basis over an extended period. (See “*Pitfalls of U.S. Pension Accounting and Disclosure.*”)

The first step in analyzing postretirement obligations is to examine key assumptions used to quantify the obligations and determine expense accrual for financial reporting purposes. The discount rate, wage appreciation, expected investment return, and medical inflation rate are all disclosed under U.S. GAAP. The use of actuarial assumptions regarding mortality, dependency status, and turnover can lead to more or less conservative estimations, but these assumptions are not disclosed directly in financial reporting; however, unrecognized losses or gains relating to changes in actuarial assumptions indicate further investigation is warranted.

When assessing assumptions, we focus on differences among companies. Assumptions are considered in light of an issuer's individual characteristics, but also are compared with those of industry peers and general industrial norms. In addition, assumptions are assessed in terms of their internal consistency. For example, both the discount rate and rate of future compensation increases

should be closely linked to the rate of inflation. If the discount rate assumption significantly exceeds the assumed rate of compensation increases, this may reflect overoptimism by management about its ability to contain wage and salary increases.

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

The next step is to compare the current value of a company's plan assets to the projected benefit obligation (PBO) for pensions, or to the accumulated postretirement benefit obligations (APBO) for retiree medical benefit obligations. In the case of flat-benefit pension plans (i.e., the pension benefit is a fixed amount per year of service, rather than pay-related plans, in which the benefit for each retiree is derived from a formula tied to compensation over a specified period), the PBO likely understates the true economic liability. This is because the PBO does not take account of future benefit improvements for these plans, even if probable, unless provided for in the current labor agreement. In such cases, the analyst estimates the additional economic liability based on the company's pattern of granting benefit improvements and management's current strategies with respect to compensation.

A company's plan assets as a percentage of the PBO or APBO is a simple, basic measure of plan solvency, referred to here as the funding ratio. Companies with the same funding ratios in their benefit plans do not, however, necessarily bear the same risks related to their plans. The size of the gross liability is also important because, where the gross liability is large relative to the company's assets, any given percentage change in the liability or related plan assets will have a much more significant effect than if the gross liability had been less substantial.

To bring the depiction of postretirement-related items in the financial statements more in line with its own analytical perspec-

tive, Standard & Poor's has devised certain ratio adjustments (see "*Adjusting Financials for Postretirement Liabilities*"). These adjustments are intended to undo the smoothing of the accounting treatment and reallocate certain accounting effects in the statements while integrating the analysis of postretirement obligations with other aspects of the financial analysis. This last point is particularly important because of the different funding approaches and regulations that pertain to different plans. For example, as noted earlier, pension plans in Germany largely are unfunded; however, major German industrial companies commonly hold large cash balances and long-term financial assets on the balance sheet to provide for future pension-related cash requirements. Analytically, as long as Standard & Poor's is comfortable that these assets will be retained over the long term to satisfy the pension-related obligations, the arrangement might well be viewed as if the pension plan had been funded. If, however, such a company's capitalization were analyzed without factoring in the pension liability, one could make the mistake of netting the surplus cash against debt, thereby double-counting the cash position and underestimating the company's financial leverage.

Beyond determining the plan's current level of funding, the analyst must also consider the likelihood of significant changes made in the liability or assets in the future. As an example, workforce downsizing through early retirement programs is a major issue in the current economic environment. The potential for changes in benefits largely is a function of the labor climate and the level of benefits relative to those of direct competitors and other regional employers. Similarly, to take a prospective view of plan assets requires the sponsor's input regarding its funding strategies and asset allocation guidelines. Regarding the latter, we do not have a preferred strategy: heavy weighting toward equities heightens near-term volatility, but—if experience holds true—should enhance long-range returns. Conversely, heavy weighting toward fixed-income holdings should minimize near-term volatility, but may well limit long-range returns.

Although Standard & Poor's views unfunded postretirement obligations as debt-like, the surplus relating to overfunded plans generally cannot be viewed as a cash equivalent. Having a significantly overfunded postretirement benefit plan is, of course, a positive from a credit perspective. If nothing else, it generally means the company can curtail future contributions to the plan, barring changes in asset or liability levels. Companies can use the surplus to enrich the retiree benefits (possibly in lieu of raising wages) or sometimes to fund special workforce reduction programs. In the U.S., a portion of the surplus can also be used to fund retiree medical benefits in some circumstances. But in the U.S.—as in most other countries—companies with overfunded pension plans may have little practical ability to revert the surplus: In the U.S., there are harsh tax consequences for doing so. (Amounts recaptured are subject to ordinary income tax, plus a punitive excise tax.)

#### **Cash-Flow implications**

The level of necessary future cash outlays has the most immediate effect on a company's financial health. Standard & Poor's focuses on prospective outlays. Information about the regulatory funding status of the plan, a company's workforce, the makeup of its retiree population, its benefit plan characteristics, and management's cost-cutting and funding strategies helps the analyst understand the likely direction of future cash outlays.

For plans in which prefunding is mandated by regulations, the degree of discretion over payments is critical. The cash requirements for U.S. corporate sponsors are significantly shorter term than the underlying disbursements to retirees, but ERISA usually grants considerable flexibility in the year-to-year timing of contributions, except when the plan is severely underfunded. Near-term minimum funding requirements often are low enough that companies can sharply curtail contributions temporarily if needed to maintain liquidity. (In Japan, pension regulations grant companies significantly greater flexibility to defer contributions over an extended period than the U.S.) When funding is required in the near term to comply with ERISA guidelines, the amounts

involved are viewed in a different, more severe, light.

The calculation of minimum pension plan contributions under ERISA is a highly complex matter. Although the ERISA framework has some similarities to the financial reporting framework, ERISA uses its own distinct methodologies and assumptions for valuing the assets and liabilities of the plan. Funding requirements are not just a function of the current funded status of the plan, but also take into account the past funded status, the level of past contributions relative to requirements, and the nature of the events that gave rise to any underfunding, among other factors.

In theory, it is possible to arrive at a rough estimate of the company's minimum future contribution levels by using the publicly available Annual Return/Report of Employee Benefit Plan on Form 5500, filed by the corporate plan sponsor; however, one such form is filed for each qualified U.S. plan of a company, and large companies may have dozens of separate plans. Moreover, the timeliness of Form 5500 is problematic: it must be filed 210 days after the end of the plan year or after the sponsor has filed its federal income tax form, whichever is later. As a practical matter, then, Standard & Poor's relies on management for information regarding the company's future minimum pension contributions to meet regulatory requirements.

Other factors besides funding regulations can influence funding decisions. For example, in the U.S., benefits provided under qualified, defined-benefit pension plans are guaranteed by a quasi-governmental entity, the Pension Benefit Guaranty Corp. (PBGC), which, in turn, charges plan sponsors an annual premium, currently \$19 per plan participant. If a plan's assets are less than the vested portion of the liability (as measured under the very conservative methodology stipulated by the PBGC, which is different from the ERISA approach), an additional, variable annual premium is assessed of \$9 for each \$1,000 of unfunded liability. Moreover, the plan sponsor must notify plan participants of the plan's underfunded status. Companies often make sufficient contributions to their pension plans to avoid these consequences, even if they are not required to do so under ERISA.

Perversely, perhaps, financial reporting can also drive funding decisions. For example, under U.S. GAAP, if the value of plan assets falls below that of the APBO, a large charge to equity can result ("Pitfalls of U.S. Pension Accounting and Disclosure," again). Companies sometimes make contributions to avoid this reporting effect, particularly if financial covenants might thereby be violated.

In the U.S., there are some tax-effective means of prefunding retiree medical benefits. One funding vehicle is the so-called Voluntary Employees' Beneficiary Association (VEBA) trust. As with pensions, contributions to a VEBA trust generally are tax-deductible up to a certain limit, and earnings on trust investments are tax-exempt. VEBA trusts are more flexible than pension trusts: Although VEBA funds cannot be reverted directly by the corporate sponsor, they can be used to pay for a variety of current benefits-related expenses, thereby freeing up other cash. For this reason, though, if a company is at all inclined to use its VEBA assets in this way, Standard & Poor's tends to view the asset as an extension of the company's ready liquidity position, rather than as offsetting a portion of the retiree medical liability.

In some cases, companies issue debt to finance their benefit plan contributions. In assessing the effect on credit quality, Standard & Poor's considers:

- Any loss of payment-timing flexibility. For example, if the company issues debt with a five-year term to satisfy funding contributions that could otherwise be spread over up to 10 years, this could well be viewed negatively;
- The maturity of the new obligation compared with the terms of the obligations it replaces. For example, if the company is able to eliminate looming, near-term funding requirements with a long-term debt issue, this could be a positive development;
- Tax consequences, such as the cash flow benefit of accelerating a tax-deductible contribution; and
- The implications for the company's debt issuance capacity, to the extent the company might have other borrowing requirements.

In most countries, companies are permitted to contribute limited amounts of their own stock to their benefit plans, substituting for or supplementing cash contributions. Standard & Poor's views such transactions as similar—in their beneficial effect—to the company's issuing common stock and using the proceeds to reduce financial obligations. One difference, however, is the correlation risk that results: If the company encounters significant setbacks, this would presumably be reflected in a weaker share price, which could cause deterioration in benefit-funding levels and precipitate accelerated funding requirements. (For this reason, funding regulations generally set some limit on contributions of so-called employer securities. For example, under ERISA, such contributions cannot exceed 10% of the fair value of plan assets, as determined through a closely scrutinized valuation process.)

#### **Ultimate recovery considerations**

For companies with significant unfunded postretirement benefit obligations, the standing of such obligations in bankruptcy can be an important consideration for creditors. It may affect their willingness to lend, as it obviously has a bearing on ultimate recovery in a reorganization or liquidation. Analysis of this matter is highly specific to the legal system and type of benefit in question, as well as to the legal structure of the corporation. In the U.S., unfunded pension liabilities typically have the standing of general unsecured claims. (The PBGC or the company generally terminates the plan, and then the PBGC pursues a claim against the company for the funding shortfall.) Companies in financial distress could have been granted funding waivers by government regulators in return for liens on assets in advance of a bankruptcy filing, but this is rare among rated companies.

The standing of retiree medical liabilities in the U.S. is less clear-cut because these do not enjoy the same degree of protection under ERISA. If, however, the benefits are owed under the terms of a labor contract, the company's voiding of the contract in bankruptcy would give rise to a general unsecured claim by employees and retirees. If the company

were to reorganize rather than liquidate, this claim would most likely be settled through the continuation of the benefit, albeit perhaps in a reduced form, rather than a monetary payout. This would—at least, in theory—still dilute the recovery of other senior unsecured claims, because the liability in its new capital structure would limit the reorganized company's debt capacity.

#### **Pitfalls of U.S. pension accounting and disclosure**

All areas of financial reporting require management to make estimates and judgments, but this is particularly true of accounting for defined-benefit pension plans. Given the prospective and variable nature of the promise companies make to provide pension benefits to retirees, pension accounting relies on numerous subjective assumptions (e.g., employee turnover, mortality rates, compensation levels, discount rates, and investment returns). Moreover, the standards that currently govern pension accounting under U.S. GAAP—Statement of Financial Accounting Standards No. 87, “Employers’ Accounting for Pensions” (SFAS 87)—were issued in 1985, despite intense opposition from many companies. The Financial Accounting Standards Board (FASB) responded with various compromise provisions to smooth the effect on earnings and on the balance sheet of pension-related factors. Consequently, some aspects of the financial reporting for pensions are incongruent with the analytical perspective.

Aspects of the current accounting framework that represent potential pitfalls for analysts include the following.

#### **Balance-sheet aspects**

SFAS 87 defines the pension liability two ways:

- The accumulated benefit obligation (ABO) is a measure of the present value of all benefits earned to date and includes nonvested and vested benefits attributable to services rendered through the balance sheet date. It approximates the value of benefits that would be payable if the company were to terminate the plan, so it represents a shut-down perspective.

- The projected benefit obligation (PBO) also is a measure of the liability for accumulated service, but, unlike the ABO, it also accounts for the effect of salary and wage increases on benefit payouts that are linked to future compensation levels by some formula (for example, where the benefits are based on a fixed percentage of the average annual compensation over the five years prior to the employee's retirement). The PBO thus values the pension promise at the amount for which it will ultimately be settled as the company continues as a going concern.

Measurement of the ABO and PBO requires the company to make many assumptions. Most important, because the liability is calculated as the present value of estimated future payments to plan beneficiaries, the liability valuation is highly sensitive to the discount rate used. (The lower the discount rate, the higher the liability, and vice versa.) SFAS 87 directs companies to "...look to available information about rates implicit in current prices of annuity contracts that could be used to effect settlement of the obligation [and] also...to rates of return on high-quality fixed-income instruments currently available and expected to be available during the period to maturity of the pension benefits."

The discount rate therefore should differ among companies, to the extent they operate in regions with different prevailing interest rates and have different workforce demographics. In actuality, though, as many observers have noted, discount rate assumptions vary significantly more widely among companies than underlying differences in these variables would justify. If the ultimate pension benefit payout is linked to compensation levels, the assumption regarding salary or wage increases also is crucial. In theory, this assumption should bear a close correlation to the discount rate because both reflect, at least partly, the expected inflation rate. If the discount rate is significantly higher than the rate of compensation increases, this may well reflect an overly optimistic view by management about its ability to contain salary and wage cost increases.

Under the framework of SFAS 87, the PBO is the basis for expense recognition—i.e., the

accounting seeks to spread the total cost reflected in the PBO over the working careers of the employees earning pension benefits. In the pension footnote, the PBO is compared with the fair value of plan assets to derive the funded status of the plan. (Note: companies can use a measurement date up to 90 days earlier than the balance sheet date to facilitate preparation of the financial statements. This can distort comparisons between the funded status of different companies.) This PBO-related funded status is the best measure of a company's pension-related liability or surplus, and therefore is the one upon which Standard & Poor's focuses.

However, the ABO, not the PBO, serves as the basis for balance-sheet recognition of any unfunded liability. Under the rules of SFAS 87, the relationship of different balance-sheet accounts to the underlying economic reality of the plan is sometimes tenuous. In the normal course of affairs, a company records a liability on the balance sheet to the extent that its pension expense exceeds its plan contributions. To the extent that a company's plan contributions exceed its accrued expense, the company records a prepaid pension asset on the balance sheet.

Strangely, an asset also can be created as a result of benefits enhancements that increase the value of the liability: This intangible asset reflects the presumed economic benefit the employer derives from the plan improvement—for example, better labor productivity from a happier workforce. From an analyst's perspective, the increase in the amount of the liability is more prudently interpreted as a sunk cost. However, if at the end of a fiscal year the fair value of plan assets is less than the ABO, the company must record a so-called minimum liability by increasing any existing balance sheet liability to the level of the unfunded ABO and eliminating any existing asset accounts, with the offset being an after-tax charge to equity (which flows through "other comprehensive earnings," rather than net income). In other words, the additional liability is ABO less (the market value of plan assets plus already accrued liabilities less already accrued assets).

As Table 1 illustrates, this requirement means a nominal change in the funding status

Table 1—Quirks of Liability and Asset Recognition

**Under SFAS 87\***

**Example 1**

(Mil. \$)	—Year ended Dec. 31—	
	2001	2002
Accumulated benefit obligation (ABO)	80	100
Plan assets	80	80
Unamortized prior service cost	0	15
Pension-related assets	—	—
Prepaid pension assets	0	0
Intangible assets	0	15
Pension-related liability	0	20
Change in net worth	0	(5)

At year-end 2001, the company's pension plan was fully funded relative to the ABO. During 2002, the ABO increased by \$20 million: \$15 million because of plan amendments and \$5 million because of variances from actuarial assumptions. Thus, at year-end 2002, the company recorded a liability of \$20 million. Offsets: the \$15 million of the \$20 million increase in the ABO resulting from plan amendments gives rise to a \$15 million intangible asset, and the balance reduces net worth.

**Example 2**

(Mil. \$)	—Year ended Dec. 31—	
	2001	2002
Accumulated benefit obligation (ABO)	100	—
Plan assets	80	80
Unamortized prior service cost	0	—
Pension-related assets	—	—
Prepaid pension assets	0	0
Intangible assets	0	0
Pension-related liability	0	20
Change in net worth	0	(20)

In this example, there also was a \$20 million increase in the ABO. The entire increase results from actuarial losses, however. Thus, net worth is reduced by the entire \$20 million.

**Example 3**

(Mil. \$)	—Year ended Dec. 31—	
	2001	2002
Accumulated benefit obligation (ABO)	80	100
Plan assets	80	80
Unamortized prior service cost	0	0
Pension-related assets	—	—
Prepaid pension assets	0	0
Intangible assets	0	0
Pension-related liability	15	20
Change in net worth	0	(5)

In this example, the facts are exactly the same as in Example 2, except that the company already had accrued expense on the balance sheet of \$15 million. Thus, it is necessary to record only another \$5 million to increase the balance sheet liability to a total of \$20 million.

Table 1—Quirks of Liability and Asset Recognition (continued)

**Example 4**

(Mil. \$)	—Year ended Dec. 31—	
	2001	2002
Accumulated benefit obligation (ABO)	80	100
Plan assets	100	100
Unamortized prior service cost	0	0
Pension-related assets	—	—
Prepaid pension assets	30	30
Intangible assets	0	0
Pension-related liability	0	0
Change in net worth	0	0

In this example, the company had a \$20 million pension funding surplus at Dec. 31, 2001, and a \$30 million prepaid pension asset account because, historically, its plan contributions had exceeded its accrued expense. (Under SFAS 87, there is no direct connection between the actual size of the surplus and the amount of the prepaid asset account.) During 2002, the ABO increased to \$100 million (because of actuarial losses), eliminating the funding surplus. Because the plan was still fully funded at Dec. 31, 2002, however, there was no write-down of the prepaid asset account. A \$30 million prepaid asset account remains, even though there is no pension funding surplus. (Had this been a \$30 million intangible asset, the treatment would have been the same.)

**Example 5**

(Mil. \$)	—Year ended Dec. 31—	
	2001	2002
Accumulated benefit obligation (ABO)	80	100
Plan assets	100	99
Unamortized prior service cost	0	0
Pension-related assets	—	—
Prepaid pension assets	30	30
Intangible assets	0	0
Pension-related liability	0	31
Change in net worth	0	(31)

In this example, the facts are same as in Example 4. However, apart from the increase in the ABO, there was a \$1 million decrease in the value of plan assets. Thus, the plan was underfunded by \$1 million at Dec. 31, 2002, relative to the ABO. The company's balance sheet must now show a \$1 million net liability, the shortfall of plan assets compared with the ABO. Thus, the company must record a \$31 million liability to offset the \$30 million prepayment. Had the \$30 million prepaid asset been an intangible asset instead, this would have been written off against equity, and only a \$1 million liability would have been recorded. \*All examples ignore tax effects.

could result in a huge reduction in equity. Analysts must be especially alert to the potential for a charge to equity in cases where companies have financial covenants tied to book equity levels. Yet, although the ABO is the crucial benchmark for triggering such a charge, companies are not required to disclose the ABO (except, indirectly, if a company has already had to book a minimum liability)—only the PBO.

**Income-statement aspects**

Although the PBO and ABO are subject to volatile year-to-year fluctuations, SFAS 87

was structured to minimize earnings volatility. Pension expense consists of a number of components, which can be grouped into four categories:

- Service cost. This is the value of benefits earned by active employees during the period. From an analytical perspective, this is akin to a normal operating expense;
- Interest cost. This results from the “aging” of the liability within the present-value framework. The discount rate is applied to the PBO at the beginning of the period. From an analytical perspective, this is akin to a financing charge;

- *Expected return on plan assets.* This is management's long-range expectation about the performance of the investment portfolio, rather than the actual return generated during the reporting period, based on planned asset allocations. Companies are given little guidance in the accounting literature for setting this assumption, and the assumptions used vary widely. From an analytical perspective, this is a dubious proposition at best. (Imagine if plain vanilla operating earnings were reported based on management's long-range expectations.) Moreover, as an alternative to being based on the fair value of assets at the beginning of the period, the assumed return rate can be applied instead to the market-related value of plan assets—i.e., on a basis that smoothes out market fluctuations over a period of up to five years; and
- *Amortization cost.* Any changes in the liability resulting from plan amendments are generally amortized over the expected average future service of employees who are active at the date of the amendment. In addition, any changes in the liability resulting from actual experience that is different from the assumption—beyond a threshold (i.e., 10% of either the PBO or the market-related value of plan assets, whichever is larger)—also are amortized over an extended period. Examples include shortfalls in investment performance, the effect of unanticipated early retirement programs, variances in mortality, and changes in the discount rate. From an analytical perspective, these all represent items without economic substance: all are losses or gains that have already been realized in economic—if not accounting—terms.

The reliance on expected investment returns is the element of SFAS 87 that has drawn the harshest criticism of late, as companies have clung to return assumptions that seem aggressive after three years of negative actual returns. For one thing, although these assumptions may be justifiable based on a very long-range view, minimum funding requirements under the Employee Retirement Income Security Act (ERISA) will in some instances necessitate substantial funding over much a shorter timeframe, barring a dramatic rebound in the stock market.

Separately, even without making aggressive investment return assumptions, some companies are reporting sizable net pension credits (that is, the expected return on plan assets more than offsets the other cost components), generally reflecting the significant overfunding of their pension plans. Overfunded benefits plans are a positive factor from a credit perspective. Yet, the advantages this provides may well be overstated by the credits (given, for example, the practical inability of most companies to directly revert the surplus), and Standard & Poor's takes this into account when arriving at a rating.

Under SFAS 87, all the cost components are aggregated, although from an analytical perspective, as mentioned above, the interest cost and investment returns are more appropriately viewed as financing items. In addition, the accounting literature contains no definitive guidance on how to display the pension cost on the income statement, so it is variously classified with cost of goods sold, SG&A, R&D, etc. Companies are not required to disclose how they have allocated pension cost among these accounts.

#### **Cash-flow aspects**

The elements of accrual accounting that make the balance sheet and income statement aspects of SFAS 87 problematic do not have the same effect on the statement of cash flows, which reverses noncash accruals and reflects only the cash flows related to the pension plan. There is no standardization regarding where pension plan contributions should be presented on the statement of cash flows, however, nor any requirement that these be identified separately. As discussed in the related article mentioned above, funding that significantly exceeds or falls short of the normal period pension cost (net of financing costs) is most appropriately viewed from an analytical perspective as a financing item, but adjusting for the distortions that otherwise can result is greatly complicated by the lack of better disclosure.

Ultimately, if a company has a significant unfunded pension liability and faces material required pension fund contributions, its funding position as defined under ERISA—rather than SFAS 87—is the most relevant

analytical consideration. Yet, companies are not specifically required by the SEC to disclose their ERISA funding positions or their expected future minimum contributions as determined under ERISA. Likewise, the contributions necessary to avoid Pension Benefit Guaranty Corp. (PBGC) variable-rate premiums, even though avoiding these can also be a powerful incentive for companies to make plan contributions.

### Adjusting financials for postretirement liabilities

Standard & Poor's uses certain financial adjustments and ratio definitions to help ensure that ratings on industrial companies fully reflect unfunded, defined benefit pension and other postretirement obligations, including health care obligations, retiree lump-sum payment schemes, and other forms of deferred compensation, whether partially funded or completely unfunded. If benefits-related matters are material, Standard & Poor's will calculate capitalization and cash flow protection measures that fully reflect such unfunded benefits obligations. Also, in its analysis of profitability, Standard & Poor's will undo certain distortions that result from current accounting standards and their application.

Given the intricacies of benefits-related regulations and financial reporting, Standard & Poor's must strike a balance between what, on one hand, might seem like the most correct approach and, on the other hand, what is feasible in light of the practical limitations of the analytic process.

In any event, if benefits obligations constitute a major rating consideration, ratio analysis will not substitute for a close consideration of the issuer's particular circumstances and its benefits plans. Note: Funding and liquidity considerations may well be much more important than the financial-statement analysis matters covered here.

In approaching benefits-related adjustments and ratio calculations, the following guiding assumptions are made:

- Standard & Poor's treats unfunded pension liabilities, health care obligations, and all other forms of deferred compensation as debt-like;

- To simplify the analysis, Standard & Poor's combines all benefits plan assets and liabilities, netting a company's overfunded plans against its underfunded plans. In theory, companies with multiple plans can curtail over the long term funding of overfunded plans and direct contributions to underfunded plans. In actuality, there is often little tax incentive to fund certain plans. Also, companies have very limited practical ability to tap funding surpluses; it is even possible for companies to face onerous near-term cash contribution requirements related to certain plans while other plans are overfunded. When near-term cash requirements are the central focus, though, ratio analysis is likely to be of secondary importance; and
- Standard & Poor's emphasizes the fullest measure of the unfunded liability available. Generally, for pensions, this is the so-called projected benefit obligation (PBO) under U.S. GAAP, which takes account of the value at which the liability ultimately will be settled (including the effect of expected wage increases if the benefit is tied to employee compensation according to some formula) and views the company as a going concern. It should be noted, however, that for collectively bargained labor contracts, the PBO does not take account of expected wage increases beyond the term of the existing contract. The PBO is a broader measure than the accumulated benefit obligation (ABO) or vested benefit obligation, which instead reflects a shutdown value perspective. For postretirement medical liabilities, the measure equivalent to the pension PBO under U.S. GAAP is the accumulated postretirement benefit obligation (APBO).

### Capital structure analysis

Standard & Poor's emphasizes the following as an important measure of capitalization:

- $$\frac{\text{total debt} + \text{unfunded benefits obligations}}{\text{total debt} + \text{unfunded benefits obligations} + \text{adjusted equity}}$$
Unfunded benefits obligations are factored in as debt equivalents.

Given the point made above, our benefits-adjusted capitalization ratio is based on the

unfunded PBO rather than on the amount recognized on the balance sheet. There often is a substantial gap between the two, given the accounting approach of amortizing the effects of variances in investment or actuarial performance compared with assumptions, or of changes in plan benefits, over an extended period. For companies with net underfunded plans, Standard & Poor's increases or reduces the balance sheet liability to equal the unfunded PBO, with the offsets to the incremental change in the liability being to deferred tax assets (where applicable) and equity (see table 2). Any transition assets, intangible assets stemming from benefits enhancements, or prepaid asset amounts are deducted from equity because Standard & Poor's believes such assets lack economic substance.

We factor benefits liabilities in on an after-tax basis, using the marginal tax rate, in countries where plan contributions—or direct payments to retirees or third-party insurers—are tax-deductible. This distinguishes benefits liabilities from debt, repayment of which does not generate tax credits. Again, the emphasis assumes the company is a going concern and can pay its taxes.

If a company is experiencing financial distress, the tax benefits related to required plan contributions are unlikely to be realized, and the analyst may then choose to exclude a tax benefit from the calculations. (In such cases, liquidity—rather than capitalization—normally would be the main area of emphasis in Standard & Poor's analysis.)

Table 2—Capitalization Adjustments

**XYZ Co.\***

Debt totals \$1.0 billion and equity \$600 million at Dec. 31, 200X. Tax rate: 33%-1/3%. Projected benefits obligation (PBO) exceeds fair value of plan assets by \$1.1 billion at year-end 200X, up from \$700 million at the previous year-end.

Change in benefits obligation (Mil. \$)

PBO, beginning of year	2,000.0
Current service cost	60.0
Interest cost (7% x 2,000)	140.0
Actuarial adjustments	100.0
Benefits paid	(300.0)
PBO, end of year	2,000.0

Change in plan assets

Fair value of plan assets, beginning of year	1,300.0
Actual return on plan assets	(100.0)
Benefits paid	(300.0)
Fair value of plan assets, end of year	900.0
Unfunded PBO	1,100.0

Assuming only \$800 million of the \$1.1 billion unfunded accumulated benefits obligation was recognized on the balance sheet at Dec. 31, 200X, adjusted debt leverage is computed as follows:

Adjusted debt and debt-like liabilities =	Total debt + [(1 - tax rate) x (unfunded PBO)]	\$1.0 bil. + (66-2/3% x \$1.1 bil.) = \$1.733 bil.
Adjusted equity =	Book equity - [(1 - tax rate) x (unfunded PBO - liability already recognized on balance sheet)]	\$600 mil. - [66-2/3% x (\$1.1 bil. - \$800 mil.)] = \$400 mil.
Adjusted debt and debt-like liabilities/total capitalization =		\$1.733 bil./(\$1.733 bil. + \$400 mil.) = 81.2%
This compares with unadjusted total debt to capitalization of:		\$1.0 bil./(\$1.0 bil. + \$600 mil.) = 62.5%

\*XYZ Co. operates in a country where benefits plans are prefunded and plan contributions are tax-deductible. Any intangible pension asset account relating to previous service cost would be eliminated against equity. This would also be tax-effected.

## Postretirement Obligations

Note: Given the latitude companies have under some accounting systems to choose the discount rate, and the significant sensitivity of the liability measurement to the rate used, it would in theory be desirable to normalize for different discount rate assumptions, putting all companies in the same region, with the same workforce demographics, on the same basis. This is, however, as a practical matter extremely difficult to do with any accuracy, without knowing the underlying cash flow assumptions on which the company's liability measurement are based. Standard & Poor's periodically will survey companies' disclosures to help ascertain which discount rate constitutes the norm. Where companies vary materially from the norm, Standard & Poor's

will seek sensitivity information from management to facilitate the analysis.

### Cash-flow analysis

Where benefits obligations are material, Standard & Poor's calculates the following ratio:

- Funds from operations ÷ (Total debt + unfunded benefits obligations)

The denominator is adjusted as described above. Funds from operations (FFO) is defined as net income from continuing operations plus D&A, deferred income taxes, and other non-cash items.

Standard & Poor's makes an additional adjustment to FFO for companies with unfunded benefits obligations that make

Table 3—Cash Flow Adjustment

#### ABC Co.\*

The company makes "catch-up" plan contributions that significantly exceed period expense. Tax rate: 33-1/3%. The company had a sizable unfunded PBO at the previous year-end and contributes \$400 million to benefits plan during 200X. The actual return on plan assets is \$30 million.

Pension expense for 200X	(Mil. \$)
Service cost	50
Interest cost	150
Expected return on plan assets	(140)
Amortization of previous service cost, other unrecognized gains or losses	40
Net periodic benefits cost	100

By contributing more than the combined service cost and net interest cost (\$50 million + \$150 million - \$30 million), ABC Co. is viewed as retiring a portion of its unfunded benefits obligation. The amount of cash needed to satisfy the combined service and net interest cost is treated as a normal cash operating expense. The balance of the cash flow effect of the \$400 million contribution is reclassified as a financing item.

#### Reported 200X statement of cash flows

Net income	100
Adjustments for items not affecting cash from operating activities	
Depreciation	200
Deferred income taxes	50
Other	100
Funds from operations§	450

Adjustments: The \$400 million contribution depressed reported FFO by \$266 million: \$400 million - (33-1/3% x \$400 million). The tax-effected overage: [(\$400 million - (\$50 million + \$150 million - \$30 million)) x (1 - 33-1/3%)] = \$153 million, is added back to FFO and subtracted from financing sources/uses:

Reported FFO	450
Adjustment	153
Adjusted FFO	603

\*ABC Co. operates in a country where benefits plans are prefunded and plan contributions are tax-deductible. Includes (\$266 million) after-tax effect of \$400 million contribution. §Management input may be required to differentiate FFO effects of the contribution from the working capital effects.

“catch-up” contributions to reduce their unfunded liabilities. Otherwise, FFO would appear depressed as a result of a cash outflow that Standard & Poor’s would view as a finance item (akin to debt amortization) rather than a cash operating expense. Specifically, as shown below, plan contributions that are materially greater than benefits-related service and net interest cost accrued during the period (that is, net of actual pension investment returns) are added back to FFO. (Note that this adjustment is capped at zero, given what

would otherwise be the distorting effect of net positive cash inflows.)

Conversely, if the company is funding its postretirement obligations at a level substantially below its accrued expense, this may be interpreted as a form of borrowing that artificially bolsters reported cash flow from operations. Standard & Poor’s also adjusts cash flow to normalize for investment return performance viewed as non-recurring in nature, whether abnormally high or low (*see table 3*).

**Table 4—Application/Expansion of Core Earnings Framework**

**UVW Co.**

The company used 10% in 200X as its expected return on plan assets assumption. Plan assets totaled \$3.5 billion at the beginning of the year. Actual return was 2% (\$70 million).

<b>200X income statement</b>	<b>(Mil. \$)</b>		
Net sales	2,000		
Operating expenses	—		
Pension expense	200		
D&A	1,000		
All other operating expenses	600		
Oper. income (after D&A)	200		
Interest expense	120		
Pretax income	80		
<b>Pension expense for 200X</b>			
Current service cost	50		
Interest cost	300		
Expected return on plan assets (10% x \$3.5 bil.)	(350)		
Amortization of unrecognized gains or losses	200		
Net pension expense	200		
The income statement would be adjusted as follows:			
	<b>As reported</b>	<b>Adjustments</b>	<b>Adjusted</b>
Net sales	2,000		2,000
<b>Operating expenses</b>			
Pension expense*	200	(150)	50
D&A	1,000		1,000
All other operating expenses	600		600
EBIT	200		350
Interest expense	120	230	350
Pretax income	80		0
EBIT fixed-charge interest coverage (x)	200/120 = 1.7		350/350 = 1.0

\*All but the current service cost (\$50 million) are eliminated from benefits expense. Benefits-related interest cost, less the actual return on plan assets (\$300 million - \$70 million) is combined with other interest expense.

## Postretirement Obligations

### Profitability Analysis

In analyzing profitability (including EBIT-DA), as illustrated below, it is appropriate to disaggregate the benefits cost components that are combined in financial reporting and eliminate those with no economic substance, in accordance with the approach of Standard & Poor's Core Earnings framework. The so-called "service cost"—reflecting the present value of future benefits

earned by employees for services rendered during the period—is viewed as an operating expense, and treated as such.

The components that represent accounting artifacts and stem from the smoothing approach of the accounting rules—e.g., amortization of variations from previous expectations regarding plan benefits, investment performance, and actuarial experience—are eliminated (consistent with the

**Table 5—Profitability Adjustment for Overly Optimistic Expected Return on Plan Assets**

#### UVW Co.

The company used 10% in 200X as its expected return on plan assets assumption. Standard & Poor's views 8% as a more realistic long-range expected annual return. Plan assets totaled \$3.5 billion at the previous year-end.

200X income statement	(Mil. \$)
Net sales	2,000
Operating expenses	—
Pension expense	200
D&A	1,000
All other operating expenses	600
Oper. income (after D&A)	200
Interest expense	120
Pretax income	80
<b>Pension expense for 200X</b>	
Current service cost	50
Interest cost	300
<b>Expected return on plan assets</b>	
(10% x \$3.5 billion)*	(350)
Amortization of unrecognized gains and losses	200
Net pension expense	200

The income statement would be adjusted as follows:

	As reported	Adjustments	Adjusted
Net sales	2,000		2,000
<b>Operating expenses</b>			
Pension expense	200	70	270
D&A	1,000		1,000
All other operating expenses	600		600
EBIT	200		130
Interest expense	120		120
Pretax income	80		10
EBIT fixed-charge interest coverage (x)	200/120 = 1.7		130/120 = 1.1

\*Under U.S. GAAP, the expected return on plan assets may not be based on the fair value of plan assets at the previous year-end, but on a "market-based value," i.e., a smoothed value averaging values of several previous years. The adjustment should always be based on the fair value of plan assets at the previous year-end. The expected return on plan assets is reduced by  $(10\% - 8\%) \times \$3.5 \text{ billion} = \$70 \text{ million}$ , thereby increasing pension expense by \$70 million.

immediate recognition of these unamortized amounts in the treatment of capitalization discussed above).

Any increase or decrease in the plan liability resulting from plan benefit changes is recognized immediately as an operating expense/credit. Interest expense, which is the result of the application of the discount rate to the PBO to “age” the liability with the passage of time, is essentially a finance charge and is reclassified as such. (As discussed above, sensitivity analysis taking account of different discount rates is appropriate.)

The expected return on plan assets also is eliminated and replaced by a much more meaningful amount: the actual return on plan assets during the reporting period. The actual return on plan assets is netted against interest expense up to the amount of the interest expense reported, but not beyond in the case of fully funded plans, as the economic benefits to be derived from such overage are limited. If the actual return is negative, though, the full amount in excess of interest expense is treated as an addition to interest expense because, unfortunately, the resulting economic detriment to the company is quite tangible (*see table 4*).

In practice, however, the profitability measures that result from the use of this

approach can be extremely volatile, with benefits-related effects often obscuring operating results. For this reason, we view such measures as supplementary. Just as in other aspects of its analysis, we look beyond changes considered temporary in nature. In approaching its conventional profitability ratios, we adjust for the effects of expected investment return assumptions that are significantly higher than the norm, where this has a material effect on reported earnings (*see table 5*).

Moreover, we are alert to cases where companies have net pension credits that are a material source of overall earnings. Net pension credits generally reflect a healthy benefits funding picture, but such credits exaggerate the economic advantage to the company of this overfunding status and can distort period-to-period and peer comparisons.

At this time, we do not intend to recalculate its published key industrial and utility financial ratios as described here. Because most U.S. companies’ pension plans were fully funded through the latter half of the 1990s, we believe such adjustments would not make a substantial difference to the published medians. If, however, current, broadly depleted funding levels persist, we will reassess the basis for statistical data. ■

# Corporate Asset-Retirement Obligations

**A**sset-retirement obligations (AROs) have for some time been viewed as debt-like liabilities in Standard & Poor's Ratings Services' analysis. Recent changes to accounting and disclosure standards under IFRS and U.S. GAAP have yielded more reliable information on the value, nature, and timing of these obligations, allowing for a more systematic analysis.

## Asset Retirement Obligations

AROs are legal commitments to incur restoration and removal costs while disposing of, dismantling, or decommissioning long-lived assets. They are legal obligations that have a call on future cash flows of an enterprise, much like debt and similar obligations. Examples include the costs of plugging and dismantling on- and off-shore oil and gas facilities; decommissioning nuclear power plants; and capping mining and waste disposal sites.

AROs typically also meet accounting criteria to be reflected as liabilities in a company's financial statements. Yet, several characteristics distinguish AROs from conventional debt, including timing and measurement uncertainties; tax implications; and the standing of claimants in bankruptcy. The measurement of AROs involves a high degree of subjectivity and measurement imprecision. For example, the amounts that will be paid ultimately to settle an ARO often depend on future legislation.

In certain cases, ARO costs are reimbursed to the entity or assumed by other parties. This occurs when an asset operator costs' are reimbursed by a local government, or—as for

many regulated entities—the costs are recovered via the rate-setting process. In such instances, the entity does not bear all of the economic risks. (*Please see "Asset-Retirement Obligations: How SFAS 143 Affects U.S. Utilities Owning Nuclear Plants," published on RatingsDirect on March 31, 2004*).

## How Standard & Poor's views AROs in its analysis

Because we consider AROs to be debt-like, the after-tax amount of AROs is added to our debt-based measures. Our analysis begins with the reported liability amount, which is adjusted for anticipated reimbursements and tax reductions, and for any assumptions we view as unrealistic.

To a large degree, Standard & Poor's agrees with the accounting view that retirement costs are encompassed in the value of the fixed asset to which they relate. From management's perspective, the return on the asset is expected to be satisfactory, inclusive of ARO costs. We believe economic reality to be best depicted by including all the relevant costs in the asset's carrying value. However, adjustments to the asset value may be war-

ranted in our analysis, in cases where we believe future recoverability is in doubt. Conversely, salvage asset values can somewhat mitigate the ARO burden (e.g., oil-producing assets, which may have a significant residual value when sold, as they often are).

#### Measurement and timing uncertainties of AROs

Because most AROs involve obligations to incur costs that may extend well into the future, uncertainties are inherent in their estimation. These include the estimated amount of the ultimate cost; timing of asset retirement; and the discount rate to be used in the present value calculation.

- The actual cost of abandonment will depend, notably, on the relevant country's laws, and asset-specific environmental regulations at retirement; the condition of the markets for the specific assets' retirement services; possible economies of scale for the operator; and whether the activities ultimately are performed by the operator or by a third party (the accounting measure assumes a third party would perform, and accordingly incorporates a profit element).
- The timing of asset retirement also is subject to assumptions that can change materially. In extractive industries, for example, retirement timing also depends on expectations for hydrocarbon or minerals prices, which are volatile. During periods of depressed pricing, the value of the abandonment obligation likely would increase, because the retirement of the asset could be accelerated. For power generators, asset-retirement timing depends notably on local legislation, which may either result in an impact that is favorable (i.e., in the case of an operating license extension) or unfavorable (i.e., in the case of an early mandated closure).
- The requirement to use an entity-specific discount rate under U.S. GAAP also hinders comparability across companies using U.S. GAAP, as opposed to IFRS-reporting companies, which use market-related rates adjusted to risk-specific factors attributable to the liability. As an example, for two companies reporting under U.S. GAAP, with different credit

quality and equal interests in the same oil-field, the present value of the AROs could be higher for the stronger company, merely because that company uses a lower discount rate. (Ultimately, however, both companies should incur the same costs at retirement.) Conversely, the periodic accretion expense would be higher for the weaker company. Information is not available to allow for adjusting for these differences, nor would it be practical. Standard & Poor's Ratings Services is sensitive to the potential for 'understatement' of the obligations for weaker companies, but in most cases, we do not expect it to be a material rating factor.

ARO's are recorded on a pretax basis under most accounting standards. Any expected tax benefits generally are reflected as a separate deferred tax asset on the balance sheet (because the ARO-related asset is depreciated). In most cases, tax-related cash flows (or tax savings) substantially coincide with the ARO payments, thereby mitigating part of the cash costs. In considering the ultimate cash flows associated with AROs, these tax effects must be considered. We analyze the company's profitability prospects and its tax position otherwise, in considering the adjustment related to taxation effects. (Occasionally, governments may provide benefits to companies—such as reduced royalty or income tax rates—to extend the useful life of a field, to avoid writing a refund check.)

#### Basic numerical adjustments to derive complementary ratios

Our analysis includes debt-like obligations (such as for operating leases and postretirement benefits) when calculating credit ratios. For AROs, and subject to data availability and materiality, our approach—which to a significant extent mirrors that on postretirement benefits—is as follows:

- The obligation, net of any dedicated retirement-fund assets, salvage value, and anticipated tax savings, is added to debt. We evaluate the estimates and assumptions underlying the obligation over time for reasonableness. In those cases where we feel the balance-sheet recognition misrepresents the obligation, we would make correspon-

ding adjustments. Adjustments are made on a tax-effected basis in cases where it is probable that the company will be able to utilize the deductions. We further consider the investment risk associated with any investment portfolio specifically set aside against the obligation (such as a decommissioning trust) when netting such amounts against the liability.

- The accretion of the obligation reflects the time value of money and is akin to noncash interest. Thus, if the accretion amount is reported as an operating charge in reported statements, we reclassify it as interest expense for both income-statement and cash-flow statement analysis.
- Because the liability is considered net of tax, the ARO-related deferred tax asset is reduced (or the ARO-related asset, if there are insufficient related tax assets).
- Cash expenses for abandonment and contributions into dedicated funds that exceed the obligations newly incurred during the period are reclassified as principal repayment of a debt-like obligation, thus increasing operating cash flow and funds from operations. If dedicated funding is in place and the related returns are not entirely reflected in reported earnings and cash flows, the unrecognized portion of the return on these assets is credited to earnings.

AROs affect a company's debt-service coverage ratios (e.g., funds from operations or operating cash flows to total debt and interest-cover ratios) as well as leverage ratios (e.g., total debt to total capital). Liquidity implications typically are secondary to the analysis, as long as these obligations remain long term, and entail only limited prefunding requirements.

### **A Post-Default Perspective: AROs As Priority Obligations, Rather Than Senior Unsecured Lenders**

The laws that govern the status of AROs in bankruptcy are diverse, asset- and jurisdiction-specific, and—occasionally—evolving and uncertain. In some cases, it is clear AROs cannot be rejected through the bankruptcy process and likely will rank senior to unsecured creditors. In such cases, AROs are viewed as “priority obligations” in the calculation of ratios used for notching the company's individual obligations up or down to reflect their relative position (and relative recovery prospects) in a company's capital structure. *(For a more detailed discussion on notching, see Standard & Poor's Corporate Ratings Criteria, on RatingsDirect.)* ■

# The Role of Corporate Governance in Credit Rating Analysis

**T**he linkages between credit quality and corporate governance—or, more correctly, certain elements of corporate governance—can be extensive. Governance issues that are germane—such as ownership structure, management practices, and financial disclosure policies—are regularly examined as part of the credit ratings methodology, although they have not traditionally been labeled with corporate governance nomenclature.

Credit rating analysis has focused on many specific corporate governance elements but has not aggregated these into one category or attempted to arrive at an overall assessment of corporate governance.

Until recently, greater emphasis has been placed on corporate governance factors in the rating analysis in countries with less-developed capital markets. However, given the recent spate of management scandals in the U.S. and Europe, Standard & Poor's Ratings Services is subjecting these issues to greater scrutiny globally.

It is clear that weak corporate governance can undermine creditworthiness in several ways and should serve as a red flag or warning indicator to credit analysts. Alternatively, strong corporate governance, demonstrated in part by the presence of an active, independent board that participates in determining and monitoring the control environment, while not an enhancement to creditworthiness, can

serve to support the credibility of financial disclosure and, more broadly, management.

Recent examples of poor corporate governance, which contributed to impaired creditworthiness, include:

- Uncontrolled dominant ownership influence that applied company resources to personal or unrelated use.
  - Uncontrolled executive compensation programs.
  - Management incentives that compromised long-term stability for short-term gain.
  - Inadequate oversight of the integrity of financial disclosure, which resulted in heightened funding and liquidity risk.
- Standard & Poor's Governance Services group offers full-scope corporate governance

analysis and scores. These services are geared largely to the equity investor's perspective. In addition, the credit ratings and governance groups at Standard & Poor's may collaborate in the analysis of specific companies. Moreover, to ensure a methodological consistency of approach relating to broad corporate governance issues, collaboration at a technical level between credit and governance analysts does occur to review points of general analytical criteria.

The following elements of corporate governance traditionally have formed part of ratings analysis. The significance of each element as a rating factor can vary greatly.

### Ownership

Identification of the owners is an obvious requirement. It is a fundamental rating criterion that entities are never rated on a stand-alone basis; links to parent companies or affiliates are important considerations. Ownership by stronger or weaker parents substantially affects the credit quality of the rated entity. The nature of the owner—government, family, holding company, or strategically linked business—also can hold significant implications for both business and financial aspects of the rated entity.

### Control

The existence of more than one owner introduces additional issues regarding potential conflicts over control. Joint owners might disagree on how to operate the business. Even minority owners can sometimes exercise effective control or at least frustrate the will of the majority owners. Whenever control is disproportionate to the underlying economic interest, the incentives for the stakeholders could diverge. This could result from existence of classes of shares with super voting rights or from owning 51% in each of multiple layers of holding companies. In either example, control might rest with a party that holds only a relatively small economic stake. Cross-shareholding of industrial groupings and family-controlled networks are commonplace in certain parts of the world. Such group affiliations can have positive or negative implications, depending on the specific situation.

Conventional, equity-oriented corporate governance analysis is very sensitive to share structure (asking, for example, whether each type of share provides representational voting), out of concern that actions will be undertaken to the detriment of minority shareholders. Although this concern is not the direct focus of credit analysis, there is a penalty for companies considered abusive to minority holders. Perception of such conduct would, obviously, impair the company's access to investment capital. Furthermore, if a company mistreated one set of its stakeholders, there would be serious concern that the company could later try to shortchange other stakeholders, including creditors.

### Management and Organization

Assessment of management is an especially significant determinant of credit-rating assignments. Rating analysis considers many factors that pertain to management, including:

- Track record and competence;
- Management background and reputation;
- Management depth and turnover;
- Professional or entrepreneurial style of management; and
- Any tensions among operating functions, the finance function, or shareholder interests.

### Policies and Strategies

Financial policies are assessed for aggressiveness or conservatism, sophistication, and consistency with business objectives. Policies should optimize for the typically divergent interests of the company's stakeholders—shareholders, creditors, customers, and employees, among others. Specifically, the company's goals with respect to its credit rating need to be consistent with the balancing of those interests.

Business strategies are evaluated for realism, comprehension of competitive risks, and contingency planning. Comparisons of policies and projections with a company's track record form the basis for judging management credibility.

### Information Disclosure and Financial Transparency

Ratings are based on audited financial data plus supplemental data (including detailed

financial projections) that might be provided confidentially. Ratings agencies enjoy unique access to data given their status under disclosure regulations in many jurisdictions and their impeccable track record regarding confidentiality.

In judging the reliability of data, we consider the accounting standards used as the basis of the financial statements, the reputation of the auditor, and the degree of openness of the local business practice. Qualms about data quality (dubbed “information risk”) would translate into a lower rating and preclude a rating in the upper part of the rating spectrum.

A review of accounting quality is a critical prerequisite of the financial analysis. Comparisons of financial measures need a common frame of reference. Consolidation standards, revenue recognition methods, and depreciation methods are all scrutinized, as is off-balance sheet financing, such as leasing, securitizations, trust vehicles, and contingent liabilities. Adjustments are regularly made to recast the financial statements—and the credit ratios based thereon—to better reflect economic risks and to allow better benchmark comparisons.

However, Standard & Poor’s does not conduct audits, and there are limitations to analytical methods. A company bent on deception might succeed in misleading both its auditors and the rating analysts.

Apart from disclosure to Standard & Poor’s analysts, though, public disclosure and transparency can be important. If a company maintains an aura of secrecy, investors will be suspicious and skittish. In addition, the company is more prone to so-called headline risk, the consequences of which can be very damaging, especially in the current environment.

#### **Intercompany and Affiliated Party Transactions**

These activities pose special challenges, because it is difficult to ascertain that they

are done on a truly arms-length basis. A propensity to engage in deals with inside parties would give rise to skepticism about the company’s conduct of its affairs, even if they were fully disclosed.

A component of corporate governance that historically has not figured prominently in the rating process is board structure and involvement. Of course, if it is evident a company’s board of directors is passive and does not exercise the normal oversight, it weakens the checks and balances of the organization and represents a negative credit factor. But considerations such as the proportion of independent members on the board of directors, presence of independent directors in board-level audit committee, and direct reporting of internal auditor to board or independent internal audit committee at board level have not been systematically examined.

Similarly, relatively little attention has been paid to the compensation of directors and senior management teams. It can be difficult to determine objectively if a given level of compensation is excessive or will result in a company strategy that is overly aggressive or mainly focused on short-term performance.

As business practices change in the wake of management and accounting abuses—and directors take on a more active role in the company direction and oversight—more weight to the role of the board of directors could be warranted from the perspective of credit rating.

Quite obviously, strong corporate governance does not, by itself, indicate strong credit worthiness—just as a company being open and fair does not equate with the company being well managed. In addition, companies with high credit ratings could have governance standards that are problematic, particularly from the perspective of minority shareholders. In the end, weak corporate governance practices can undermine credit-worthiness, but it would depend on the specific aspects of governance that led to the poor assessment. ■

# Securitization's Effect On Corporate Credit Quality

**T**he focus of this article is on securitizations undertaken by industrial companies—not by financial institutions, which use securitization extensively to fund mortgage and credit card loans, as well as other types of finance assets. Nevertheless, Standard & Poor's Ratings Services' fundamental approach to analyzing securitization is the same in both the industrial and banking sectors.

Asset securitization is a form of financing that has been widely used across industries and across the rating spectrum. Securitizations are important financing sources for many companies, often providing both lower cost and more diverse sources of funding and liquidity than available to the company otherwise. The ability to securitize assets provides additional financial flexibility and is regarded as a positive credit factor. Apart from this, though, securitizations do not ordinarily transform the risks or the underlying economic reality of the business activity—that is, provide what is commonly referred to as “equity relief.” Equity relief is rarely achieved when a company has a recurring financing requirement, in contrast to one that uses securitization only as a means to monetize a non-core asset on a one-time basis. If securitization is used to supplant other debt, its effect on credit quality is likely to be close to neutral. Because the accounting treatment of securitization frequently is not congruent with Standard & Poor's analytical perspective, adjustments to the reported financials are necessary.

In the event of a bankruptcy, an issuer's reliance on securitization can be detrimental to the ultimate recovery prospects of unsecured creditors—and so may well warrant notching down of unsecured debt issue ratings from the issuer credit rating.

## What Is Securitization?

A securitization is a means of obtaining financing, but it is not accomplished through a borrowing arrangement in the traditional sense. In a securitization, an asset or pool of assets is sold in a “true sale” to a bankruptcy-remote entity, variously referred to as a securitization trust, special-purpose vehicle (SPV), special-purpose entity (SPE), or variable-interest entity (VIE). This entity funds the transaction by issuing debt, equity, or other forms of beneficial interests. Subsequently, the debt is serviced exclusively with cash flow generated from the trust's assets. Because the trust is bankruptcy-remote, its debtholders are insulated from the default risk of the issuer. (Securitizations are often effected using a series of trusts to achieve the desired legal isolation.)

Further protection is afforded to trust debtholders through “enhancement” in the form of overcollateralization. That is, the debt issued by the securitization trust is less than the value of the assets, and the difference between the two is the so-called “first-loss” exposure. This exposure can take different forms, including subordinated interests in trusts, cash reserves, and deposits due from trusts.

Another form of enhancement can be the accumulation by the trust of excess cash flow, also referred to as “excess spread” or “interest-only strips.” This is the difference between cash inflows from the securitized assets and cash outflows related to debt service, servicing fees, and other expenses. Some securitizations “trap” a portion of this cash within the deal structure to further protect debtholders.

Securitizations also frequently incorporate enhancements provided through third parties, including bond insurance, liquidity facilities, and credit derivatives. Furthermore, securitizations commonly include performance-based early amortization and reserve funding triggers.

Securitizations can be amortizing, in which one asset or pool of assets is sold at the initiation of the transaction and then is liquidated over a stipulated period. Or, they may be “revolving” in the sense that liquidating assets are replaced by new assets sold by the issuer into the trust. Securitization trusts may be associated with a single corporate seller of assets (single-seller conduits) or incorporate several corporate sellers (multi-seller conduits).

Corporations commonly securitize a wide range of assets, including—to give just a few examples—finance and lease receivables, trade receivables (including existing and future export receivables), inventory, transportation equipment, timberlands, trademark licenses, royalties, receivables from tax authorities, and stranded costs of electric utilities.

### Benefits Afforded By Securitization

Securitizations are important financing sources for many issuers, adding to the range of other secured and unsecured funding alter-

natives. For some marginal or distressed companies, securitization may be the only accessible form of obtaining financing; investors may be too wary of the company’s poor prospects to lend directly, but might still be willing to lend against the company’s discrete assets when coupled with all the structural protections afforded by securitization.

In addition, securitization may facilitate match-funding, as the term of securitized debt generally mirrors the life of the underlying assets.

Securitization also provides access to relatively low-cost financing in many instances. However, the cost of the securitization transaction encompasses more than just the coupon rate of the securitized debt: the costs related to all the different forms of credit enhancement must also be weighed, as well as incremental administrative costs. Moreover, securitization may weigh on the cost of other financings because the overcollateralization enjoyed by securitized debtholders can put unsecured creditors at a disadvantage, as discussed below.

In thinking about the financial flexibility benefits provided by securitization, one must also be sensitive to the risks posed by financial covenants or other credit triggers included in the securitization. In revolving securitizations, triggers are commonly tied to the performance of the underlying assets, which, when triggered, stop the sale of additional assets and cause all cash flow of the securitization to be used for debt amortization. This can result in liquidity challenges and cause a “credit cliff” situation for the company.

### Does Securitization Bring Equity Relief?

Many market participants think of securitization’s effect on an issuer’s credit quality almost exclusively in terms of “equity relief,” that is, the notion that by having completed a securitization, the issuer is able to retain less equity, or incur more debt, than would otherwise have been the case, without any change in its credit quality.

For Standard & Poor’s, equity relief is one potential aspect of the analysis of a securiti-

zation's effect on an issuer's credit quality. We gauge equity relief in terms of risk transfer: equity relief is achieved only to the extent the risk related to securitized assets is transferred to the securitization debtholders. We do not approach this matter in black-and-white terms, but instead view the potential outcomes along a spectrum. To the extent that the securitization accomplishes true risk transference, the transaction is interpreted as resembling an asset sale, whereas in the much more common case where the issuer retains the bulk of risks related to the asset, the transaction is akin to a secured financing.

Key considerations include the following:

- The riskiness of the securitized assets. The only risk that can be transferred is that which existed in the first place. If, as is often the case, an issuer securitizes its highest-quality or most liquid assets, that limits the extent of any meaningful equity relief.
- First-loss exposure. The issuer commonly retains the first-loss exposure, thereby enhancing credit for the securitized debt. For the securitized debt to be highly rated, the extent of enhancement must be a multiple of the expected losses associated with the assets. The first-loss layer thus encompasses the preponderance of risk associated with the securitized assets, and the issuer's total realizations from the securitization will vary depending on the performance of the assets. Often, only the risk of catastrophic loss is transferred to third-party investors—risk that is generally of little relevance in the corporate rating analysis.
- Moral recourse. This refers to how the company would behave if losses did reach catastrophic levels. Empirical evidence suggests that companies often feel they must bail out troubled financings (for example, by repurchasing problematic assets or replacing them with other assets) to preserve access to this funding source and, more broadly, to preserve their good name in the capital markets, even though they have no legal requirement to do so. Moral recourse is magnified when securitizations represent a significant part of a company's financing activity or when a company remains linked to the securitized assets by continuing in the role of servicer or operator.

- Ongoing funding needs. Even if it were certain that the risks related to a given pool of assets had been fully transferred and the issuer would not support failing securitizations, equity relief still would not necessarily have been achieved. If, for whatever reason, losses related to the securitized assets rose dramatically higher than initially anticipated, and if the issuer has a recurring need to finance similar assets, future access to the securitization market would be dubious—at least economically. Future funding needs would then have to be met by other means, with the requisite equity to support them. Thus, even if a company separately sells the first-loss exposures, or sells the entire asset without retaining any first-loss exposure, it may achieve little equity relief. (See “Auto Whole Loan Sales Bolster Automakers' Funding Flexibility,” published March 15, 2004, on *RatingsDirect*, *Standard & Poor's Web-based research and credit analysis system*.)

Our experience has been that expectations regarding equity relief are often exaggerated. The fact is, minimizing funding costs for the issuer while transferring significant risk to the investor tend to be mutually exclusive.

### Accounting Aspects

Convoluting and form-driven accounting rules under U.S. GAAP complicate the task of assessing companies' uses of securitizations. Under SFAS 140 (“Accounting for Transfers and Servicing of Financial Assets and Extinguishments of Liabilities”), certain specifically defined securitizations effected through securitization trusts termed “qualifying special-purpose entities” (QSPEs) are treated as asset sales, with the securitized assets and related debt being off-balance-sheet. Yet, QSPEs, which are “passive” in nature and narrow in scope of activities, include securitizations of recurring finance receivables—a securitization type where there is typically little basis for supposing risk transfer has occurred, based on the factors enumerated above.

Otherwise, under FASB Interpretation Number 46-Revised (FIN 46R; “Consolidation of Variable Interest Entities”),

a company must consolidate a securitization trust—here termed a VIE—if the company is deemed to be the “primary beneficiary” of the VIE trust (unless the VIE is a QSPE under SFAS 140). Under FIN 46R, a company is considered the primary beneficiary if it holds a variable interest(s) in the VIE, which will absorb most of its expected losses, receive most of the expected residual returns, or both. Variable interests are defined in terms of the rights and obligations that convey economic gains or losses from changes in the values of the VIE’s assets and liabilities. According to FIN 46R, a company with the majority of the risks or rewards associated with a VIE’s activities is essentially in the same position as the parent in a parent/subsidiary relationship.

Applying the rules for tallying variable interests is highly subject to judgment and estimates. In addition, some companies tailor the terms of securitizations specifically to fail the tests for off-balance-sheet treatment—which can be achieved without substantially modifying the underlying economics of the transaction—feeling their financial statements are thereby more transparent. Other companies prefer the minimization of apparent financial leverage that can result from off-balance-sheet treatment.

Management’s accounting objective may also be influenced by income statement-related considerations: some companies prefer to avoid the volatility associated with upfront gain recognition, preferring the more smoothed earnings recognition pattern generally afforded by on-balance-sheet accounting for securitizations. (Note: FASB has recently proposed an amendment to SFAS 140 that would require companies to record upfront gains on sales and mark-to-market all securitized assets and liabilities [including any retained portions], as well as affording optional fair-value or amortized cost accounting for servicing rights.)

Further muddying the waters: the IFRS framework is very different from that of U.S. GAAP. Thus, even when transactions have the same economic substance, the accounting treatment can vary.

## Analytical Adjustments

Our analytical treatment of securitizations is not dictated by the accounting treatment. Rather, we seek to understand the economic substance of the transactions. In calculating financial ratios that assist us in assessing debt leverage, profitability, and cash flow, we adjust financial statements as necessary to be in accordance with our analytical perspective and to enhance comparability among issuers.

### Capital structure

For capital structure ratio calculations, the analytical treatment will vary depending on the degree to which risks are transferred. For transactions in which a company retains the preponderance of risks (including those related to ongoing funding needs), we calculate ratios where the outstanding amount of securitized assets are consolidated, along with the related securitized debt—regardless of the accounting treatment. If securitization is used essentially to transfer risk in full and there are no contingent or indirect liabilities, we view the transaction as the equivalent of an asset sale. When necessary, then, we recast the assets, debt, and shareholders’ equity accordingly, including adjusting for deferred tax effects. (In some cases, the securitization gives rise to a deferred tax liability that accrues over the life of the transaction and is ultimately payable when the transaction matures. Given the visibility of this liability and the high likelihood that it will ultimately become payable, in contrast to deferred tax liabilities in general, it may be appropriate to treat this as a form of debt.)

### Profitability

When securitizations are accounted for as sales, they commonly give rise to upfront “gain-on-sale” effects, which represent the present value of the estimated difference between the asset yield and the securitization funding rate and other securitization-related costs. For securitizations in which a company retains the preponderance of risks, it is appropriate to back out such gains and spread them out over the life of the securitizations, given the uncertainty about whether the earnings will ultimately be realized as

expected and to give a clearer picture of the company's recurring earnings.

In theory, it may be desirable to fully recast the income statement—for example, consolidating off-balance-sheet securitization transactions not involving risk transference. As a practical matter, though, this is difficult to accomplish without the detailed assistance of management. Some companies have voluntarily included such pro forma schedules in their public disclosures.

### Cash flow

In accordance with SFAS 95 ("Statement of Cash Flows"), any cash inflows/outflows related to working capital assets or liabilities, or finance receivables, are classified as "operating" in nature on the statement of cash flows. Hence, inflows/outflows from related securitizations affect operating cash flow, with particularly significant effects possible in reporting periods when securitizations are initiated or mature. The reporting convention varies, though, in line with the balance sheet classification. If the securitization is consolidated, the related borrowings are treated as a "financing" activity. If the securitization is not consolidated, it is as if the assets self-liquidated on an accelerated basis: no debt incurrence is identified separately, either as an operating or financing source of cash.

When our analytic view is that securitizations should be consolidated (or, in rare situations, when those that are consolidated should not be), it would be desirable to recast the statement of cash flow accordingly—to smooth out the variations in operating cash flow that can result from the sale treatment of the securitization, which can give a distorted picture of recurring cash flow. Again, though, as a practical matter, this can be difficult to accomplish without the company's assistance.

### Ultimate Recovery Aspects

Use of securitization may pose concerns regarding ultimate recovery prospects for unsecured debt in the same way that securing

some debt with valuable assets relegates the unsecured debt to junior status. Thus, where sufficiently material, this may warrant notching down of unsecured debt issue ratings and needs to be taken into account in assigning recovery ratings to other debt issues.

Like secured debtholders, securitization debtholders have a priority claim to a designated pool of assets. If the issuer becomes insolvent, unsecured debtholders would receive a direct benefit from the encumbered assets only if the value of those assets was more than sufficient to meet the secured/secured debtholders' claims. This implies "subordination" of unsecured debt and of debt secured by lower-quality assets, which becomes potentially more threatening the greater the percentage of assets that are securitized. In the case of securitization, however, if the value of the encumbered assets is insufficient to satisfy the claims of the securitized debtholders, those debtholders have no claim on the issuer's unencumbered assets (that is, as long as the company does not extend any guarantee to the securitization). (Note: Whether the securitization has been consolidated or deconsolidated for financial reporting purposes has no bearing on the legal treatment in bankruptcy.) Therefore, as long as the securitized and unsecuritized assets are of roughly uniform quality, i.e., equally subject to erosion in value, the securitization transactions should not be detrimental to the ultimate recovery prospects of unsecured creditors, particularly if the securitization proceeds are used to repay unsecured debt.

If the securitization transactions are more highly leveraged than those of the rest of the issuer, securitization creates a potential relative benefit for the unsecured debtholders. Obviously, though, if better-quality assets are securitized while inferior ones are left unencumbered on the balance sheet—which is most often the case—the result is that unsecured debtholders are disadvantaged.

Particularly in view of the increasing use of securitizations by corporates, we invite comments from any market participants regarding this article. ■

# Short-Term Speculative-Grade Rating Criteria

**S**hort-term speculative-grade ratings represent Standard & Poor's Ratings Services' opinion of the relative creditworthiness of an obligor with specific reference to a short-term time horizon, generally the following 12 months (on a rolling basis). For issuers with long-term ratings of 'BB+' or lower, their short-term ratings fall in a range, including 'A-3', 'B-1', 'B-2', 'B-3', 'C', and 'D'. For corporate issuers (industrial and utility sectors), the emphasis for short-term speculative-grade ratings is cash flow analytics, liquidity (including loan covenant analysis), and relevant near-term business factors.

Near-term credit factors are often similar to longer-term credit factors, and Standard & Poor's always considers credit issues over a variety of time horizons in assigning long-term ratings. However, for speculative-grade issuers, the short-term horizon can be particularly critical, in terms of liquidity, event risk, and susceptibility to changes in business conditions.

Standard & Poor's short-term speculative-grade ratings are intended to give market participants an additional indicator of creditworthiness. Short-term ratings for speculative-grade issuers focus first and foremost on liquidity, which is the leading driver of creditworthiness over the short term for the majority of corporate issuers in the speculative-grade category. In addition to liquidity, Standard & Poor's considers various other factors in determining the short-term rating.

The business factors will vary by industry and, for example, might address the following: cyclical factors such as commodity pricing environment, potential regulatory changes or rate reviews, potential legal issues, potential new products, or potential sources of delay in introducing products, such as regulatory approvals, potential entry into new business line or exit from existing lines, significant potential competitive developments, near-term country risk factors faced by material emerging market subsidiaries, or other potential event risk.

Short-term speculative-grade ratings are assigned as an "issuer" rating, i.e., one that addresses relevant short-term credit factors for a particular company. Standard & Poor's would also assign ratings to specific

short-term notes or loans (i.e., issue ratings) upon request.

All else being equal, companies with exceptional liquidity characteristics are those most likely to have short-term ratings at the upper end of the scale, since they can rely on their liquidity cushion to shelter them from near-term risks. Companies with corporate credit ratings of 'BB+' may even achieve an 'A-3' short-term rating, which is equivalent to the 'A-3' rating assigned to investment-grade issuers. Despite strong liquidity and what may be favorable near-term industry conditions, these companies' speculative-grade long-term ratings indicate exposure to significant risks over time, for example: vulnerability to a downturn in the domestic economic cycle, product obsolescence risk, expected medium-term competitive developments, regulatory risk, legal risk, or other types of event risk.

Liquidity analysis is naturally a key focus for both short- and long-term speculative grade ratings. The sections below will review the cash flow and liquidity analytics focus for the short-term rating.

### Internal Sources Of Liquidity

#### Cash, marketable securities

A company's cash position is of course the most reliable source of liquidity. However, not all of the cash position can be viewed as surplus: virtually every company has some base amount of cash that must be retained for day-to-day operating purposes. In addition, balance-sheet figures cannot be taken at face value: information on published balance sheets may be stale; cash may be held at operating subsidiaries and not available to the holding company, due to covenant restrictions, cross-border tax inefficiencies, or foreign-exchange restrictions for emerging market subsidiaries; or cash may be pledged to a certain facility. What companies classify as "marketable securities" may in fact be more or less liquid, may be subject to significant swings in value, and depending on the accounting jurisdiction, may or may not be marked to market on a regular basis. Marketable securities also need to be scrutinized for risk concentrations (credit risk;

country risk; and currency risk). For weaker credits, signs of a deliberate strategy to build a cash-cushion prior to a filing for reorganization (such as Chapter 11 in the U.S.) need to be considered.

Therefore, in analyzing a company's cash position as a source of liquidity, Standard & Poor's evaluates the quality and availability of the cash position, taking into account the factors previously mentioned. Careful review of the notes to financial statements, other regulatory disclosures, understanding management's liquidity investment policy, and questioning management directly are sources utilized.

#### Cash flow

A company's ability to generate free cash flow (cash flow after working capital needs and capital expenditures) is a key source of liquidity. Building blocks for the cash flow analysis include:

*Funds from operations.* This basic cash flow indicator (cash flow before working capital adjustments and capital expenditures) is scrutinized for historical and projected annual level and relative volatility, including seasonal or commodity price-related fluctuations.

#### *Working capital/operating cash flow.*

Working capital can be a critical use or potential source of cash flow, depending on the nature of the company and its operating cycle. Standard & Poor's reviews companies with a high degree of seasonality and working capital variation, such as retailers, for peak and trough levels of working capital usage and related liquidity needs and sources. A company may also be able to extract cash from working capital at least temporarily, for example, by monetizing receivables through factoring or securitization, liquidating unneeded inventories, or stretching out payments to suppliers. Each of these techniques has potential drawbacks, however, in terms of time needed to execute, or—in the case of stretching out payments—sending potentially alarming signals to suppliers.

#### *Capital expenditures/free cash flow.*

Standard & Poor's expectations about a company's required maintenance capital expenditures, as well as likely growth-related capital expenditures, are factored into the cash flow analysis to arrive at projected free cash flow. The relative flexibility the

company may have to cut back on capital expenditures, if needed, is also analyzed.

## External/Other Sources Of Liquidity

### Bank lines of credit

Key factors reviewed are total amount of facilities; whether they are contractually committed; facility expiration date(s); current and expected usage and estimated availability; bank group quality; evidence of support/lack of support of bank group; and covenant and trigger analysis.

Financial covenant analysis is critical for speculative-grade credits. Standard & Poor's requests copies of all bank loan agreements and bond terms and conditions for rated entities, and reviews supplemental information provided by issuers for listings of financial covenants and stipulated compliance levels. Standard & Poor's reviews historical covenant compliance as indicated in compliance certificates, as well as expected future compliance and covenant headroom levels. Entities that have already tripped or are expected to trip financial covenants will be reviewed for their ability to obtain waivers or modifications to covenants. Penalties for violating financial covenants are also reviewed as to whether they trigger an event of default (most severe) or a debt incurrence limitation. Material adverse change clauses are also reviewed for potential ability to affect bank group behavior during a liquidity or other crisis.

Ratings triggers are less common for speculative-grade issuers than for investment-grade issuers. Nevertheless, rating triggers are sometimes found at the 'BB' or 'B' level (i.e., a downgrade from 'BB-' to 'B+' may trigger a put option or immediate unavailability of a bank facility for future borrowings).

### Market access

Although market access cannot be taken for granted, companies are reviewed for their track record in ability to access debt and equity markets. Particularly outside the U.S., a company's role in the national economy can enhance its access to bank and capital markets. Near-term, well-defined, highly executable bank or capital market financings are

included in Standard & Poor's near-term cash flow projections, while potential execution risks are also considered.

Ability to access securitization markets on an ongoing basis should also be considered. This assessment should take into account the current and anticipated liquidity in securitization markets, as well as the nature of assets available to be securitized (amount, quality, and salability). Committed multi-seller and single-seller bank conduit facilities should be considered where applicable.

### Ability to sell nonstrategic assets

Identified, marketable nonstrategic assets may be considered as a form of backup liquidity support. However, execution risks may be considerable; timing of the closing of such transactions (i.e., receipt of funds) can be notoriously unpredictable.

### Parent support

Parent support may be considered as a potential source of liquidity, albeit with a healthy dose of skepticism. The track record of the parent in supporting the subsidiary or other similar subsidiaries, the strategic nature of the subsidiary, or the presence of cross defaults related to the subsidiary in parent debt agreements all may lead Standard & Poor's to conclude that temporary liquidity support from a more highly rated parent is likely. However, parents often change their views with regard to the relative importance of keeping a subsidiary out of default or bankruptcy, as the parent company's own business and financial strategies evolve.

## Uses Of Cash

In addition to working capital and capital expenditures, expected near-term uses of cash may include the following:

### Debt maturities

A company's debt maturity schedule is carefully reviewed, with particular scrutiny of short-term debt (debt with original maturity within one year) and the current portion of long-term debt (the portion of bond or long-term bank debt maturing within one year). For most speculative-grade companies, market

access is not guaranteed. Periods of market illiquidity or temporary spikes in credit spreads may make market access difficult, expensive, or both. Short-term bank debt rollovers also cannot always be taken for granted. Companies with the highest short-term ratings will have sufficient cash to cover near-term maturities or a refinancing plan that we view as having little execution risk (such as planned market access with committed credit facilities as a backup). While the focus is 12 months forward on a rolling basis, this does not mean debt maturities just beyond this horizon are ignored in the short-term rating analysis. Standard & Poor's would want to see that the company has a credible strategy for repaying or refinancing debt maturing up to 18 months for companies to achieve the highest short-term ratings. As maturities move into the forward 12-month time horizon, Standard & Poor's will start placing more weight within the short-term rating analysis on the materiality of upcoming maturities and the company's refinancing strategy and execution ability. Debt maturing within six months, depending on materiality relative to liquidity sources, would be weighted quite significantly in the short-term rating, with proportionally less credit given to refinancing strategies not yet executed.

Particularly for companies in the weaker short-term rating categories, the specific timing of debt maturities can be critical. Maturities are scrutinized by month, and for companies with severe liquidity problems, constructing a day-by-day schedule of material maturities may be needed.

Besides bank and bond debt, other financial obligations are considered, including leases and contingent obligations.

### Dividends

Expected common and preferred dividends are factored into projected use of cash. Standard & Poor's will also consider a company's flexibility to reduce dividends if needed. Companies may find it difficult to reduce dividends if they have maintained a long track record of maintaining or increasing dividends per share, which in turn is considered critical to maintaining access to equity markets.

### Acquisitions.

Expected near-term acquisitions (and funding strategy) are factored into cash flow projections. For particularly acquisitive companies, Standard & Poor's may make a base-case assumption about acquisitions in our forecast, although no specific acquisition target may have been identified.

Other projected uses of cash may include:

- Pension funding
- Obligations arising from derivatives (margin calls)
- Take or pay obligations
- Debt buybacks
- Litigation
- Environmental obligations

## Guidelines For Speculative-Grade Short-Term Issuer Ratings

Standard & Poor's considers the various factors listed below for each rating category. The final rating incorporates a qualitative weighting of these and other industry risk factors; therefore, the guidelines are not meant to be definitive.

### 'A-3'

A small portion of speculative-grade credits, those with outstanding short-term creditworthiness, may obtain an 'A-3' short-term rating (i.e., cross-over to investment grade for their short-term rating). These issuers should have relatively low default risk over the near term, despite speculative-grade characteristics over the medium to long term. They must have a combination of outstanding liquidity and lack of near-term event risk. In particular, the issuer should exhibit a combination of most of the following characteristics:

- Free cash flow positive for prior (rolling) 12 months and per Standard & Poor's projections for next (rolling) 12 months;
- Cash and easily liquidated short-term investments more than cover short-term debt maturities (i.e., no refinancing risk in the near term);
- Has ample backup liquidity from unutilized lines of credit and no chance of covenant breach or rating trigger activation;

- Enjoys very good access to external financing, including debt (bank, securitization, and other debt markets), and equity.
- Event risk over the short term (acquisitions, industry downturn, adverse regulatory/legal rulings, adverse competitive developments) should be minimal.

#### 'B-1'

Issuers with a 'B-1' short-term rating have above-average creditworthiness over the short term compared to other speculative-grade issuers, despite credit concerns over the medium to long term. They should have a combination of very strong liquidity and limited near-term event risk. In particular, such issuers should exhibit the following:

- Should be free cash flow positive for prior (rolling) 12 months and per Standard & Poor's projections for next (rolling) 12 months;
- Cash and easily liquidated short-term investments should nearly cover short-term debt maturities (i.e., limited refinancing risk). Alternatively, backup liquidity from unutilized lines of credit may help cover short-term debt maturities, if there is virtually no chance of covenant breach or rating trigger activation;
- Have ample backup liquidity from unutilized lines of credit and little chance of covenant breach or rating trigger activation;
- Total liquidity (cash, marketable securities, unutilized bank lines, projected 12-month funds from operations) should well exceed total near-term uses (working capital requirements, capital expenditures, dividends, pension funding requirements, debt maturities);
- Typically enjoy good access to external financing (debt-including securitization facilities), equity, or both); and
- There may be some event risk over the short term (acquisitions, industry downturn, adverse regulatory/legal rulings, adverse competitive developments), but assessed potential impact should be minimal. There may be more significant event risk identified over the medium term.

#### 'B-2'

Issuers with a 'B-2' short-term rating have average speculative-grade creditworthiness over the short term. They should have adequate to good liquidity and may have limited near-term event risk. In particular, these issuers should have the following traits:

- May be neutral to slightly free-cash-flow-negative (for prior [rolling] 12 months and per Standard & Poor's projections for next [rolling] 12 months);
- Cash and easily liquidated short-term investments, plus backup liquidity from unutilized lines of credit, should nearly cover short-term debt maturities (i.e., may have some refinancing risk);
- Have some backup liquidity from unutilized lines of credit. There may be some chance of covenant breach, although limited impact is expected (i.e., either lines of credit are not critical liquidity sources, or banks are expected to waive);
- Total liquidity (cash, marketable securities, unutilized bank lines, projected 12-month funds from operations) should cover total near-term uses (working capital requirements, capital expenditures, dividends, pension funding requirements, debt maturities). Some reliance on rollovers (particularly for bank lines where covenant coverage is ample) may be factored in;
- Typically enjoy access to external financing (debt, equity, or both), but disruptions can be anticipated; and
- There may be some event risk over the short term (acquisitions, industry downturn, adverse regulatory/legal rulings, adverse competitive developments), but assessed potential impact should be moderate. There may be more significant event risk identified over the medium term.

#### 'B-3'

Issuers with a 'B-3' short-term rating have weak speculative-grade creditworthiness over the short term (next 12 months). They may have poor to merely adequate liquidity and have significant near-term event risk. In particular, the issuers should exhibit the following:

- May be neutral to significantly free cash flow negative (for prior [rolling] 12 months

## Short-Term Speculative-Grade Rating Criteria

and per Standard & Poor's projections for next [rolling] 12 months);

- Cash and easily liquidated short-term investments, plus backup liquidity from unutilized lines of credit cover only a fraction of short-term debt maturities (i.e., may have significant refinancing risk);
- Have some backup liquidity from unutilized lines of credit. There may be a significant chance of covenant breach, although such a breach should not lead to an immediate liquidity crisis;
- Total liquidity (cash, marketable securities, unutilized bank lines, projected 12-month funds from operations) should nearly cover total near-term uses (working capital requirements, capital expenditures, dividends, pension funding requirements, debt maturities). Some reliance on rollovers

(particularly for bank lines where financial covenant compliance is comfortable) may be factored in;

- Typically have only sporadic access to external financing (debt, equity, or both); and
- Typically there is some identified event risk over the short term (acquisitions, industry downturn, adverse regulatory/legal rulings, adverse competitive developments); assessed impact would be significantly negative. There may be more significant event risk identified over the medium term.

### 'C'

Issuers with a 'C' short-term rating have very weak creditworthiness over the short term. They have a combination of poor liquidity and/or significant event risk, suggesting a high near-term default risk. In particular, these issuers should have the following:

- Be typically free-cash-flow-negative;
- Have no capital market access and limited bank line availability. They also have large near-term maturities. Covenant breach may be expected in the near term, with a high level of uncertainty by Standard & Poor's over the issuer's ability to obtain bank waivers;
- Have high near-term event risk (such as materially adverse litigation result expected); and
- Default is highly probable in the near term, unless a significantly positive development materializes that is not in our base case (i.e., external sources of liquidity found through asset sales, cash injection from parent, acquisition by a stronger company, event risk is reversed).

Note: Speculative-grade short-term ratings have a certain natural correlation with long-term ratings. However, with certain exceptions, several short-term rating outcomes are possible for an issuer with a given long-term rating. Issuers with long-term ratings of 'BB' and lower are not expected to achieve a short-term rating of 'A-3' or higher; issuers with long-term ratings of 'CCC+' and lower are not expected to achieve a short-term rating higher than 'B-3'. ■

Chart 1—Short-Term Speculative-Grade Ratings: Correlation With Long-Term Ratings

