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Criteria | Corporates | General:

2008 Corporate Criteria: Analytical Methodology

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*(**Editor's Note:** We originally published this criteria article on April 15, 2008. We completed our most recent periodic review of these criteria on Dec. 18, 2015. This article has been partially superseded by the articles titled: "Commodities Trading Industry Methodology," published on Jan. 29, 2015, and "Methodology: Investment Holding Companies," published on Dec. 1, 2015. Previously, this article was partially superseded by "Corporate Methodology," published on Nov. 19, 2013, for issuers within the scope of that criteria, but remains in effect for the following sectors or entities: project developers, transportation equipment leasing, and auto rentals companies. In addition, the following sections were also partially superseded. Section: 'Accounting And Financial Reporting,' partly superseded by "Corporate Methodology: Ratios And Adjustments," published Nov. 19, 2013; Section: 'Liquidity,' partially superseded by "Methodology And Assumptions: Liquidity Descriptors For Global Corporate Issuers," published Dec. 16, 2014; Section: 'Industry Risk,' by "Industry Risk," Nov. 19, 2013, concerning the industry risk segments for those companies in scope for Corporate Methodology, or for companies in scope for other sector-specific criteria that describe the use of the industry risk assessment for that sector; Section: 'Ratings Above the Sovereign' has been superseded by "Ratings Above The Sovereign--Corporate And Government Ratings: Methodology And Assumptions," published Nov. 19, 2013; Section: 'Management and governance,' partially superseded by "Methodology: Management And Governance Credit Factors For Corporate Entities And Insurers," published Nov. 13, 2012, and table 2 was superseded by "Methodology: Business Risk/Financial Risk Matrix Expanded," published Sept. 18, 2012.)*

Analytical Methodology

Our rating methodology is based on fundamental analysis. Our model has evolved over time to reflect greater complexity and volatility facing companies. Current ratings analysis puts much greater emphasis on cash flow adequacy and liquidity than in the past. Our profitability analysis was part of our financial risk review, but we now emphasize its role as part of our business risk and competitive assessment.

Overview

Over the past five or six years, we have paid significantly more attention to accounting considerations and corporate governance. Management's risk orientation has always been a critical part of our rating decisions, but there is a more complex corporate landscape now--including the availability of ever more complicated securities and transactions. Accordingly, we need to drill deeper into management practices and policies, including a range of issues, from ownership to board independence to off-balance-sheet stratagems.

Business risk/Financial risk matrix

We strive for transparency around the rating process. However, it is critical to realize--and it should be apparent--that the ratings process cannot be reduced to a cookbook approach: Ratings incorporate many subjective judgments, and remain as much an art as a science.

Our corporate analytical methodology organizes the analytical process according to a common framework, and it divides the task into several categories so that all salient issues are considered. The first categories involve fundamental business analysis; the financial analysis categories follow. (Credit ratings often are identified with financial analysis--especially ratios. And we publish ratio statistics and benchmarks both for sectors and individual companies. But 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.)

We developed the matrix in table 2 to make explicit the rating outcomes that are typical for various business risk/financial risk combinations. The table illustrates the relationship of business and financial risk profiles to the issuer credit rating. The following illustrates how the tables can be used to better understand our rating conclusions.

Table 2

Business Risk/Financial Risk

	—Financial risk profile—				
Business risk profile	**Minimal**	**Modest**	**Intermediate**	**Aggressive**	**Highly leveraged**
Excellent	AAA	AA	A	BBB	BB
Strong	AA	A	A-	BBB-	BB-
Satisfactory	A	BBB+	BBB	BB+	B+
Weak	BBB	BBB-	BB+	BB-	B
Vulnerable	BB	B+	B+	B	B-
Financial risk indicative ratios*	**Minimal**	**Modest**	**Intermediate**	**Aggressive**	**Highly leveraged**
Cash flow (Funds from operations/Debt) (%)	Over 60	45–60	30–45	15–30	Below 15
Debt leverage (Total debt/Capital) (%)	Below 25	25–35	35–45	45–55	Over 55
Debt/EBITDA (x)	<1.4	1.4–2.0	2.0–3.0	3.0–4.5	>4.5

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

The hypothetical case of company ABC

Company ABC is deemed to have a satisfactory business risk profile, typical of a low investment-grade industrial issuer. If its financial risk were "intermediate," the expected rating outcome should be 'BBB'.

ABC's ratios of cash flow to debt (35%) and debt leverage (total debt to EBITDA of 2.5x) are indeed characteristic of intermediate financial risk. (The assessment of financial risk really is not so simple: It encompasses financial policies and risk tolerance, volatility and risks to future performance, 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 an upgrade to the 'A' category by reducing its debt burden to the point that cash flow to debt is more than 60% and debt leverage is only 1.5x. Conversely, ABC may choose to become more financially aggressive--perhaps it decides to reward shareholders by borrowing to repurchase its stock. The company can expect to be rated in the 'BB' category if its cash flow to debt ratio is 20% and debt leverage remains at 4x--and there is a commitment to keeping its finances at these levels.

The rating matrix is a guideline, not written in stone

The rating matrix is 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 outcome.

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. Also, the matrix does not address the lowest rungs of the credit spectrum (i.e., the 'CCC' category and lower). These ratings, by definition, reflect some impending crisis or extraordinary vulnerability, and the balanced approach that underlies the matrix framework just does not lend itself to such situations.

Corporate Credit Analysis Categories

The categories underlying our business and financial risk assessments are:

- Business risk
- Country risk
- Industry factors
- Competitive position
- Profitability/Peer group comparisons

Financial risk

- Governance/Risk tolerance/Financial policies
- Accounting
- Cash flow adequacy
- Capital structure/Asset protection
- Liquidity/Short-term factors

Note that we do not have any predetermined weights for these categories. The significance of specific factors varies from situation to situation.

Business risk considerations

Country risk. The operating environment in the particular country--including, importantly, any sovereign-related stress--can have an overwhelming impact on company creditworthiness, both direct and indirect. Sovereign credit ratings suggest 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 affect the entity's creditworthiness. Such economic or country risk pertains to the impact of government policies on the obligor's business and financial environment, and a company's ability to insulate itself from these risks.

Industry factors. All rating analyses incorporate an assessment of the company's business environment. The degree of operating risk facing a company almost always depends on the dynamics of the industry in which it participates. Our industry 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. It is critical, for example, to determine vulnerability to technological change, labor unrest, regulatory interference, or changes in the supply/demand balance. Our knowledge of the investment plans of the major players in a given industry offers a unique vantage point with respect to the future industry's profile.

The industry risk assessment sets the stage for analyzing specific company risk factors/keys to success and establishing the priority of these factors in the overall evaluation. For example, if technology is a critical competitive factor, research and development (R&D) prowess is stressed. If the industry produces a commodity, cost of production is of major importance.

Still, 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 (e.g., a pharmaceutical company with only one blockbuster drug that is subject to competition and patent expiration).

Competitive position. Competitive position represents a critical input in assessing a company's level of business risk in our analysis, and can often have a significant impact on the debt rating for an issuer. To determine a given issuer's competitive position, we look at key factors pertinent to the specific industry. A key factor for a pharmaceutical company, for example, might be R&D, whereas marketing would be a particularly important consideration for a consumer products company.

Company size and diversification often plays role. Although we have no minimum size criterion for any given rating level, company size tends to be significantly correlated to rating levels. This is because larger companies often benefit from economies of scale and/or diversification, translating into a stronger competitive position. Small companies are, almost by definition, more concentrated in terms of product, number of customers, and geography. To the extent that markets and regional economies change, a broader scope of business affords protection.

Small companies are sometimes touted for their greater growth potential. However, fast growth often is subject to poor execution (even if the idea is well conceived) and can also tempt a company into overambitiousness, which could involve added risk.

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.

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 a rating may reflect skepticism until management has established credibility. Credibility can become a critical issue when a company is faced with stress or restructuring, and we must decide whether to rely on management to carry out plans for restoring creditworthiness.

Profitability/Peer group comparisons. 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.

Moreover, conclusions about profitability also serve as a good sanity check on our assessment of business risk: A company's profit performance offers a litmus test of its fundamental health and competitive position. In this regard, comparing peer companies on key profit metrics is most meaningful.

Financial risk considerations

Having evaluated the issuer's operating environment and competitive position, 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. Several analytical adjustments typically are required to calculate ratios for an individual company (see "Encyclopedia of Analytical Adjustments"). Cross-border comparisons require additional care, given the differences in accounting conventions and local financial systems.

Financial policy. We attach 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, the interplay between business and financial risk, and the need to adjust financial data to reflect different needs and perspectives.

Even those companies that have set goals may not have the wherewithal, discipline, or management commitment to achieve these objectives. Leverage goals, for example, need to be viewed in the context of an issuer's record and the financial dynamics affecting the business.

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 and utility companies. The analysis of financial statements begins with a review of accounting characteristics. The purpose is to determine whether ratios and statistics derived from the statements can be used appropriately to measure a company's performance and position relative to both its direct peer group and the larger universe of corporate issuers. The rating process is, in part, one of comparisons, so it is important to have a common frame of reference.

Analytical adjustments are made to better portray reality and to level the differences among companies--although it rarely is possible to completely recast a company's financial statements. Even where the ability to adjust is limited, it is important to at least have some notion of the extent to which different financial measures are overstated or understated.

Apart from their 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.

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.

The analysis often focuses on levels of funds from operations (FFO), but we play close attention to working capital swings, capital spending requirements, and shareholder distributions to complete the picture with respect to cash flow adequacy.

Cash flow analysis is usually the single most critical aspect of 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, speculative-grade issuers lack this degree of flexibility and have fewer alternatives to internally generated cash for servicing debt.

Capital structure and asset protection. A review of an issuer's capital structure represents an important part of our financial review. The review encompasses both the level and mix of debt employed (i.e., fixed/variable rate, maturity, currency, secured/unsecured). This analysis helps us determine a company's financial flexibility, and how leveraged it is. Of course, when we look at leverage, our analysis goes beyond reported debt on the balance sheet and includes such items as leases, pension and retiree medical liabilities, guarantees, and contingent liabilities.

In addition, a company's asset mix is a critical determinant of the appropriate leverage for a given level of risk. Assets with stable cash flows or market values justify greater use of debt financing than those with clouded marketability. Accordingly, we believe it is critical to analyze each type of business and asset class in its own right. While the Financial Accounting Standards Board (FASB) and International Accounting Standards (IAS) now require consolidation of nonhomogenous business units, we analyze each separately.

Liquidity/Short-term factors. Sundry considerations that do not fit in other categories are examined here. The potential impact of contingencies is considered, along with the company's contingency plans. These include serious legal problems, lack of insurance coverage, or restrictive covenants in loan agreements that place the company at the mercy of its bankers. Access to various capital markets, affiliations with other entities, and the ability to sell assets are important factors in determining a company's options under stress.

Debt maturities schedules are scrutinized. Flexibility can be jeopardized when an issuer is overly reliant on bank borrowings or CP. Issuing CP without adequate backup facilities is a big negative.

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 they must be replaced in a few years. Nonetheless, the ability to generate cash through asset disposals enhances a company's financial flexibility.

Country Risk

Country risk--the risk of doing business in a particular country--is a critical component of many ratings, particularly for companies in emerging markets. The large number of corporate defaults in Argentina during the 2001-2002 crisis was related to a combination of macroeconomic factors, such as severe currency depreciation and weak economic activity, and government actions such as the "pesification" (conversion to pesos from foreign currency) of financial obligations, utility tariffs, and most other dollar-denominated contracts at an unfavorable exchange rate from a creditor's perspective.

Country risk differs from sovereign credit risk--the risk of the sovereign defaulting on its commercial debt obligations. Country risk is often correlated with sovereign creditworthiness, but not always.

Depending on the industry sector or individual company's financial strength, a company may be better or less able to withstand macroeconomic shocks or other country-related risks. For instance, several--but not all--Brazilian exporters performed well during 2002 despite a severe credit crunch in the marketplace, given government reluctance to interfere with export financing. Commercial banks and state development banks continued to provide lines of credit to major exporters, even though the sovereign suffered credit stress. Most Russian companies continued to perform and to service external, export-backed debt in 1998-1999 when the sovereign was in default.

On the other hand, strengthening credit quality of the sovereign state does not necessarily improve the business environment--or the relevant country risk. For example, although Russia's sovereign credit quality has been improving, the operating environment remains risky. All ratings on Russian companies factor in uncertainty about enforcement of regulatory and legal norms and the still-weak corporate governance environment.

Certain industries tend to be more affected by sovereign issues than others. Banks and utilities are greatly affected by the regulatory framework and by the general condition of the economy. On the opposite end of the spectrum are export-oriented companies, which are less affected by local economic conditions, and generally benefit from currency depreciation. Nevertheless, even exporters are exposed to country risk. For instance, they are subject to local rules on labor and domestic input sourcing and could suffer a disruption in financial market access because of sovereign-related investor perceptions. Resource nationalism can also make export-oriented commodity industries more likely targets of selective sovereign intervention.

Exposure to country risk may even differ on a company-by-company basis. For instance, in Russia, the large oil and gas producers may each be subject to different risks of government interference.

Government-related companies generally enjoy some government support, but face general country risks as well. Although selective sovereign intervention is hardly an issue for them, in terms of outright expropriation, they are still subject to the country's tax and regulatory risks, infrastructure constraints, or exchange rate movements. There are plenty of examples in which the sovereign has induced the government-owned entities to reduce capital investment budgets, increase the tax burden, or pay extraordinary dividends when economic pressures have risen.

Country risk methodology and interaction with the sovereign rating

The main sovereign- and industry-related risks affecting and sometimes constraining the credit quality of companies in a certain jurisdiction include various economic, financial, regulatory, and industry-related risks that can affect day-to-day operations, long-term investment decisions, and, of course, payment capacity.

We divide the main country risk factors that could affect the private sector into two categories: Economic/political and industry risks.

Economic risks

- Growth prospects of a country;
- Business cycle;
- Political factors influencing the business environment;
- Current and projected inflation levels;
- Foreign exchange risks affecting the flow of imports, exports, and the balance of payments;
- The payment system and the strength and depth of the banking system;
- Interest rates and spreads;
- The depth and liquidity of the local capital markets; and
- Access to the cross-border markets for commercial or financial transactions.

Industry-related risks

- Labor market constraints or incentives;
- The strength and political direction of labor unions;
- Labor cost and strike experience;
- Condition of general infrastructure in the country--with potential constraints on water supply, cost of electricity, and price and availability of oil and gas;
- Poor transportation services in roads, ports, and airports;
- Accounting and reporting transparency in the country;
- Federal and state government legal systems;
- Regulatory risk for utilities, banks, and other entities under regulation;
- Existence or potential for heavy taxation; and
- Corruption-related risks affecting day-to-day operations.

Past experience

The main country risk factors that have affected financial performance and have caused corporate defaults in the past are the following:

- Currency mismatch on operations and financial obligations combined with sharp local currency depreciation;
- Price controls combined with drastic raw material increases;
- Sudden contraction of liquidity, combined with a general weakening of the financial system and a possible freezing of bank deposits;
- Large increases in the cost of funds by financial intermediaries, if available;
- Delayed payments from domestic customers, including sovereigns themselves or sovereign-owned entities;
- Hikes in export tariffs or taxes;
- Prolonged labor strikes with excessive demands;
- Unfriendly change in regulations;
- GDP contraction and reduced domestic demand for several months or years;
- Sovereign restrictions on access to foreign exchange needed for debt service; and
- Forced conversion of foreign currency-denominated obligations into local currency.

Ratings above the sovereign

Under our methodology, ratings on a company may exceed those on the sovereign, if we expect it would continue to perform and fulfill its financial obligations, even during a sovereign local and/or foreign currency default scenario. The company must demonstrate that it is significantly sheltered from sovereign and country risk factors, based on past experience and probable scenarios. Where such potential exists, we would perform additional sovereign and country risk stress scenarios as part of the rating analysis.

In addition, ratings above those on the sovereign are possible where there is strong implicit or explicit support from a highly-rated parent in another jurisdiction, and/or there is significant cash-flow diversity derived from operations in several countries.

Foreign-currency ratings of an entity would usually be capped by the T&C assessment for a given country--ordinarily, higher than the sovereign foreign-currency rating. (See "Ratings Above The Sovereign-Corporate And Government Ratings," published on Nov. 19, 2013.) Assessments of T&C risk are published on a monthly basis for all rated sovereigns.) Nevertheless, the foreign-currency ratings on a company can exceed the T&C assessment in instances of:

very strong credit metrics and business prospects, as projected even through a sovereign default scenario; strong incentives to service foreign debt (links to global trading system); or a projected ability to generate enough foreign currency cash flow to comfortably cover foreign currency outflows.

As of Dec. 7, 2015, 153 corporate (including financial institution) and local or regional government (LRG) ratings exceeded the sovereign rating of the country of domicile, on a foreign currency basis. (See "Corporate And Government Ratings That Exceed The Sovereign Rating," published on Dec 7, 2015.) Only a handful, however, exceeded the T&C assessment.

Industry Risk

Industry risk analysis sets the stage for company-specific analysis. The goal is to develop a robust understanding of the company's external business and operating environment. Industry analysis focuses on the industry prospects, as well as identifying the competitive factors, risks, and challenges affecting participants in that industry. Once key industry and country risk considerations are identified, the credit analysis process proceeds to a second phase--company-specific analysis.

Industry characteristics--and the mix of opportunities and risks they represent--include the sector's growth and profit potential, degree of cyclicality, ease of entry, nature and degree of competition, capital intensity, operational and cost structure, regulation, and technology. Companies best positioned to take advantage of these key industry drivers--or to mitigate associated risks more effectively--possess a competitive advantage, and a stronger business risk profile.

Evaluating an industry's risk profile

While characteristics pertinent to credit risk across industries broadly are similar, the impact of these factors can vary significantly between industries. Table 3 highlights how a common set of industry characteristics/metrics can be applied to identifying the relative credit impact of key industry factors across some major industries in the U.S.

Some industries are more highly affected by national factors than others. The nature and impact of key characteristics can vary markedly between countries for a given industry. Utilities, telecom, and retail tend to be more affected by national characteristics. By contrast, oil & gas, chemicals, and technology sectors are more global in nature, as national factors tend to be less influential.

Table 3

Key Industry Characteristics And Drivers Of Credit Risk

Credit risk impact: High (H); Medium (M); Low (L)

Risk factor	Cyclicality	Competition	Capital intensity	Technology risk	Regulatory/Government	Energy sensitivity
Industry	H	H	H	L	M/H	H
Airlines (U.S.)	H	H	H	M	M	H
Autos*	H	H	H	M	M	M
Auto suppliers*	H	H	M	H	L	L/M
High technology*	H	H	H	M	M/H	H
Mining*	H	H	H	L	M	L
Chemicals (bulk)*	H	H	H	L	M	H

Table 3

Key Industry Characteristics And Drivers Of Credit Risk (cont.)

Credit risk impact: High (H); Medium (M); Low (L)

Risk factor	Cyclicality	Competition	Capital intensity	Technology risk	Regulatory/Government	Energy sensitivity
Hotels*	H	H	H	L	L	M
Shipping*	H	H	H	L	L	M
Competitive power*	H	H	M	L	H	H
Telecoms (Europe)	M	H	H	H	H	L

*Global.

An example of country-specific influences: Telecom

While the telecom industry recently has been a primary driver of globalization, and the technology platforms and connectivity provided by telecommunication companies form the underpinnings of the global network for voice, data video, and Internet services, it does not have a uniform global credit profile. A few leading operators have diversified internationally by building networks in multiple regions and countries, although none can be said to be global. A major impediment to the creation of truly global players is that many governments view the industry as being of national strategic importance; so, as in the case of utilities, barriers to cross border/global expansion and diversification often are material. The high cost of cross-border entry includes availability and expense of government-sanctioned frequencies and licenses, network-construction capital expense, and, in emerging markets, often the requirement to share profits and manage decisions with local partners. The degree of competition in telecom is in many countries a direct function of government policy and regulation, as well as other factors, such as population and business density. National markets with the higher telecom credit risk tend to be those with a high degree of competition, where growth prospects are limited by market maturity, and government and regulatory policy or actions have spurred competition, and historically have been inconsistent: The U.K. is an example of one such market. Conversely, in markets with lower levels of competition (often because of government policies and regulations that aim to support price levels and profit margins, and create surplus cash generation to fund infrastructure spending by incumbents), and growth prospects are high, the sector credit-risk profile can be much more favorable. A prime example of the latter market is China. Key ratings metrics, such as operating margins, EBITDA coverage, and leverage ratios for China's dominant incumbent wireline and wireless companies reflect this advantage, and are among the strongest of any rated telecom. However, in the case of China, the ratings on these companies are constrained by sovereign/country-risk considerations. Markets where competition is limited by government policy are obviously susceptible over time to policy changes leading to greater market liberalization. Although the possibility of a major policy U-turn in China currently appears low, it is essential that any likelihood of changes that would foster greater competition be factored into the analysis in markets where there is a high degree of government protection.

High-risk industries

Certain sectors historically have experienced higher default rates and downward transition behavior. This can be linked to key high-risk industry characteristics. Ratings within such industries tend to cluster, because competitive differentiation is often hard to achieve and financing needs are relatively similar.

Still, it is critical not to paint an entire industry with the same brush. In fact, the stress of many companies in a particular industry can result from the superior execution and performance of their rivals. Such competitive divergence should be mirrored in a bifurcated ratings profile for that industry.

Factors with a high level of impact on credit risk are cyclicality, competition, capital intensity, technological risk, regulation/deregulation, and energy cost sensitivity.

Mature industries that are very competitive often have long-established companies with inflexible/legacy cost structures (arising from labor, pension, and/or environmental issues, among others). Industries in this category include autos, airlines, and integrated steel.

Cyclicality

Industry cycles result not only from fluctuating demand, but also, importantly, from swings in supply capacity. (Such addition of new capacity often occurs in response to cyclical upswings in demand.) Overbuilding of production capacity exacerbates competitive and earnings pressure, especially in the event of a downturn in demand (examples of this dynamic: bulk chemicals and shipping).

A company's business can be so impaired during a downturn that it runs out of funds--or its competitive position may be permanently altered. In the extreme, a company will not survive a cyclical downturn to participate in the upturn. So, all else equal, companies subject to cyclicality are rated lower than noncyclical companies.

We attempt to avoid assigning high ratings to a company at its peak of cyclical prosperity, if that performance level is expected to be only temporary. Similarly, we may not lower ratings to reflect weakening performance because of cyclical factors, if the downturn is likely to be only temporary or there are good prospects for management to respond to the changed circumstances.

It is not that ratings are not adjusted with the phases of a cycle: Rather, 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--tempers any rating action.

We do not--and cannot--aim to "rate through the cycle" entirely. Rating through the cycle requires an ability to predict the cyclical pattern--usually extremely difficult to do. The phases of a cycle probably will be longer or shorter, or 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. As noted, a company may fail during the cyclical downturn. Conversely, a company may accumulate enough cash in the upturn to mitigate the risks of the next downturn.

Furthermore, investor sentiment about cyclical credits may fluctuate over the course of a 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 determines its access to capital markets, bank credit, and even trade credit--for better or worse. Accordingly, the psychology and the perceptions of capital providers must be taken into account.

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 are more likely to 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 significant rating changes because of factors deemed to be cyclical, unless the cycle is either substantially different from that expected, or the company's performance is somehow exceptional relative to that expected.

(Rating stability for a company throughout a cycle also presumes 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.)

Capital intensity

To the degree that a business is capital intensive, return/break-even horizons are often further out, because of the need to invest heavily in fixed assets/production capacity. Operating leverage/capacity utilization adds to the risk profile.

Sectors that are both capital intensive and have a high degree of competition (e.g., autos, shipping, forest products, and metals & mining) are especially sensitive to the need for high capacity utilization. Nonetheless, capital-intensive sectors often have a high propensity to overexpand capacity in growth periods, leading to surplus capacity, intense price competition, and eroding margins. Perhaps ironically, such companies also tend to have above-average financial risk, as financing needs often are substantial and long.

Rapid change

Industries undergoing rapid change because of technological innovation and/or deregulation tend to have more industry risk. Barriers to entry can be substantially reduced, allowing an entry to new competitors that may not be burdened by legacy business models, technologies, and the cost structures of incumbents.

There is greater potential for industry peers sorting themselves into winners and losers--as companies pursue different business models/strategies. The quality of management is particularly important in such industries.

Risks in maturing or declining industries

Maturing economic and demographic environments can lead to market saturation (e.g., anemic growth rates in Western Europe and Japan for autos and steel). Technological change may spur substitution (fixed-wireline phones by mobile/wireless; traditional media advertising by Internet ads; pharmaceutical medications by bio-medications; and print media/news by Internet news services). New business models can lead to disintermediation (local retailers by mega retailers, and traditional airlines by low-cost carriers).

Stagnant or declining revenues require cost reductions to maintain profitability. Product differentiation also tends to be difficult in maturing industry environments, as there is a high degree of correlation between industry maturity and product commoditization (brands do afford companies protection from commoditization in some sectors). Industry consolidation often is challenging--both for the companies making the acquisitions--and those left to compete with them.

Risks in rapidly growing, immature industries

The promise of new technologies and new business models--while a threat to the existing companies--is not a panacea for the innovators either (e.g., Internet and dot.com companies). High-growth industries, particularly those driven by technological change, tend to have long investment breakeven horizons, especially if they are capital intensive. Their early periods are associated with losses and negative cash flow.

Unproven commercial viability of a new technology and/or business model also make them poor candidates for obtaining credit. New industries normally are funded in their early phases through venture capital (e.g., biotechnology).

Some high technology/high-growth industries are viewed as having economic and political importance to national governments, which may protect them from market competition in an attempt to stimulate their development (as noted with China's telecoms). Barriers to entry erected by governments in the form of licensing, franchise auctioning, and laws barring competition and acquisition by nonsanctioned entities are used to provide a protected environment. However, as these industries mature, governments open them up to varying degrees of competition by allowing new entrants or removing monopolistic privileges incumbents had previously enjoyed. Once deregulated, such industries normally become much riskier from a credit perspective, because increased competition erodes industry profit margins.

"Old" industries can become rejuvenated in emerging markets

Not all industry high-growth opportunities are created by new technology or business models. Currently, the rapid industrialization of developing countries (notably China and India) is creating growth industries for mature products--including auto manufacturing, capital goods, and steel. In addition, countries seeking to attract foreign participants offer protected environments and/or assistance and inducements.

Such status can prove tempting for foreign companies establishing operations, but early foreign entrants often find it hard to maintain adequate profitability once tax holidays end and/or new entrants are in place. (Again, China offers a good example: the government's decision to allow the entrance of additional Western, Japanese, and Korean auto manufacturers has created a high degree of competition with rapidly declining profit margins, despite very rapid market and sales growth.)

Potentially onerous government regulations, policies, and requirements, as well tolerance of illicit activity--such as proprietary technology transfers/piracy, are additional risk elements that need to be considered.

Competitive Position

Competitive positioning is the cornerstone of business risk analysis. While the industry environment, whether favorable or unfavorable, will strongly influence the business risk, differences in competitive positioning can justify substantial differences in credit standing among industry players. A strong business profile score can only be achieved through a very competitive position. Such status supports revenue and cash flow stability--and generally goes in tandem with superior profitability measures. A comparatively weak competitive position--even in the most favorable industry environment--is unlikely to result in a solid credit standing.

Sustainability is key

The sustainability and trend of a competitive position are critical rating factors. Sustainability of competitive advantage is often determined by cost leadership or product differentiation. A broader evaluation would look at:

- Product positioning (quality, pricing) and brand reputation;
- Market shares, the installed customer base, and geographic coverage;
- Distribution capabilities;
- Customer relationships;
- Technology/manufacturing capabilities; and
- Meaningful barriers to entry, such as transportation, capital or technology intensiveness, and regulation.

The assessment of these factors must, of course, be forward looking; we use historical data only to the extent that they provide insight into future trends.

Several other factors also are critical in determining the strength and sustainability of a company's competitive position. Vertical integration, for instance, often enables a stronger competitive position--although not necessarily higher returns on capital employed--protection of the customer base, and pricing power, as well as better ability to adjust to technology developments. That said, it is of utmost importance for a company to have the strongest grip on that part of the value chain that comprises the highest value added.

Market share analysis can be a critical component, but only when weighed in the context of industry dynamics

In noncommodity sectors, market share analysis often provides important insight into a company's competitive strength. A large share, however, is not always synonymous with a competitive advantage or with industry dominance. If an industry has a number of similarly large participants, none may have a particular advantage or disadvantage. (This is the case of the mature U.K. mobile telephony market, which, despite having four competitors with roughly similar large market shares, is characterized by intense competition, yielding relatively low margins for all market participants.) Even duopolies (such as the aircraft manufacturing industry) do not necessarily ensure high and stable margins. Highly fragmented industries (such as transportation--with airlines being a good example) may lack pricing leadership potential altogether. These examples underline the limits of market share analysis without understanding the industry context.

Global industries typically are characterized by gradual market consolidation and the risk of product commoditization; only large, cost-efficient players with vast research and distribution capabilities are able to sustain or reinforce their business positions and profitability.

In contrast, companies operating in local industries may benefit from transportation barriers, long-term regulatory advantages, or a locally large installed asset or customer base. This is sometimes the case for food retailers, which can enjoy all these advantages, helping them achieve relatively solid business risk profiles, based on entrenched and well-managed local positions.

Comparing mature and fast-growing markets

An emerging or fast-growing market offers considerable growth prospects, but competitive positions in such markets are likely to be more volatile. Companies may reap substantial benefits in a relatively short period of time but find it difficult to manage over the long haul. (Moreover, fast-growth companies often tend to retain high-risk financial policies as they aggressively pursue ever more ambitious objectives, thereby limiting potential credit quality.) The promise of small companies can fade very quickly on growth-related risks, including management's experience and resources to enter new markets, or to integrate acquired companies.

A mature market, although perhaps not appealing from an earnings growth standpoint and possibly exposed to risks of price commoditization or revenue decline, can mean greater protection for market shares. Large companies in mature markets have substantial staying power. Their sizable staff, vast array of disposable assets, and often-significant restructuring potential can positively influence their fates.

Therefore, we generally would favor a solid, established position in a mature, consolidated industry, which would have greater ability to offer predictable revenue and earnings streams, and to protect a company's capacity to service its debt over the long term.

Diversification can enhance the business risk profile

Having a diverse range of products, customers, and/or suppliers helps cushion a company against adversity. Geographic spread can also afford some protection against adverse changes in regional markets and economies, to the extent that the markets for a company's products or services are sufficiently uncorrelated.

When a company operates in more than one business, we analyze each segment separately. We then form a composite from these building blocks, weighing each element according to its importance within the overall organization. (Determination of importance can vary; we often use earnings contribution, especially if segment cash flow data are unavailable.)

Diversification that includes a good competitive position in several industry segments is then considered as a positive credit factor. The business profile of a company solidly positioned in an array of cash-generative businesses with different industrial cycles is stronger in terms of credit quality than each of the best-ranked stand-alone competitors.

However, we generally are cautious with respect to the benefits of business diversification related to weaker competitive positions or activities exposed to a very difficult industry environment.

Global conglomerates generally achieve some of the highest ratings among corporate issuers. Impressive geographic spreads, balanced exposure to cyclical industries and economic conditions, and often very sizable market shares in consolidated, well-protected markets are common features of some of the world's largest conglomerates, such as U.S.-based General Electric Co. (AAA/Stable/A-1+).

Size and ratings end up being highly correlated

Although we have no minimum size criterion for any given rating level, size and ratings do end up being correlated, given that size often provides a measure of diversification, and/or affects competitive positioning.

It is relative--not absolute--size that is crucial in determining market position, extent of diversification, and financial flexibility. Small companies also can enjoy the competitive advantages that accompany a dominant market position, although such a situation is not common. In this sense, sheer mass is not important; demonstrable market advantage is.

Accordingly, small or modest size generally is a negative rating factor if there is significant divergence in size and market shares between the market leaders and smaller players. Nevertheless, small and midsize enterprises can survive and perform satisfactorily in industries dominated by companies with large market shares, provided they can build defendable market positions in niche segments of the industry. German sports car designer and manufacturer Porsche AG (not rated) has successfully defended and expanded its strong position in luxury sports cars with respect to competitors owned by large car manufacturers.

As noted, large companies in highly fragmented industries may find it difficult to exert influence over pricing; instead, all industry players are exposed to intense competition. This is the case in the semiconductor industry, for example (with the exception, perhaps, of the microprocessor segment), where none of the large players has demonstrated the long-term ability to differentiate themselves in a highly competitive environment. The transportation and logistics industries are other good examples.

Large size also is often positively correlated with low cost. Economies of scale in purchasing, manufacturing, and distribution can provide large companies with better cash flow characteristics, which is of particular importance at the downside of the cycle. In some cases, like forest products, group size may not be the most critical aspect of cost advantage; rather, the size of the individual production units--in particular, the size of the machines--is critical.

Also, small companies are, almost by definition, more concentrated in terms of product, number of customers, and geography. In effect, they lack certain elements of diversification that can benefit larger companies. To the extent that market and regional economies change, a broader business scope affords protection.

In addition, the impetus to grow dramatically tends to be higher for players aiming to access the industry's first tier than for industry giants that already achieved that status. Ambitious growth strategies often entail significant financial and implementation risks.

Accordingly, we pay much attention to 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 we presume a company's central focus is to increase shareholder value over the long run. In this context, a lack of indicated earnings growth potential is considered a weakness.

How Company Management Influences Business And Financial Risk

Management evaluation is an input for both business risk and financial risk profiles--reflecting the fact that management's strategy, decisions, and policies affect all aspects of a company's activity. The evaluation includes a review of the credibility and realism of management's strategy and projections, its operating and financial track record, and its appetite for assuming business and financial risk.

Our judgments regarding management's strategy and operating track record help determine our view of competitive position, a key element of the business risk profile. We try to assess management's competence--and its role in determining strategic and operational success.

We bear in mind that success can be more difficult to achieve in some industries than others, simply because of the inherent risk characteristics of the business. Various airline executives, reflecting on the periodic and damaging price wars endemic to the U.S. airline industry, have observed that "you are only as smart as your dumbest competitor." Management's reputation within an industry complements our evaluations.

Each industry has its own specific challenges and constituencies that management must deal with. Heavily unionized industries, such as automakers, steel, and airlines, may face difficult labor relations--and how management handles unions and employees can determine a company's fate in cases where a strike could be fatal to operations. Relations with regulators or government officials are important in other sectors, such as utilities. Corporate governance and financial policy--including risk tolerance--are part of our financial risk evaluation.

Strategies and plans

We compare management's future plans and assumptions with those of peer companies and with our own estimates. Implausible or overly optimistic projections can indicate poor internal planning capabilities or an insufficient grasp of the challenges (or opportunities) facing that company--especially if management fails to consider factors that peer competitors are focusing on. Indeed, one benefit of our access to management as part of the rating process is the opportunity to compare perspectives of various participants in an industry.

How strategy, plans, and policies are implemented helps determine our view of management consistency and credibility. In that exercise, determining why results fail to meet expectations is important. For example, meeting or exceeding projections could be the result of unanticipated good fortune, rather than a reflection of management's capabilities.

Accordingly, when reviewing projections or scenarios that are presented by management, we also strive to understand what could cause performance to deviate. We understand that forecasting is more difficult in some industries than others, and that unforeseen factors outside of management's control can upset the best-laid plans. A candid acknowledgement of risks and understanding of how various factors could affect earnings and cash flow is helpful for our internal deliberations--and may reflect favorably on management's credibility. Conversely, a record of abrupt or frequent changes in business strategy, including unexpected acquisitions, divestitures, or restructurings, definitely would raise our concern.

Acquisition strategy

Acquisitions often play a significant role in management's strategy. Although almost all mergers involve risk, well-executed acquisitions can make strategic sense. We try to fathom the company's acquisition criteria with respect to:

- Strategic "fit";
- Diversification objectives;

- Market share gains;
- Availability of excess cash resources; and
- Valuation considerations (cash flow multiples, internal rate of return, earnings accretion).

(Some of these considerations also reflect on management's overall risk tolerance and financial policy, which are discussed below in the context of financial risk.)

Management's approach and plans for poorly performing business units or those that no longer make strategic sense are a related area for investigation. Objective appraisals of businesses units and disciplined approaches to dealing with underperformers (divestiture, restructuring, or discontinuing businesses are among the options in such cases) are viewed positively.

Corporate governance and its relationship to credit analysis

Our evaluation of governance as part of credit analysis is not focused on misappropriation of funds, lack of accountability, or other misdeeds. Rather, it covers a broad array of topics relating to how a company is managed; its relationship with shareholders, creditors, and others; and how its internal procedures, policies, and practices can create or mitigate risk.

The starting point is to identify the owners of the company. The nature of the owner--e.g., government, family, holding company, or strategically linked business--can hold significant implications for both business and financial aspects of the rated entity. Ownership by stronger or weaker parent companies can substantially affect the credit quality of the rated entity. Cross-shareholding of industrial groups and family-controlled networks, commonplace in certain parts of the world, can have positive or negative implications, depending on the specific situation. We never rate corporate entities on a stand-alone basis.

The corporate governance of family-owned businesses, for example, introduces added complexities. Do the various family shareholders agree on strategy? Have the owners hired professional management and allowed them sufficient authority and autonomy to carry out their mission? What about management succession, or other involvement by children of the founder or owner? What about the possible desire to liquefy value in shareholdings through dividends or an IPO, and what are the implications of estate planning? Still, family ownership can hold certain advantages, in terms of adherence to long-term strategic goals and commitment of family resources to a business.

Ownership by private equity firms has become more common recently in the U.S. and Europe. Such owners typically are much more actively involved in management than public shareholders, and we seek to understand private equity owners' strategy for the company being rated. Is the company a platform for organic growth, industry consolidation, or a cash cow? What is the typical holding period and exit strategy for the owners? Repaying debt (often incurred in a leveraged acquisition of the company) and eventually selling to a strategic buyer or through an IPO is likely to be a more creditor-friendly strategy than debt-financed dividends. Some of the larger private equity companies own multiple rated companies, giving us a track record by which to judge the owners' statements of intent when a new investment of theirs is being rated.

The existence of more than one owner introduces the potential for 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.

(Conventional, equity-oriented corporate governance analysis is very sensitive to share structure--for example, whether each type of share provides representational voting--out of concern that management or majority owners will act to the detriment of minority shareholders. Although this concern is not the direct focus of our 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 group of stakeholders, there would be serious concern that it could later try to shortchange other stakeholders, including creditors.)

Our evaluation of corporate governance is sensitive to potential organizational problems. These include situations where:

- 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;
- The finance function and finance considerations do not receive high organizational recognition; and
- The company is particularly aggressive in the application of accounting standards, or demonstrates opaqueness in its financial reporting.

And recent examples of poor corporate governance have contributed to impaired creditworthiness. These cases included:

- 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; and
- Inadequate oversight of the integrity of financial disclosure, which resulted in heightened funding and liquidity risk.

Still, board structure and involvement has not figured prominently in the rating process. 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. But considerations such as the proportion of independent members on the board of directors, presence of independent directors in the board-level audit committee, and the compensation of directors and senior management teams have limited relevance. It can be difficult to determine objectively whether 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.

Indeed, strong corporate governance--in the conventional sense, demonstrated in part by the presence of an active, independent board that participates in determining and monitoring the control environment--does not by itself provide enhancement to creditworthiness. Governance qualities cannot overcome a weak business or financial risk profile, although they might contribute to protecting an already strong business.

Financial policy and risk tolerance: managing the balance sheet and more

We assess financial policies for aggressiveness/conservatism, sophistication, and consistency with business objectives. We attach great importance to management philosophies and policies involving financial risk. Accounting practices, capital spending levels, debt tolerance, merger activity, and asset sale frequency are all aspects of a management's financial policies (see "Credit FAQ: Knowing The Investors In A Company’s Debt And Equity," published April 4, 2006, on RatingsDirect).

Policy differences between companies can be driven by various factors, including management preferences, business requirements, and/or shareholder value considerations. 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 also need to be consistent with the balancing of those interests.

Sophisticated business managers have thoughtful policies that target a variety of financial measures and acknowledge the interplay between business and financial risk. But a surprising number of companies have not given their financial policy serious thought, much less reached strong conclusions. For many others, debt leverage (either debt to capital or debt to EBITDA, calculated without any adjustment to reported figures) is the only focal point of such policy considerations.

In all cases, what corporate management says it will do must be viewed in the context of what it actually does and what makes sense for that entity to do. For example, an organization's leverage goals should be judged relative to its past record and future business requirements. A company that is increasing its capital spending beyond what can be met from internal cash flow should not be forecasting declining leverage unless there is a corresponding plan to sell assets or common equity. A skeptical analyst would question management on how exactly it plans to achieve both goals. The answers, and the company's subsequent performance, reflect on management's risk tolerance and credibility.

The analyst must consider the realistic choices available to management and how it responds. Similarly, debt usage and shareholder rewards need to be judged within the context of the company's cash-generating capabilities and the stability of those cash flows. We view a debt-financed dividend as very risky for a weak company with volatile cash flows, but such a move could be reasonable for a company that is generating substantial free cash flow and has already achieved a solid balance sheet.

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 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 management forgoes attractive business opportunities merely to avoid financial risk, the company may be making a poor strategic decision, sacrificing long-term credit quality for near-term balance sheet considerations.

In any event, pursuit of the highest rating attainable is not necessarily in the company's best interests. While 'AAA' is our highest rating, we do 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 ordinarily 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.

A high credit rating usually is more important for financial institutions than for industrial companies. For companies with solid business risk profiles and the financial capacity to target ratings within investment grade, various motivations can affect financial policy. Two examples are the balancing of financial risk against cost of capital and reliable access to CP markets. The former often leads to a target rating in the range of 'BBB+' to 'A'. The latter may suggest seeking a 'BBB' or 'BBB+' rating, which typically coincides with an 'A-2' CP rating. Customer perception can be another motivating factor. Some defense companies say maintaining an investment-grade rating is important when selling weapons to governments outside the U.S.

Tolerance for risk extends beyond leverage. The mixture of fixed-rate and floating-rate debt (including use of derivatives to manage that) offers an example. Generally speaking, long-term assets such as factories are best financed using fixed-rate debt, while short-term working capital financing may be accomplished using floating-rate borrowings. Management should develop an appropriate maturity schedule and liquidity targets.

For companies with defined-benefit pension plans, management makes choices regarding the mix of investment assets. The proportions of equity, fixed-income, and other investment assets should be developed with a view to the relative volatility of those investment assets. We review such investment choices and compare assumptions (e.g., discount rate) with those of other companies in the same industry. Other potential sources of earnings and cash flow volatility are exposure to foreign exchange or commodity price movements. Use of derivatives to manage such exposure is reviewed as part of our overall financial risk assessment, but the choices made by management also reflect on its risk appetite.

Accounting And Financial Reporting

A company's financial reports are the starting point for the financial analysis of a rated entity (or issue). Such analysis must consider the accounting basis a company uses to prepare its financial reports and the implications of the varying methodologies and assumptions on the reported amounts.

Understanding the implications of the accounting basis used--e.g., International Financial Reporting Standards (IFRS), U.S. Generally Accepted Accounting Principles (U.S. GAAP), or other local or statutory GAAP basis--is highly germane to our corporate rating methodology. But analytical challenges exist even for companies using the same accounting basis, because accounting rules often provide optional treatment for certain items (e.g., last, in first out [LIFO] rather than first in, first out [FIFO] to account for inventory under U.S. GAAP, optional hedge accounting, or optional revaluation of certain assets or liabilities under IFRS). Moreover, as business transactions have become increasingly complex, related accounting rules and concepts have correspondingly grown more complex--and in many cases, subject to greater reliance on estimates and judgments.

Accounting failures in the early 2000s highlighted several fundamental shortcomings of the financial reporting process and its ability to comprehensively address the information needs of financial statement users. Shortcomings include both recognition and measurement issues (e.g., under what circumstances an item such as a special-purpose entity, or a "synthetic lease" should be reflected on or off a company's balance sheet, and at what value), and transparency issues (e.g., what a company should disclose about the nature of off-balance-sheet commitments, compensation arrangements, or related-party transactions).

These failures also reinvigorated the debate on the merits of using a principles-based, rather than a rules-based, accounting standards framework, and served as a catalyst for expediting convergence of global accounting standards. Relatively rapid rates of accounting rules changes have occurred--often hampering meaningful period-over-period comparisons. In addition, the broader concerns about clarity and accuracy of financial reports have been evidenced by a considerable increase in restatements.

To address these challenges, we have increased and systematized the emphasis we place on the understanding of issuers' accounting characteristics. We supplement our analysis with enhanced financial statement analysis both in terms of qualitative and quantitative considerations. Our ratings criteria include numerous quantitative adjustments we often make to reported financial results to increase consistency among peers, and to better align with our view of the underlying economic reality of a particular circumstance or transaction. Our analysts also employ adjustments to portray what we view as a more appropriate depiction of recurring activity. For example, we may adjust financial measures to exclude gains or losses that we view as unsustainable or nonrecurring.

As part of our ongoing surveillance process, we consider the impact of changes in accounting standards and the impact of special events or items reported by an issuer (e.g., acquisitions, dispositions, write-offs, internal control matters, restatements, and regulatory actions). As the amount of disclosure in financial statements varies by company and by jurisdiction, we engage in differing levels of interaction with our issuers to obtain additional data beyond what is reported in the company's financials.

Evaluating accounting characteristics in the rating process

Our analysis of an issuer's financial statements begins with a review of the accounting characteristics, to determine whether the ratios and statistics derived from the statements can be used appropriately to measure the rated issuer's performance and position relative to both its peer group and the larger universe of corporate issuers. (The rating process is, in part, one of comparisons, so it is important to have a common frame of reference.) In doing so, we take an analytic rather than forensic approach.

The recent adoption of, or moves to adopt, IFRS in many countries--including Australia, Canada, and across the EU--as well as the ongoing effort to converge U.S. GAAP and IFRS, continues to further enhance comparability among companies. However, this ought not be seen as a panacea. Within IFRS, U.S. GAAP, and the separate national accounting systems, companies may choose among alternative accounting methods--for example, historical or amortized 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 and liabilities 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 (LBO) or bankruptcy reorganization.

A company's scope of consolidation is an example of a key accounting characteristic that we consider to determine the relevant economic entity for analytical purposes. We look at whether there are nonconsolidated affiliates, including joint ventures, where the company does not exert a high degree of control but which we feel should be consolidated for analytical purposes (given our assessment of their strategic importance, including ownership positions, the size of the investments, and whether a unique, interdependent customer/supplier relationship exists) even though they may be properly excluded from consolidation for accounting purposes. Consider The Coca-Cola Co. and PepsiCo Inc., where certain key unconsolidated bottling companies are viewed as part of an entire economic system: We accordingly consolidate these entities for analytical purposes. The converse may be true when we deconsolidate an entity that is properly consolidated for accounting purposes. There are many examples of industrial companies or diversified holding companies that consolidate financial or insurance subsidiaries; for analytical purposes, we use the equity method for such nonhomogenous business activities, to avoid the distortions that would pertain as reported.

With respect to a company's hedging and risk management policies and related accounting for derivative instruments, accounting results vary widely among companies and commonly fail to adequately depict the underlying economics. Our framework for analyzing derivative use focuses on the business, financial, liquidity, controls/risk management, and financial statement risks. This analysis includes a determination of whether a company is using derivatives for trading and/or risk management purposes, and whether a company avails itself of special hedge-accounting treatment. As this area is both complex and fraught with inadequate disclosure by many issuers, our review often entails interaction with management to properly assess a company's derivative use and risk management practices.

The accounting characteristics we review and the emphasis placed on each depend on the nature of, and activity in, the industry in which the entity operates. For example, analyzing inventory and related consideration may be important for a manufacturing company, but less relevant for a hotel management company: Likewise, the analysis of oil or natural resources reserves or the use of percentage of completion accounting is relevant to only a handful of industries.

Analytical adjustments to financial statements

Making analytical adjustments to amounts reported in the financial statements of the companies we rate traditionally has been an integral part of our rating process. We make analytical adjustments to better portray economic reality and to level the reporting differences among companies, e.g., to arrive at measures we believe enable more meaningful peer and period-over-period comparisons; better reflect underlying economics; better reflect creditors' risks, rights, and benefits; and facilitate more robust financial forecasts. It is rarely possible to completely recast a company's financial statements, but making these analytical adjustments improves the analytical relevance and consistency of the financial ratios that we use in our credit analysis.

(Although our adjustments revise certain amounts reported by issuers under applicable accepted accounting principles, that does not imply that we challenge the application of said principles by the issuer, the adequacy of its audit or financial reporting process, or the appropriateness of the accounting basis used to fairly depict the issuer's financial position and results for other purposes. Rather, our methodology reflects a fundamental difference between accounting and analysis. The accountant necessarily must find one number to use in presenting financial data. The analyst, by definition, picks apart the numbers. Good analysis looks at multiple perspectives, then uses adjustments as an analytical tool to depict a situation differently for a specific purpose or to gain another vantage point.)

Examples of common adjustments include:

- Trade receivables sold or securitized;
- Hybrid securities;
- Surplus cash and "near cash" investments;
- Capitalized interest;
- Share-based compensation expenses;
- Captive finance activity; and
- Asset retirement obligations.

(See "Ratios And Adjustments" for a full list and discussion.)

Changes in accounting standards

As part of our surveillance process, we monitor the potential impact of recent and pending changes in accounting and disclosure standards, and other legislation affecting information included in financial reports. Accounting changes should not have any direct effect on credit quality unless they reveal new information about a company, which then needs to be factored into our understanding of the company. (For example, the ratings on a few U.S. companies were lowered following the implementation of new accounting for retiree medical liabilities in the early 1990s, because little information was previously available about these obligations.) However, accounting changes can produce indirect effects. These include triggering of financial covenant violations; regulatory or tax consequences; or adverse market reactions as a result of changes in market sentiment about the company's apparent leverage, profitability, or capitalization; and, accordingly, can even influence changes in business behavior.

Consider the example of U.S. accounting standard SFAS No. 158, which requires full recognition of pensions and other postretirement obligations (e.g., retiree healthcare) on the sponsoring employers' balance sheet. Because we have long reflected an issuer's full postretirement liability by virtue of our adjustments to leverage and capitalization ratios, the adoption of this pronouncement has no direct ratings implications. However, the potential ancillary effects could be equally important to our consideration: As a result of the new standard, many companies will report substantially lower shareholders' equity and will appear more leveraged--and could affect dividend policies. In addition, many employers are changing the structure and funding levels of their postretirement plans as a consequence of changes in legislation and accounting standards, resulting in potential changes to amounts and timing of related cash flows.

Another example of changes in accounting standards that caused pronounced behavioral shifts: SFAS No. 123R, requiring the expensing of stock-options and other share-based payments. In anticipation of that change, many companies chose to accelerate the vesting of employee stock options in the year prior to adoption. The effect of such acceleration was to move compensation expense that would have been recognized in 2006 and future years to a preadoption year. (Such recognition was not required; only pro forma footnote disclosure of the expense was required under pre-SFAS No. 123R rules.) In addition, many companies have reconsidered their use of share-based pay as a result of the expensing requirement, and have made changes to their employee compensation plans--resulting, for some, in real changes to cash flows.

Information risk, restatements, and disclosure of significant events

To the extent we believe information risk exists, it can influence our decision to maintain a rating, assign a rating in the first place, or the level of the rating assigned. In cases where the information risk is so significant that it precludes meaningful analysis we would decline to assign a rating, or, where a rating is already assigned, withdraw or suspend that rating. However, we ordinarily rely on the issuer's audited financial statements and the inherent checks and balances in the financial reporting process. Our analytical process does not include an audit, nor does it include a process of "verification."

A rating can sometimes be assigned even in the absence of audited financial statements. This especially is the case when a new company is formed from a division of another company that did produce audited financial statements. In other cases, there may be unaudited data--such as oil-production data--that corroborates company results. Further, much additional information that is provided to us by management is unaudited, including preliminary financial data, quarterly financial statements, projections, operating data, pro forma financial statements, cash flow data, and various scenario analyses, to name a few. We incorporate such data at our discretion, making judgments about the reliability of each input.

There have been many situations--especially recently--where rated companies have delayed filing their financial reports for various reasons, sometimes for significant periods of time. Such reporting delays, too, require judgment regarding the implications, if any, for credit quality. We have no monolithic approach to such situations, rather, additional interaction with the company is required, as part of our surveillance process during the period in which formally issued and audited financial statements are lacking. Our interaction includes determining the cause for the delay and potential consequences, obtaining interim financial reports, discussing how the company is addressing ensuing regulatory or covenant matters, and discussing liquidity prospects and internal control matters, among others.

Filing delays happen for many reasons: In some cases, because of a restatement of prior-year financials; in others, from a review of an alleged financial-statement irregularity, or issues discovered with a company's internal controls process.

In any event, we are cognizant that lengthy reporting delays can result in adverse regulatory reactions and covenant compliance uncertainty. Delays, restatements, material weaknesses, and related investigations also can lead to other adverse results, such as auditor changes, personnel changes, lawsuits, management distraction, increased compliance costs, and challenges in accessing the capital market--the impact of which must be closely evaluated in our ratings process. The impact these events have on a rating depends on the unique facts and circumstances of each case.

With respect to violation of covenants, a liquidity crisis could result. Technical and actual defaults (including cross defaults) require waivers under debt agreements, and sometimes result in a company receiving a notice of default. Sometimes the question of whether or not a filing delay results in a default is not immediately clear when the delay is announced, or during the period of delay. In some cases, detailed information may not be available for some time, and we will react as we deem appropriate, based on our analysis of the best available information, through CreditWatch actions and intermediate rating changes, or--in extreme cases--withdrawal of the ratings.

In general, the impact of the instances involving financial-statement irregularities is hard to predict. The underlying reality can range from an almost trivial problem to a complete audit and financial failure. Occasionally, a small problem can turn into a large one, as headline risk takes a toll on the company's access to financing. We critically weigh how pervasive these issues are, how they affect the enterprise's reputation and its ability to conduct future business, and broadly how proactively management and the board approach resolution to these matters.

Cash Flow Adequacy

Cash flow analysis focuses on understanding and forecasting how cash is generated and spent by a business. It incorporates identifying a company's cash flows, determining trends and sustainability, distinguishing operating from investing and financing flows, and understanding potential sources of distortion and future volatility.

All this must be considered in the context of a company's individual characteristics, such as, where it is in its life cycle. The ability to generate cash is determined by a company's business prospects--competitiveness, market dynamics, economic environment, etc., while its need for cash is a consequence of the balance sheet structure, management's financial strategy, and strategic needs.

An enterprise's capacity to pay debts or any other obligation, the core underlying concept of a credit rating, is determined by the ability to generate cash--not earnings, which is an accounting concept. Although there is generally a strong correlation between operating cash flow and profitability in the long run, many transactions and accounting entries may affect one and not the other during a specific period. Aggressive accounting policies, for example, regarding revenue and expense recognition, asset write-downs, or adjustments to depreciation schedules, can have a material impact on earnings and none whatsoever on actual cash generation.

Liquidity pressures can arise even when a company reports robust earnings--e.g., when gains not realizable in cash for a lengthy period comprise a significant component of earnings or where the enterprise faces large capital expenditure requirements. Accordingly, cash flow adequacy is typically the single most critical aspect of credit rating analysis.

Measuring cash flow

Discussions of cash flow often suffer from lack of a uniform definition of terms. Our analysts use numerous cash flow measures in the credit decision process, and the terms we use to define specific cash flow concepts are summarized here.

We begin to measure an issuer's operating cash flow generation using its FFO, which is defined as net income from continuing operations adjusted for depreciation and amortization (D&A) and other noncash and nonrecurring items such as deferred taxes, write-offs, gains and losses on asset sales, foreign exchange gains and losses on financial instruments, and undistributed equity earnings or losses from joint ventures.

The availability of cash for debt service for companies on a high growth spurt is ordinarily better appreciated after backing out the changes in working capital, and arriving at the operating cash flow. The use of the FFO metric for some regulated utilities, for instance, can be misleading as it does not capture the variation in regulatory assets or liabilities. In Brazil, for example, tariffs are revised only annually: the time gap between when the actual cash revenues or costs occur and the recognition in the income statement is substantial and might affect different fiscal years.

Similarly for working capital-intensive industries such as retailing, operating cash flow may be a better indicator of the firm's actual cash generation. Working capital, on the other hand, could be managed or manipulated by management depending on its liquidity or accounting needs. Accordingly, FFO has been frequently used as a comparative indicator of cash from operations. Because operating cash flow tends to be more volatile, FFO is often used to smooth period-over-period variation in working capital. It is used as a better proxy of recurring cash flow generation rather than the actual cash flow generated by the ability to manage working capital.

By deducting capital expenditures from operating cash flow, we arrive at free operating cash flow (FOCF), which can be used as a proxy of a company's cash generated from core operations. We sometimes exclude discretionary capital expenditures for capacity growth from the FOCF calculation, but in practice, it is often difficult to discriminate between expansion and replacement. And, while companies do have some flexibility to manage their capital budget to weather down cycles, such flexibility is generally temporary and unsustainable in light of intrinsic requirements of the business. For example, companies can be compelled to increase their investment programs because of strong demand growth or technological changes. Regulated entities (e.g., telecommunication companies) might also face significant investment requirements related to their concession contracts.

We calculate a company's discretionary cash flow by subtracting cash dividends (including to minority interests) from FOCF. The discretion in dividend pay-out will depend on a company's financial strategy. Companies with aggressive dividend pay-out targets might be reluctant to reduce the level of dividends even under some liquidity pressure. In addition, dividends of investment-grade companies are less likely to be reduced following some reversals--although they ultimately are discretionary.

Finally, cash used for acquisitions and/or received from asset disposals and other miscellaneous sources and uses of cash are subtracted or added to discretionary cash flow, and prefinancing cash flow is the end result. This metric represents the extent to which a company's cash flow from all nonfinancing sources has been sufficient to cover all internal needs, including the payment of dividends. We then reconcile prefinancing cash flow to various categories of external financing activity, such as borrowing or repayment, equity issuance, and to changes in the company's cash balances.

EBITDA is a widely used indicator of cash flow, but it has significant limitations. Because EBITDA derives only from income statement inputs, it can be distorted by the same accounting issues that limit the use of earnings as a basis of cash flow. Besides, EBITDA overlooks balance sheet items that might be tying or freeing up cash. It is better suited for more established companies, especially in relation to industry benchmarks.

Potential distortions affecting cash flows

Distortions to cash flow may arise from timeliness of income or expense recognition, classification of items, and other accounting issues. For example, the period in which companies choose to recognize income and expenses (such as the charge-off of uncollectible items, asset disposals, repairs and maintenance, etc.) depends on applicable GAAP, which may be subject to estimates and management's discretion.

Because cash flow is an indicator of a company's health and prospects, there is a bias to enhance apparent cash generation by treating cash inflows as operating in nature, and cash outflows as investing or financing in nature. But loose classification of flows into operating, investing, or financing can distort their true nature. Classification of investments as trading, available-for-sale, or held-to-maturity dictates if related cash flows are treated as operating or investing. Operating margin hedging program results are treated as financing--while they reflect operational strategies.

Another source of distortion is translation of foreign currency. Swings in working capital may only reflect the volatility of the foreign currency, and not the actual cash in the original currency. We would prefer to analyze working capital in the original currency--and reflect translation effects in a separate cash flow entry.

Cash flow ratios

Analysts are encouraged to look at more than a single measure, to develop several perspectives. A company's individual characteristics and its business cycle will be better captured in certain ratios than in others. Where long-term viability of a company is more certain (i.e., for more highly rated credits), there can be greater analytical reliance on FFO and its relation to total debt burden. In addition, more established, healthier companies usually have a wider array of financing possibilities to cover potential short-term liquidity needs and to refinance upcoming maturities. For more marginal situations, the focus shifts to free cash flow--after the various uses have been subtracted--and this is more directly related to current debt service. Some of the cash-flow metrics most used by our analysts include:

Debt payback ratios

- FFO/total debt: the most frequently used credit measure in industrial ratings;
- Operating cash flow/total debt: captures working capital requirements;
- Debt/EBITDA: used as a proxy of debt repayment capacity for high-yield issuers; it can overstate repayment capacity by excluding interest burden--usually high for speculative ratings;
- Total debt/discretionary cash flow: provides an indication of how many years would be required to repay outstanding debt using current cash flows, but is subject to changes in dividend policy; and
- FOCF/total debt: indicates a company's capacity to pay debt with internal operating cash flow; it is more critical when analyzing weaker companies, because speculative-grade issuers typically face near-term vulnerabilities that are better measured by free cash flow ratios.

Debt service ratios

- EBITDA/interest expenses: useful because of its simplicity, wide usage, and industry reference (peer comparisons, financial covenants, etc.);
- FOCF + interest expenses/interest expenses: similar to the EBITDA/interest ratio, but more comprehensive (after taxes, working capital and capital expenditure) and with lower potential for distortions; and
- FOCF + interest expenses/interest expenses + 12-month debt maturities: measures the ability to pay interest and principal out of free cash flow; more appropriate for projects and entities with amortizing debts.

Financial flexibility ratios

- FFO/capital expenditures: indicates a company's internal flexibility to meet its capital budget; and
- Capital expenditures/depreciation expense: a low ratio (typically, less than 100%) could indicate problems in the rate of replacement of plant and equipment--a strong ratio may indicate high-growth industries, and is needed to keep up with the competition.

Interpretation of ratios is not straightforward, and careful analysis always is required, because a similar ratio might lead to different conclusions, depending on company specifics. A company serving a low-growth or declining market may exhibit relatively strong free cash flow because of diminishing fixed and working capital needs. Growth companies, in contrast, exhibit thin or even negative free cash flow because of the investment needed to support growth. For the low-growth company, credit analysis weighs the positive, strong current cash flow against the danger that this high level of protection might not be sustainable. For the high-growth company, the opposite is true: Weighing the negatives of a current cash deficit against prospects of enhanced protection once current investments begin yielding cash benefits.

There is no simple correlation between creditworthiness and current levels of cash flow. Even for peer companies with very similar cash flow coverage ratios, the rating outcome can be very different, depending on their other business and financial characteristics.

Balance Sheet And Asset Protection

The main ratio we use for leverage analysis is total debt/total debt plus equity.

What is considered "debt" and "equity" for the purpose of ratio calculation is not always so simple, and requires extensive analytical input. Our computation of total debt includes various off-balance-sheet liabilities and analytical adjustments, as noted in the section on cash flow analysis. Similarly, the amount of equity is adjusted for hybrid securities in all their variations. (See Hybrid instruments section of "Ratios And Adjustments" for our adjustments and how we calculate them.)

We sometimes calculate supplemental ratios that incorporate the market value equity. These can have especial relevance in comparing companies with significant intangible assets. 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.

Generally, we do not net out cash from the debt amount; however, we adopt a "net debt" approach in some situations, especially in countries (such as Japan and in Europe) where local practice is to maintain a large portfolio of cash and marketable securities. (In these situations, we also focus on cash flow to net debt.) 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 in the case of cash-rich U.S. pharmaceutical companies that enjoy tax arbitrage opportunities with respect to these cash holdings.

In the case of hybrid securities, too, the analysis is based on their specific features--not the accounting or the nomenclature. For debt that is convertible at the discretion of the investor, depending on the future value of the common shares, it would be somewhat presumptuous for us to predict whether and when conversion will occur, so we ordinarily give little, if any, weight to the conversion potential.

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.)

Nonrecourse debt is often included in the calculation; moreover, even 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 company 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 debt were not added to the (parent) company's balance sheet.

More fundamentally, the nature and valuation of a company's asset mix is critical to determining 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 are 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.

Asset valuation

Knowing appropriate values to assign a company's assets is key to our analysis. Leverage as reported in the financial statements is meaningless if the assets' book values are materially undervalued or overvalued relative to economic value.

We consider 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, using the market value of a company's equity in calculations of leverage has its drawbacks. 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 preacquisition 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 of an acquisitive company when these rely on turnaround strategies or "synergistic" mergers.

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. Preferred stocks with a maturity receive diminishing equity credit as they progress toward maturity.

Preferred stock that may eventually be refinanced with debt is viewed as a debt equivalent, not equity, all along. While "perpetual" on the surface, these securities often are merely a temporary debt alternative for companies that are not current taxpayers, until they once again can benefit from tax deductibility of interest expense. Redeemable preferred stock issues may be expected to 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.

Auction preferreds are even more problematic, given that the holders of these preferreds would pressure for redemption in the event of a failed auction or even a rating downgrade.

Liquidity

Gradual erosion in a company's fundamentals can ultimately lead to liquidity problems. Yet, even a company with a solid business position and moderate debt use, can, when faced with sudden adversity, experience an actual or potential liquidity crisis, or an inability to access public debt markets. Possible causes of such adversity include:

- A dramatic setback in the business caused by, for example, a crisis in consumer confidence, such as the precipitous market downturn following the terrorist attacks of Sept. 11, 2001. In particular, this event had a significant negative impact on the airline and travel-related industries.
- A large, adverse litigation judgment.
- Real or alleged management impropriety, including accounting abuses such as those at Enron Corp. in 2001, and Tyco International Ltd. in 2002.
- Large derivatives or trading losses.
- Sovereign intervention, for example, in the form of foreign currency controls, controls on bank deposits, or pricing controls, such as those in Argentina in 2002.

We consider the challenges a company confronted by a shock or triggering event would face concerning its existing debt maturities, its ability to make internal adjustments to maximize near-term cash generation, and its access to external sources of liquidity and capital. Analyzing a company's ability to cope with such extraordinary challenges is a matter of assessing its liquidity or its options under stress.

Our analytical focus here is on the downside: whether the company can meet its obligations on a rainy day, rather than just under the expected circumstances. Speculative-grade issuers are more susceptible to liquidity crises, which, in their situations, can stem from upcoming interest and principal payments, financial covenants, and availability on revolving credit facilities.

In the context of a liquidity crisis, a company's business position cannot be considered a constant: The nervousness of customers and/or suppliers might impair the company's competitive standing, contributing to a downward spiral in its fortunes. Industrial companies with finance operations may be particularly vulnerable, given the funding required for such operations. Companies with trading operations are doubly vulnerable, given the risk-averse inclination of trading counterparties, coupled with heavy funding needs.

Often, the effect of such adversities is compounded by the triggering of contingent provisions included in credit lines, bond indentures, counterparty agreements, or operating agreements. Triggers can change minor adversity into a major crisis for the company (and, as such, we do not view ratings or other triggers favorably). These provisions take many different forms, with the trigger based on downgrades, the violation of financial benchmarks or ratio levels, "material adverse changes" (as interpreted by the creditor), share price declines, or ownership changes. They may set off default, acceleration, put, or collateralization requirements.

In any event, the starting point of liquidity analysis is the maturity schedule for debt and other long-term obligations. Near-term maturities include CP; sinking fund payments and final maturity payments of long-term debt; borrowings under bank credit facilities with approaching expiration dates; and mandatory redemptions of preferred stock. Other significant financial obligations may also need to be considered, for example, lease obligations, contingent obligations such as letters of credit (LOCs), required pension fund contributions, postretirement employment payments, and tax payments. Even when analyzing highly creditworthy companies, it is necessary to be aware of the overall maturity structure and potential for refinancing risk.

Cash is king

The best sources of liquidity are surplus cash and near cash on the balance sheet. This includes cash in the bank, cash equivalents, and short- and long-term marketable securities. (Indeed, we also look to some companies to maintain high cash balances against potential liquidity crises; these include bonding requirements in the case of U.S. cigarette companies, and cyclical reversals in the case of capital intensive manufacturers, such a the automobile companies.)

Of course, not all cash is surplus. Virtually every company has some base amount of cash necessary for day-to-day operations--which may be quite large, if the company is subject to wide swings in working capital. Companies with seasonal borrowing needs may build up large cash balances for use during the seasonal peak.

Additionally, restricted cash (disclosed separately) is unavailable for everyday funding and should not be factored into a liquidity analysis, because these funds have been set aside to satisfy a specific obligation. A subsidiary's loan agreements can also restrict dividends and upstream advances. This poses a problem for a holding company that would rely on such dividends or upstream loans to access cash at the subsidiary level.

Bank overdrafts should also be deducted from available cash balances. Offshore cash may be subject to a repatriation tax, in which case it should be discounted accordingly. For companies in emerging markets, it is important to consider whether the company's liquid asset position is held in local government bonds, local banks, or local equities, and whether the issuer will have access to these assets at times of stress on the sovereign.

To fully benefit from cash and near-cash holdings from a liquidity perspective, these assets must be readily accessible and available to support the company's immediate needs. Sometimes the company may not have free access to all the cash shown on the consolidated balance sheet. For example, offshore cash may not be available for a few business days--especially if it has to be converted from a foreign currency.

Other internal sources of liquidity

Any company faced with severe liquidity pressures can be expected to make internal adjustments to maximize near-term cash flow. Considering a company's flexibility to do so is an extension of normal cash flow analysis. There are several possible options for doing this.

Cash can be extracted from working capital by monetizing receivables through factoring or securitization, liquidating unneeded inventories, or stretching out payments to suppliers. However, if, for example, no factoring or securitization facilities are already in place, these may take several months to establish. If aggressive discounting is necessary to sell inventory quickly, such liquidations could have severe implications for the company's future pricing power and brand image. In stretching payment terms to suppliers, the company runs a risk of spreading alarm about its situation and, ultimately, making suppliers unwilling to ship goods.

Companies generally have some flexibility to reduce capital expenditures from planned levels, at least temporarily. As such, we look at maintenance, rather than discretionary capital spending plans. Maintenance capital spending may include plant refurbishing, and ordinary repair work and is necessary for the company to sustain normal operations. Pollution control projects needed to meet regulatory requirements have little deferral potential. Presumably, expenditures related to growth initiatives could be put on hold, and are discretionary in nature. In any case, it may take some time to reduce expenditures to the maintenance level if the company had already entered into contractual commitments related to its planned investments.

The business implications of reducing capital spending must also be considered. Continued deferral of spending may make the company less competitive and more prone to operational problems. Additionally, beyond a certain point, management might rationally conclude that seeking protection from creditors through a bankruptcy filing would be preferable to permanently impairing the business by neglecting capital spending.

Curtailing operations with negative cash flow and divestitures

Discrete business units or product lines that are performing poorly or in a start-up mode could be suspended. Shutdown costs must be netted against the ongoing cash savings. Again, the implications of such actions for the business must also be weighed.

A company may choose to sell entire operations or lines of business to raise cash. These could include underperformers as well as strong businesses. Additionally, we consider the company's ability to realize value in light of market conditions for such assets, including the availability of interested buyers, as well as the likely time period for effecting transactions. Assets sold in a fire sale often do not recapture their full value. Dumping large blocks of stock may depress their value.

Asset sales may have mixed implications for the remaining business mix. For example, the sale of a profitable, cash-generating operation that had been the company's best business could have a negative effect on the company's business risk profile. Alternatively, a money-losing unit with heavy capital requirements could improve the business risk profile while bringing in some much needed cash.

Dividend deferrals offer a quick source of cash savings. But, dividend cuts often are visible signals of distress, and the negative perception in the capital markets that may result must also be considered: At the very least, such actions may hinder further equity issuance. Additionally, extended deferral of preferred dividends may create a growing liability on the balance sheet.

External sources of liquidity

A company's ability to tap external sources of funding may be jeopardized when it is overly reliant on one source of financing. In general, a company's experience with different financial instruments and capital markets gives management alternatives if conditions in a particular market suddenly sour.

Company size and recognition can play a role in whether it can raise funds in the public debt markets. Similarly, a company's role in the national economy--particularly outside the U.S.--can enhance its access to bank and public funds. Large issuers in a relatively small country often are favorably positioned to attract financing from that country's banking system. External sources of liquidity, including CP, bonds, bank credit facilities, and equity issuance are discussed below.

Of all the sources of debt funding, CP is the least reliable. Use of CP to fund short-term assets (typically, inventory and receivables) or as a small component of a company's long-term funding is fairly common. However, when faced with severe adverse circumstances, companies often will not be able to roll over outstanding CP as it matures--let alone raise additional sums.

Typically, only companies viewed as having a strong credit standing can access the market. The market for CP rated 'A-2' or lower is much smaller than the market for that rated 'A-1' or 'A-1+', partially because of SEC regulation 2(a)7, which severely restricts holdings of lower-rated CP by U.S. money market funds. The U.S. market for CP rated 'A-2' or lower in 2007 was estimated to total about $72 billion, compared with the approximately $1.7 trillion of 'A-1' and 'A-1+' paper outstanding. Moreover, the 'A-2' market is subject to significant pressure during credit crunches.

When market fears build regarding a particular issuer, the term of CP the issuer can place typically shrinks to a few days, thereby heightening refinancing risk. Market confidence can be lost very quickly. This was evident following Altria Inc.'s loss of access to the CP markets following an unfavorable verdict and $12 billion bonding requirement in the Price class action lawsuit. And, in addition to legitimate concerns about a declining credit, the market can be spooked by unwarranted fears. For example, Columbia Gas Systems Inc. unexpectedly filed for bankruptcy protection in 1991 because of onerous natural gas take-or-pay obligations. Suddenly, other natural gas pipeline companies, many of which had minimal take-or-pay exposure, found it difficult to sell CP.

Backup liquidity

Given the CP market's acute sensitivity to credit quality, and the speed with which confidence can be lost, we consider it prudent for companies that issue CP to make arrangements in advance for backup sources of liquidity. Backup liquidity protects a company from defaulting if it is unable to roll over maturing paper with new notes because of shrinkage in the overall CP market, or an issuer's inability to access the CP market because of company-specific issues.

Backup for CP generally is provided by committed credit facilities, yet sometimes may take the form of excess cash that is specifically committed for this purpose. (For a discussion of our CP, see "Commercial Paper.")

Bonds

The public bond market is far less risk-averse than the CP market. Most investment-grade companies in the U.S. can gain access to the public debt market for a new bond issue at a reasonable rate. In other, less-developed countries, the public bond market may at times become inaccessible for even the most creditworthy companies (e.g., South Korea in early 2001). Placing debt is easiest for a company that has regularly tapped the market and that can issue debt in large amounts--thereby providing investors with a more liquid secondary market.

Although the market for speculative-grade debt is very large, this market is much more volatile. Speculative-grade companies, especially those on a deteriorating trend, may well have only intermittent access to this market, depending on market sentiments and liquidity. There have been times when even 'CCC' rated debt found ready buyers, but there have also been periods when the entire junk bond market was effectively shut down.

Whatever the general market conditions, even investment-grade companies may have difficulty issuing public debt if one of the types of shocks discussed above has occurred. In theory, a company should be able to issue debt at some price, but in practice, debt issuance may well not be feasible if there is considerable uncertainty in the market about a company's situation and underwriters are, therefore, understandably nervous about undertaking a transaction on behalf of the company.

The price of outstanding bonds may be a good gauge of market sentiments--although technical factors can also influence pricing. Obviously, if existing bond spreads have widened significantly relative to the market and are responding wildly to the day-to-day developments at a company, prospects for an additional public debt issuance are poor. (We monitor bond spreads as part of our ongoing surveillance.) The bond market has also been inaccessible during periods of overall market uncertainty following economic weakness, political changes, and terrorism actions or threats.

Bank credit facilities

Bank credit generally is a company's most reliable source for debt capital. When a company loses access to the CP and public debt markets, banks are often the lenders of last resort. It is typical for banks to provide a portion of a healthy firm's company's regular financing. Speculative-grade companies have also accessed these markets more frequently in lieu of traditional public subordinated debt offerings. In some countries (including almost all less-developed markets), banks are the major source of capital for both short-and long-term needs.

Banks offer various types of credit facilities that differ widely in the commitment to advance cash under all circumstances. Weaker forms of commitment, although less costly to issuers, give banks great flexibility to redirect credit at their discretion. For example, uncommitted lines are little more than an invitation to do business at some future date, and are given little to no credit in our liquidity analysis.

The strongest facilities are those that are in place and confirmed in writing, or committed facilities. In the U.S., fully documented revolving credits represent such contractual commitments. In the absence of a contractual commitment, payment for the facility--whether by fee or balances--is important because it generally creates some moral commitment on the bank. Generally, a solid business relationship is key to determining whether a bank will stand by its client.

Dependence on just one or a few banks heightens risks. Apart from the possibility that the bank will not have adequate capacity to lend, it also may not be willing to lend to the issuer. Having several banking relationships diversifies the risk that a single bank will lose confidence in the borrower and hesitate to provide funds.

Although less common now, in some cases, companies establish separate credit agreements with each of their banks, which can make it unwieldy to quickly renegotiate terms of the agreements in a crisis. A group of lenders having preestablished lending commitments under a common credit agreement is generally more practical, effective, and predictable. Even here, though, some features of the agreement could greatly hinder the renegotiation process--for example, a requirement that the agreement can be modified only by unanimous consent.

Concentration of banking facilities also tends to increase the amount of an individual bank's participation. As the amount of the exposure increases, the bank may be more reluctant to meet its commitment. In addition, the potential requirement of high-level authorizations at the bank for the release of funds could create logistical problems for the issuer in quickly accessing funds. 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. We expect banks themselves to be financially sound, and do not favorably view marginally investment-grade banks.

As with any source of debt funding, the analyst must consider the term structure of bank credit facilities. Reliance on short-term facilities poses obvious risks. Even multiyear facilities will provide commitments for only a short time as the end of their terms approaches. We closely monitor a company's efforts to arrange for the continuation of its banking facilities well before they lapse. In normal situations, bank facility expirations may be viewed as "soft" maturities because the facilities are routinely renewed. But, if the company is under stress and the banks have lost confidence in the company's prospects, the banks might use the expiration to demand repayment.

Financial covenants and triggers

In assessing a company's access to bank capital and other sources of debt financing, the analyst must consider triggers that can block access to additional funding, accelerate the repayment of existing debt, or create a cross default with other debt obligations. The most common such triggers are financial covenants in the form of ratio benchmarks. In certain cases, investors may take comfort from knowing that covenants (e.g., leverage tests) impose discipline on an otherwise financially aggressive management by prohibiting debt-financed acquisitions and special distributions to shareholders. In severe adversity, however, tight covenants could imperil credit quality by provoking a crisis with lenders if the covenants are violated: the lenders would have the discretion to accelerate the debt, causing a default that might otherwise have been avoided. Triggers may also be in the form of credit rating changes themselves, for example, a change in rating from investment grade to noninvestment grade.

In considering just how the issuer's risk profile is affected by such provisions, the key considerations are: How close the company is to the trigger thresholds; how severe and immediate the consequences are; the amounts involved; and how material the amounts are in the context of the specific company. Borrowing agreements, even of creditworthy companies, are sometimes structured with tight covenants. The initial expectation is that lenders will routinely renegotiate the terms as the issuer's circumstances change. Even here, though, the existence of covenants can be problematic if, for example, the lenders' strategies change and they wish to reduce their exposure to the borrower, or if a company is unable to meet its financial forecasts that were used as a basis of setting these covenants.

Violation of covenants in public debt issues always is serious, given the cumbersome procedure the company must follow to obtain waivers or to modify the covenants. In all cases, it is important to monitor the performance of a company against its most restrictive financial covenants. (We obtain bank loan covenant compliance reports directly from issuers, given the nonpublic information needed to compute the covenant values.)

Material adverse change (MAC) clauses represent another form of trigger. Remedies include the full range of possibilities that also apply to financial covenants. The vague definition of such clauses leaves much discretion to lenders. Still, cases of MAC clauses actually being invoked against corporate borrowers are extremely rare. The bank's reputation would suffer if it was not judicious in invoking the clause--and it would be subject to litigation. There undoubtedly have been instances, though, when companies have been dissuaded from tapping their credit facilities by the threat of a MAC clause being invoked.

Springing liens also can be problematic regarding financing flexibility. Sometimes, lenders may require the company to post collateral after a downgrade--which is provided for in the loan documentation. When assessing the impact of a springing lien, we consider how close the company is to the trigger; for example, if the company is rated 'BBB-' with a negative outlook, it is pretty close to a lien that goes into effect upon dropping to speculative grade. (With respect to recovery analysis, we always assume that a springing lien has been activated. The context for recovery analysis is a default scenario--and we assume that the trigger would have been breached in advance of default.)

Equity issuance

In theory, equity issuance is another source of capital; in practice, this source cannot be relied on in a crisis scenario. The public equity markets are extremely fickle. Selling new common stock generally is feasible only if the company is seen as having at least decent prospects and the overall stock market is favorable. Moreover, accessing the common stock market may primarily depend on management's willingness to accept dilution. We therefore do not give companies credit for potential equity issuances until such transaction has been completed.

Selling preferred stock may be more acceptable to management because this avoids dilution of the common shareholders' earnings, but this usually is viable only if the company's continuing ability to meet its preferred dividend requirements is apparent.

Companies owned by other corporate or government entities can seek fresh capital from these owners. Often a strong parent or equity sponsor is available to provide much needed capital during a liquidity crisis.

The management factor

Finally, management's skill in coping with a liquidity crisis can make the difference between corporate life and death. Prudent financial managers will:

- Avoid excessive short-term debt;
- Spread debt maturities over time;

- Maintain cordial relations and credibility with banks, during bad times and good;
- Negotiate bank loan covenants with ample cushion while the company is financially strong;
- Anticipate potential covenant defaults before they occur and renegotiate covenants on a timely basis with the bank group;
- Maintain bank lines in excess of anticipated needs, and begin negotiating renewals well before expiration; and
- Fully draw credit lines at the onset of major difficulties.

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