MOODY'S
INVESTORS SERVICE

CROSS-SECTOR RATING METHODOLOGY

General Principles of Liquidity Risk Assessment

This cross-sector rating methodology replaces "Moody's Approach to Assessing the Adequacy of Liquidity Risk Insurance," which was published in January 2000 and combines it with our "Speculative Grade Liquidity Ratings" methodology published in September 2002. The update enhances transparency and provides a more comprehensive discussion of our approach to assessing liquidity for investment-grade and speculative-grade issuers.

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Introduction

This rating methodology describes our approach to assessing liquidity risk, which is based on a forward-looking view of the availability and balance of cash sources relative to cash needs for operations, investment, debt service and other corporate uses over a prospective, typically short-term and rolling time horizon. We analyze liquidity risk as part of our broader assessment of an issuer's fundamental long-term creditworthiness. If we perceive an issuer's liquidity position to be exceptionally or intractably weak or believe that the issuer's liquidity management practices are aggressive relative to those of its peers, our assessment will generally be reflected in a lower long-term rating. Similarly, very strong liquidity that provides a substantial buffer against default for a low-rated issuer is likely to provide some rating support relative to a low-rated issuer with less robust liquidity, all else being equal.[1] This methodology applies globally to non-financial corporate issuers, corporate infrastructure issuers and the small number of financial corporate sectors whose primary rating methodologies do not address liquidity.

An assessment of liquidity risk is an important dimension of credit analysis and has value as one of many considerations that underpin our ratings, but its utility in differentiating credit risk is often limited to the very short term. While a liquidity crunch often triggers a default, barring exogenous shocks or fraud, the underlying cause is almost always underperformance of the business or excessive leverage that creates an untenable balance sheet. Poor operating performance or excessive leverage routinely precede weak liquidity. Accordingly, our industry-specific rating methodologies typically focus on business profile and financial strength indicators that are predictive of relative default risk much further in advance of default than liquidity. In addition, there are many variables that affect the balance and timing of future cash sources and uses, including anticipating management decisions about how to use or preserve cash. These considerations add substantial nuance and complexity to any purely quantitative assessment of liquidity.

[1] While liquidity is a consideration frequently critical to ratings, in other circumstances it may not have a substantial impact in discriminating between two issuers with a similar credit profile. As an example of the limitations, ratings can be heavily affected by extremely weak liquidity that magnifies default risk. However, two identical issuers might be rated the same if their only differentiating feature is that one has a good liquidity position while the other has an extremely good liquidity position, unless these are low-rated issuers for which liquidity can be a substantial differentiator for relative default risk.

Fundamental Principles Guiding Our Approach to Assessing Liquidity Risk

We describe the guiding principles relating to our assessment of liquidity risk below.

Our approach to liquidity analysis is both quantitative and qualitative. We generally begin by looking at cash, short-term investments and available committed bank facilities relative to current debt maturities, including short-term debt and puttable securities. For some highly rated investment-grade issuers that are strong under this assessment or that have strong operating cash flow or large discretionary cash outflows (for example, dividends and share repurchases), a rating committee may view this initial assessment to be sufficient because the issuer has either a significant cash cushion or substantial flexibility to make adjustments to its cash outflows if needed.

For all other issuers, we typically compare our estimate of cash sources to our estimate of cash uses over the next four quarters (or longer in some instances). Estimated sources of cash include cash flow from operations, cash on the balance sheet, short-term investments and availability under committed arrangements, such as bank facilities. Estimated uses of cash generally include capital and other investments (including known acquisitions), debt maturities, dividends and share repurchases.

The quantitative result of this comparison is used as a starting point for a qualitative liquidity assessment that considers each issuer's potential vulnerability to stresses that could reduce future cash sources and the issuer's ability and willingness to take actions that preserve cash (for example, to cut dividends, capital spending, acquisitions or share repurchases) or increase sources of cash (for example, asset sales, or debt or equity issuance). Furthermore, while the quantitative estimates that are the starting point exclude market access, our qualitative assessment of these estimates considers the likelihood that the issuer can and will access capital or bank markets to maintain or restore sufficient liquidity. For example, a highly rated issuer with no secured debt in its capital structure could likely access the secured debt market even during a period of market stress or issuer-specific challenges.

To Assess Internal and Committed Sources in Isolation, We Generally Assume No Market Access

Our quantitative approach typically assumes no market access for 12 months to provide an isolated view of estimated internal and committed sources of cash. This assumption of no market access, while likely unrealistically severe for most highly rated corporate issuers most of the time, creates a standard analytical starting point, and it aligns with our general expectation of no market access for low-rated companies during periods of stress.

Our Assessment Considers Cash Flow Variability and Ability to Access Alternate Sources of Liquidity

We typically begin our assessment with a base-case review of near-term sources and uses of cash and consider the impact that adverse conditions could have on the issuer's projected cash activity. We may consider the cash claims that could emerge under stress conditions and the issuer's ability to navigate such an environment by conserving or generating cash (for example, generating cash from asset securitizations or asset sales). An understanding of the issuer's business and the sector in which it operates is a critical part of our assessment of the resiliency of the issuer's liquidity position. Our comfort with an issuer's liquidity ultimately relies on the estimated cushion available to the company to absorb unexpected shocks. Investment-grade companies typically have far more flexibility in managing their liquidity needs in poor operating environments than speculative-grade companies.

The Reliability of Borrowing Arrangements Is Important

An important component of our assessment of a company's liquidity position is the ability to access backup credit lines from banks. Certain fundamentals are critical in assessing the strength of supporting bank credit facilities. For example, we are watchful for provisions that could provide lenders with a basis not to fund. These may include covenants, material adverse change (MAC) clauses, bank lenders' financial strength, facility maturity dates, and renewal procedures for multiyear and 364-day revolving credits. We typically consider the mechanics for loan draws and the geographic markets and currencies in which the facilities reside and generally also consider how quickly borrowing alternatives would be available to the issuer.

We recognize that a company's continued access to its credit facilities may quickly erode if a deteriorating financial position put it near a breach of its financial covenants. This risk may be particularly acute when a lender's commitment is undrawn, because with no existing loans to protect, a lender may be more likely to take action in order to avoid direct exposure to a company undergoing financial stress.

Where liquidity support is involved, an erosion of market confidence can quickly translate into a serious liquidity crisis. Loss of market confidence can set in motion a downward credit spiral that can transcend a liquidity crisis and challenge solvency.

A more detailed discussion of assessing the strength of a liquidity facility is available in Appendix 1.

Special Considerations for Commercial Paper Issuers

Liquidity is an especially relevant analytical input in our approach for determining short-term ratings,[2] including ratings on commercial paper. Highly rated issuers of commercial paper usually refinance maturing commercial paper with the issuance of new commercial paper. The most significant risk for these issuers is an abrupt loss of access to the capital and credit markets as a result of an adverse event. Top-rated or Prime-1 issuers of commercial paper generally maintain exceptionally strong liquidity characteristics. This typically includes alternate liquidity provisions through committed bank facilities at least as large as total short-term debt (generally based on our estimate of maximum anticipated commercial paper issuance), access to same-day-available funds in the market of commercial paper issuance, and no restrictions on funding related to material adverse changes in the borrower's financial condition. In some cases, our liquidity analysis also gives credit to cash holdings and a portion of near-cash investments that are maintained at a stable level for long periods and are available on an immediate basis. A relatively aggressive approach to liquidity can result in a lower long-term rating as well as a lower short-term rating.

Toward the Bottom of the Rating Scale, Liquidity Is More Consequential

An assessment of liquidity risk can play an especially vital role in detecting distress for speculative-grade companies given their higher probability of default relative to investment-grade companies. Strong liquidity, which is not likely to be a significant differentiator at the investment-grade level, becomes increasingly meaningful lower down the rating scale. For these reasons, our approach to assessing liquidity is generally more detailed at the speculative-grade level. In our speculative-grade liquidity (SGL) framework, we separately assess four key components of liquidity: internal sources of cash; committed external financing; covenant compliance; and alternate liquidity. For some companies we publish numeric SGL ratings and component scores based on this liquidity framework. SGL ratings

[2] For more information about our short-term ratings, please see our short-term rating methodology. Links to our sector and cross-sector methodologies and to Moody's *Rating Symbols and Definitions* can be found in the "Moody's Related Publications" section of this document.

are opinions of an issuer's relative ability to generate cash from internal resources and the availability of external sources of committed financing, in relation to its cash obligations over the coming 12 months. SGL ratings are not credit ratings; they are assessments that result from the application of the SGL framework, which focuses solely on intrinsic liquidity and differs from our approach for assigning long-term ratings.

While generally more detailed, our overall assessment of liquidity at the speculative-grade level is the same as our approach higher up the rating scale. The foundation for the SGL framework is our view of intrinsic liquidity and the assumption of no market access to meet short-term obligations. We also assume that the issuer is not able to amend financial covenants in existing debt agreements. The SGL framework generally incorporates an assessment of the issuer's free cash flow,[3] cash on hand and committed sources of financing, in relation to its obligations coming due over the next 12 months. Committed sources of financing include committed bank credit facilities or other forms of committed financing, such as securitization facilities. The SGL analysis assesses the issuer's ability to maintain orderly access to committed facilities. A more detailed discussion of the SGL framework is available in Appendix 2.

[3] Free cash flow is net of investment in working capital, dividends and capital expenditures. Please see *Moody's Basic Definitions for Credit Statistics (User's Guide)*. A link can be found in the "Moody's Related Publications" section of this document.

Appendix 1: Assessing the Strength of a Liquidity Facility

This appendix provides more detail about our approach to assessing alternate liquidity agreements and explains some of the hidden pitfalls of commonly used arrangements. This section considers backup facilities for commercial paper and liquidity facilities for companies across the spectrum of ratings.

In assessing the strength of a liquidity facility, the following generally have the most negative impact:

MAC Clauses and Other Funding-Inhibiting Language: Provisions such as material adverse change (MAC) and material adverse litigation (MAL) clauses, restrictive covenants and other funding-inhibiting legal language in the backup credit line documentation may significantly lessen the effectiveness of credit facilities as a source of alternative liquidity. When invoked, MAC and MAL clauses eliminate availability of the facility.

Modest Leeway in Meeting Performance and Financial Covenants: Performance covenants and the extent of the leeway that a company has in meeting financial covenants are key to the strength of a credit agreement. For example, a company that is close to breaching its financial covenants may discover that, as its financial position erodes, availability under an undrawn credit facility may quickly dissipate.

Loss of Market Confidence: An erosion of market confidence can translate quickly into a serious liquidity crisis, when all types of credit, including trade and banks credit as well as debt and equity markets, can contract simultaneously and create a downward spiral.

Unavailability of Same-Day Funding in the Jurisdiction: Among the key issues in assessing the strength of a company's borrowing alternatives is the immediacy of their availability, including in the appropriate jurisdiction. For example, a commercial paper issuer typically has access to same-day funding under committed bank facilities in all regions of its commercial paper issuance in case the markets do not roll over its maturing commercial paper.

Poor Banking Relationships: In assessing the sources of short-term funding, we typically consider the strength and stability of the issuer's banking relationships. The likelihood that a lender will seek to abrogate its contractual obligation to lend often corresponds to the amount outstanding under that lender's commitment — if a lender's commitment is undrawn with no existing loans to protect, it may be more likely to take action to avoid direct exposure to a company undergoing financial stress. A bank may have a variety of relationships with a company, and it may have entered into different kinds of credit hedging arrangements, such as credit default swaps, that also influence the bank's behavior.

Bilateral Credit Agreements: In some cases, companies choose to have separate credit agreements with each of their banks. These agreements, known as bilateral credit agreements, which are signed with multiple banks, can be very destabilizing during periods of adversity and can exacerbate the effects of a liquidity crisis.

Assessing the Quality of the Backstop Facility

The strength of a company's liquidity facility depends on the company's ability to access the facility during periods of market stress or company-related setbacks. However, alternate liquidity agreements often contain clauses that enable liquidity providers to step back from their commitments should the risk profile of the company increase. Provisions such as MAC clauses, restrictive covenants and other funding-inhibiting legal language in the backup line documentation may significantly lessen, if not almost entirely eliminate, the effectiveness of credit facilities as a source of alternate liquidity.

For this reason, the stability of a company's banking relationships and legal covenants are extremely important in our analysis. Our key considerations include the following:

» The facility type

» The nature of the banking/company relationships in the country or region

» Covenants embodied in the credit facilities — or in a company's existing indentures — that might disrupt a company's access to liquidity

Generally, we expect to see a higher level of committed back-stop facilities relative to cash needs and tighter documentation with Baa and lower-rated companies than with a company rated A or higher. Highly rated companies may have backstop commitments that are shorter in tenor (for example, 364 days) while lower-rated companies generally have multiyear facilities. We believe a longer tenor generally provides stronger backup on an absolute basis, but we recognize that a highly rated company typically has greater flexibility in managing cash uses (such as reducing share repurchases) and more consistent market access. For a borrower with a 364-day liquidity back-stop facility, we typically consider how soon the company customarily renews its facility prior to expiration. Moreover, subject to the satisfaction of certain conditions that may include the provider's willingness to extend the facility, some 364-day facilities contain options that enable a borrower to extend the facility. Frequently, non-renewal of such facilities permits the borrower to convert any amounts outstanding into a one-year loan.

Types of Bank Facilities

The typical liquidity backstop facilities listed below are ranked in order of decreasing reliability during periods of stress. A company's bank arrangements often consist of a combination of these facilities, and we assess this mix in the context of the overall credit strength of the borrower.

» Multiyear contractual lending commitment with a broad syndicate of banks that is legally binding on those banks and has no lending escape clauses. These are generally the most solid form of commitment.

» A contractual commitment with a syndicate of banks that is legally binding on those banks but is subject to material conditions to availability, such as certifying the absence of a MAC. The MAC clause may permit a bank to withhold funding if there has been a significant negative change affecting the financial strength of the borrower. Equally important is the leeway granted to a company to meet its performance and financial covenants.

» Multiyear contractual lending commitment with a single bank. In general, there are fewer disincentives for a single bank in a bilateral relationship to assert that the terms of the agreement have been breached in a way that permits it to terminate its commitment. For example, MAC clauses usually entail a degree of judgment whether or not the negative change in the financial strength of the borrower is material. A bank in a broad, syndicated facility would typically refrain from asserting a MAC unless other banks agreed.

» An evergreen facility that is committed but can be cancelled by the bank at any time with a relatively short notice (such as a couple of months) or a line of credit that is advised but not legally committed and for which the bank is compensated. A line of credit is a non-contractual (non-committed) bank facility that stipulates only the bank's intention to lend.

Other facilities that companies use but that generally offer less predictable support include:

» A line of credit for which the company does not pay

» Internal bank guidance limits

» Demonstrable excess borrowing power based on the strength of the company's banking relationships

» Factoring arrangements

» Vendor financing

Assessing the Covenants: Credit Agreements Are Not Ironclad

How Covenants Can Be Used to Disrupt Access to a Back-Stop Facility

Standard covenants in credit agreements can disrupt a company's access to liquidity. When lenders analyze compliance certificates, they review not only compliance but also the calculation of what room remains under the covenants relative to the level that would permit them to assert a contractual default , which may lead to suspension or termination of the lending commitment. The bank can thus assess the likelihood of a covenant default by monitoring when a borrower is close to breaching a particular covenant and can take action accordingly. In some cases, availability of the committed facility may be subject to constraints that effectively limit the amount that the issuer can access. For instance, a financial maintenance covenant or required borrowing base of pledged receivables and inventory may limit availability even if the commitment remains in place. As an example, the effective availability under a $100 million revolver may be only $50 million, if borrowing more than $50 million would lead the company to breach a covenant.

Because credit agreements contain covenants that often include numerous, agreement-specific carve-outs for extraordinary items in the calculation, we typically assess the overall flexibility provided in the covenant, based on the contractual calculation of compliance. To this end, we typically request a copy of the borrower's compliance certificate and covenant calculations as well as copies of other financing agreements that may have separate covenants.

Lenders May Seek to Avoid Obligation, Even Without a Covenant Violation, Particularly on Undrawn Facilities

In the absence of an explicit covenant violation, lenders may seek to construct arguments to avoid their obligations to lend under committed facilities. For this reason, we may assess the terms of the representations in each agreement.

The likelihood that a lender will seek to abrogate such an obligation often inversely corresponds with the amount outstanding under that lender's commitment — e.g., if a lender's commitment is undrawn with no existing loans to protect, it may be more likely to take action to avoid direct exposure to a company under financial stress. While we typically view undrawn credit facilities as a source of liquidity, we also recognize that their value may be substantially diminished when the borrower is close to violating its financial covenants.

Amendments May Be Difficult to Obtain When the Percentage of Required Banks Is High

Required lenders (or majority lenders) is a term typically defined as lenders whose commitments or loans represent a specific percentage, typically a majority or two-thirds of the total, which is required to amend or to waive a borrower's lack of compliance with covenants contained in a credit agreement, or to waive conditions precedent to lending. In credit facilities consisting of a large number of lenders, the higher the percentage, the more difficult it may be for a borrower to obtain requisite consents from a sufficient number of lenders. Conversely, in an acceleration scenario, a higher percentage may work in the borrower's favor, because it may be more difficult to obtain consent from lenders representing the required level of loans to terminate the commitments and declare the unpaid principal amount of loans due and payable.

Lenders May Challenge Borrower Representations

Lenders can sometimes challenge a borrower's financial representations as a tactic to avoid obligation. As a condition precedent to the effectiveness of a committed back-stop agreement, a borrower is required to make specific initial representations and warranties about its financial condition. While some higher-rated borrowers make such representations solely upon closing of the liquidity facility, many borrowers including those at the lower end of the ratings scale, must restate or "bring down" the initial representations at the time of each borrowing. At the time of each drawdown under an existing credit facility, such borrowers are required to reaffirm the representations in the agreement, and the lenders are generally obligated to fund when presented with a "clean notice of borrowing" conforming to the requirements set forth in the credit agreement. (These representations typically state that there has been no material adverse change in the business, assets or financial condition of the company and its subsidiaries since the most recent fiscal year-end. Sometimes the representations also extend to specific disclosures, such as an affirmation of no material litigation, and can relate to the borrower as a separate legal entity or to the borrower and its subsidiaries taken as a whole). Typically, the representations relate to the period up to and including the borrowing date and generally are not prospective in nature but do require that the borrower would be able to reaffirm any conditions pro forma for the anticipated borrowing.

If a lender is given a "clean notice of borrowing" but has concerns regarding a borrower's actual creditworthiness, the lender may challenge the borrower's ability to make the representations. Among the more common tactics used during periods of financial stress, lenders seeking to avoid funding under a committed facility may avail themselves of a provision, common in credit agreements, that allows them to request additional information from the borrower. Lenders may then use the new information to challenge the borrowing representations made by the company.

To brace for the possibility that lenders may challenge a borrower's ability to make the representations, we generally place particular importance on the phrasing of the representations in each agreement.

Multiple Bilateral Credit Agreements Can Worsen a Liquidity Crunch

In some cases, companies choose to have separate credit agreements with each of their banks. These agreements, called multiple bilateral credit agreements, can be destabilizing during periods of adversity and can exacerbate the effects of a liquidity crisis. In situations of stress, a lender is less likely to provide flexibility unless it knows that similar flexibility is being extended by other lenders at similar terms. In some instances, a disparate group of lenders operating under separate agreements will disintegrate in a credit crunch, leaving the borrower in crisis.

We believe that a formalized group of lenders with established pro rata lending commitments, all embodied into a common credit agreement, will generally provide stronger support during periods of adversity than will a disparate group of individual lenders with separate agreements that fund on a bid basis and that have no manager holding the group together.

Assessing the Immediacy of the Facility

Among the key issues in assessing the strength of a company's borrowing alternatives is the immediacy of their availability. This is especially critical for evaluating the adequacy of facilities backing commercial paper issuance. Highly rated issuers of commercial paper usually refinance maturing commercial paper with the issuance of new commercial paper. A market-standard backup facility generally provides access to same-day funding in the jurisdiction where the commercial paper matures to ensure reliable coverage in the event that the company is not able to roll over commercial paper.

A company whose commercial paper fails to roll over could also experience a liquidity crisis if it fails to give adequate notification for borrowing under its credit agreement. Settlement times vary from market to market and can range from same-day to two days after the trading date (the date of agreement is between issuer and investor, usually as arranged by the dealer). However, bank agreements may vary in the required notification period before drawdown. The more stringent the notice period for borrowing, the less flexible the company's alternate liquidity. For example, a two-day settlement market — in which an issuer would have two days' notice that its commercial paper was not rolling over — does not necessarily indicate that the company has two days' grace period to arrange a borrowing. To determine the proper grace period, we typically consider the particulars of the banking arrangements, with the knowledge that a lender may require, for example, a two-day notice period for borrowing.

Our assessment of the relationship between maturity and borrowing availability is also sensitive to location and cross-border issues. For example, time zone, bank holiday and currency differences between the issuing conduit and its major banking facilities may call for a swing line (a special form of backup facility) to help provide liquidity until other sources of funds become available. If a company is issuing paper in a different country from that of its bank facilities, a swing facility in the country of issuance can help assure timely payment. Typically, such a swing facility is equal to several days' peak maturities; however, settlement times of the market(s) involved affect this amount.

Assessing the Strength of the Liquidity Relationship

In assessing sources of short-term funding, we typically consider the credit profile of the lender(s) and the nature of a company's relationship with the lending group. We view strong ongoing relationships as valuable. The nature of banking can shift over time, sometimes favoring transaction-driven associations as opposed to relationship-driven lending, and banks typically must periodically reassess their relationships based on the perceived profitability potential relative to the level of risk-weighted assets employed. Some banks also periodically reassess their commitment to a particular region, especially to a region with more volatility than the bank's core region. Thus, we generally assess banking relationships critically.

Strong relationship-based bank facilities that also exhibit the protective features of extended duration, compensation and contractual obligation with few or no escape clauses for the lending institutions provide the strongest backup liquidity. In a stress scenario, we believe that relationship-based lenders are more likely to support a company's liquidity position than will arm's-length lenders and transaction-oriented lenders. However, contractual commitments to lend can compensate for the declining predictability of traditional relationship-based funding sources. Moreover, a key bank with substantial loans outstanding to a borrower may find it more difficult to sever the relationship.

The bank's commitment to the relevant sector as a whole is also important. For example, we have witnessed periods when certain banks refused to lend to certain industry sectors. Moreover, if overall loans outstanding approach a bank's legal lending limit, the bank will put a ceiling on additional commitments.

We also may consider the nature and history of a company's banking relationships according to the banking practices of the country involved. In Japan, for example, companies do not typically have committed, fee-paying, back-up facilities. Relationship ties in Japan have been of primary importance, and they have sometimes been fostered by regulators. While such relationship ties could weaken due to changing market or regulatory conditions, they have generally been as strong or stronger than contractual ties in other markets. In many Latin American countries, the lack of availability of substantial committed credit facilities has generally caused issuers to maintain more on-balance sheet liquidity than global peers with committed facilities.

Appendix 2: Speculative-Grade Liquidity Framework

Our assessment of liquidity risk for speculative-grade companies aligns with the general liquidity assessment principles, but it typically involves more detail. The level of detail varies, but at a minimum, we generally assess sources such as cash and short-term investments, free cash flow and availability under bank credit facilities relative to a company's cash uses. We typically monitor and assess the liquidity profile of speculative-grade companies through a Speculative-Grade Liquidity (SGL) framework. Under the SGL framework, we separately assess four key liquidity components: 1) internal sources of cash versus cash needs; 2) availability of external sources of committed funding; 3) covenant compliance; and 4) alternate liquidity. We score each one on a scale of 1 (very good) to 4 (weak). The standard forward time frame for this assessment is the next 12 months, but in some cases we extend the horizon to 15 months.

The SGL framework focuses solely on intrinsic liquidity. We assume that companies will not be able to access the capital markets in order to arrange new sources of financing – or to extend existing debt maturities – within the horizon of the liquidity analysis. We also assume that lenders will not provide waivers or amendments to covenants or other facility terms that might be necessary to avoid lender acceleration and ensure continuing access to credit facilities. These assumptions closely replicate the environment speculative-grade borrowers typically face during economic or credit cycle downturns. This intrinsic liquidity assumption is different from our approach for assigning long-term ratings where we can and do make assumptions about the cost and likelihood of market access and actions such as covenant amendments.

SGL Ratings

We may assign and publish Speculative Grade Liquidity Ratings ("SGL ratings"), which are opinions of an issuer's relative ability to generate cash from internal resources and the availability of external sources of committed financing, in relation to its cash obligations over the coming 12 months. SGL ratings are not credit ratings but rather assessments that result from the application of the SGL framework, which focuses solely on intrinsic liquidity and differs from our approach for assigning long-term ratings. SGL ratings are typically assigned only to speculative grade companies for which we maintain long-term credit ratings and when they are published, we generally also disclose the individual scores for each of the four liquidity components enumerated above. SGL ratings, including any changes in those ratings that may occur from time to time, are assigned by rating committees.

SGL Ratings, which range from SGL-1 (the highest SGL rating) to SGL-4 (the lowest SGL rating) are assigned based on our overall view of relative strength of a speculative grade issuer's liquidity profile. Individual component scores are assigned on a scale of 1 (highest) to 4 (weakest). Component scores inform the overall SGL rating, but the SGL rating does not represent a weighted average of the scores. SGL ratings do not carry an outlook nor do we typically place SGL ratings on review for upgrade or downgrade, but we may comment on the liquidity rating implications of external events, such as mergers or acquisitions.

Our view of the liquidity of a speculative-grade issuer, as for any company, is an important aspect of our analysis for the issuer's long-term rating. However, SGL ratings are independent from our long-term ratings, and two companies can have the same long-term ratings but different SGL ratings, or the same SGL ratings but different long-term ratings. SGL ratings generally change more frequently than our long-term ratings given their more narrow focus and assumptions. For example, an SGL rating can change abruptly and by multiple categories due to actions such as the announcement of a large capital expenditure or other investments, changes in capital costs or views on the economic environment, the migration of maturing debt into the 12-to-15-month assessment window, or actions such as debt-refinancing and covenant amendments.

SGL Analytic Framework

We assess four liquidity components in the SGL framework: internal, external, and alternate sources of liquidity and covenant compliance.[4] The approach includes an assessment of cash and short-term investments, free cash flow and availability under bank credit facilities relative to a company's cash uses; however, our analysis may involve a more comprehensive review of all material sources and uses of cash, especially for issuers whose credit profiles are most sensitive to their levels of liquidity, which is more typical at the weaker end of the speculative grade scale.

The Four SGL Component Scores

An issuer's overall SGL assessment is informed by our evaluation of the four liquidity components. When we assign an SGL rating, it is the same as the composite SGL assessment.

» Internal Sources: Ability to cover cash requirements from cash and cash flow

» External Sources: Reliance on, and size of, available loan commitments

» Covenant Compliance: Elements of conditionality, including covenant cushion and likelihood of compliance

» Alternate Liquidity: Other sources of liquidity, such as asset sales or the presence of unencumbered assets that may be used to secure new external financing

These four liquidity components generally form the core of the SGL analysis. We typically assess each component discretely to determine the component score, and we generally consider the collective interaction of these components in our overall SGL assessment . Our discussions usually focus on projected cash flow, cash needs and covenant compliance and typically include insights from discussions with the rated issuer.

The composite SGL assessment is not a weighted average of the four component scores. We may emphasize the components differently depending on our opinion of key liquidity drivers for a given company at a certain point in time. Generally, cash and cash flow carry the most influence. For example, a company without external committed financing may have a high SGL assessment due to a very high cash balance or strong cash flow. Tight cushions and an increased probability of covenant breach can elevate the importance of maintenance covenants, since triggering an event of default would allow lenders to accelerate the debt. Unless a company has sufficient internal resources to repay all outstanding borrowings under a facility, a covenant score of 4 would likely lead to an overall SGL-4. At other times, covenant cushions may be less important than an impending debt maturity. Good alternate liquidity may lift a low SGL score, but cases where it would lift the composite to the highest level would be rare. SGL assessments also incorporate our assumptions about the economic environment and confidence in the projections used for each component.

4 We disclose numeric scores for these four components for companies with public SGL ratings. The goal of publicly assigning SGL and related component scores is to provide investors with insights into our views of the creditworthiness of speculative-grade issuers and to enhance transparency.

The outcome of the SGL analytic framework is a composite SGL assessment on a scale of 1 to 4 that is based on the following parameters.

» SGL-1: Issuers rated SGL-1 possess very good liquidity. These companies are most likely to have the capacity to meet obligations over the coming 12 months through internal resources without relying on external sources of committed financing.

» SGL-2: Issuers rated SGL-2 possess good liquidity. These companies are likely to meet their obligations over the coming 12 months through internal resources but may rely on external sources of committed financing. The company's ability to access committed financing is highly likely based on Moody's evaluation of near-term covenant compliance.

» SGL-3: Issuers rated SGL-3 possess adequate liquidity. These companies are expected to rely on external sources of committed financing. Based on Moody's evaluation of near-term covenant compliance, there is only a modest cushion and the company may require covenant relief in order to maintain orderly access to funding lines.

» SGL-4: Issuers rated SGL-4 possess weak liquidity. These companies rely on external sources of financing, and the availability of that financing is highly uncertain in Moody's opinion.

Below we describe the key considerations that go into each SGL component score.

Internal Sources

The Internal Sources component addresses a company's ability to cover basic and other cash requirements with internal sources of liquidity during the coming 12 months. When assessing internal sources, analysts typically estimate some or all of the following sources of cash over the next 12 months:

» Unrestricted cash balances (uncommitted balance sheet cash in excess of normal day-to-day operating and/or minimum balance requirements)

» Internally generated cash flow after operating expenses, cash interest, tax obligations

» Marketable securities or other very liquid assets

» Excess commodity inventories that can be sold without eroding underlying enterprise value (this analysis typically considers the potential for a decline in market prices)

When considering "basic cash requirements" for scoring internal sources per the below scoring chart, analysts typically estimate some or all of the following uses of cash over the next 12 months:

» Capital spending to maintain the company's existing asset base (commonly referred to as maintenance capital expenditures)

» Dividends (preferred or common) expected to be paid

» Seasonal and non-seasonal working capital needs

» Debt maturities (including expiring bank or accounts receivable facilities)

- Puttable securities
- Other contingent liabilities (including taxes, legal settlements, and earn-outs related to acquisitions) likely to be paid
- Debt with ratings triggers that are near the trigger point, or that may trip
- Required pension payments
- Product liability payments (e.g., asbestos liabilities)

For scoring internal sources per the chart below, we also estimate an issuer's "other cash requirements" over the next 12 months. These may include some or all of the following:

- Project-based capital expenditures (committed planned growth capital expenditures that are above and beyond what is considered maintenance capital expenditures). Project-based capital spending is also commonly referred to as growth-related capital expenditures. For purposes of the SGL analysis, project-based capital expenditures could be delayed or cancelled with relatively short notice, but would likely involve some continuing expenditures in the form of closing or carrying costs related to a cancellation or delay of all or part of the project.
- Extraordinary capital expenditures, which is defined as discretionary, growth-oriented capital expenditures that can be delayed or cancelled with relatively short notice, minimal disruption, and little or no operating and/or financial consequence.
- Cash flow requirements of non-recourse/project subsidiaries from which the parent would be unlikely to walk away.

Internal Sources

1	2	3	4
At all times over the next 12 months, the issuer can comfortably cover all basic and other cash requirements from internal sources	For the projected 12-month period, but not necessarily for all interim quarterly periods, the issuer can likely cover all basic cash requirements as well as project-based capital spending and cash flow requirements of non-recourse/project subsidiaries from internal sources. Issuers in this category are not expected to be able to cover extraordinary capital expenditures from internal sources.	For the projected 12-month period, the issuer can cover all basic cash requirements from internal sources. Issuers in this category are not expected to cover other cash requirements from internal sources. For these issuers, external liquidity is needed to cover some or all cash needs above the basic cash requirements.	The issuer is unlikely to cover the basic cash requirements from internal sources and likely to need external financing to remain liquid and/or to maintain status as a going concern.

For retailers and some distributors with large seasonal working capital needs, the estimates used in our internal sources assessment typically incorporate our expectations for support from vendors and banks, which generally extend more-generous terms during seasonal build periods. We typically consider trade creditor confidence and expect that a company will have access to vendor support at a level in line with industry practice, its position within its segment and its fundamental credit standing. For example, we may sensitize our assumptions for access to vendor financing more severely for a lower rated company than a stronger company, and the potential for a decline in creditor confidence is typically important to both our liquidity analysis and our overall credit analysis.

External Sources

The amount and adequacy of a company's availability of committed external sources of financing are critical components of liquidity. Our review of external sources of liquidity, such as revolving credit facilities, asset-based facilities and accounts-receivable securitizations, generally focuses on size, maturity and availability, as well as the company's relative reliance on these sources.

Amount

We typically evaluate the amount of external financing sources based primarily on the following:

Size: We typically consider the size of the issuer's committed credit facility(ies) alone, ignoring the constraints of operative covenants for this component of liquidity. Room under operative covenants is analyzed independently as the third component of liquidity (see discussion of covenant compliance in the following section). We may also assess the certainty of the credit commitment when warranted.

Maturity: We consider the maturity of the credit facility. A 364-day tranche would not typically be considered a committed source of external financing for the full liquidity analysis period, and, if drawn, would typically represent a debt maturity during this period. The existence and potential impact of rating triggers or other forms of conditionality (excluding those covered in Covenant Compliance) that would terminate the facility may also be considered.

Availability: In defining the amount of the credit facility available, we typically consider unused availability relative to projected cash needs for the upcoming liquidity analysis period. Items that reduce the face availability, such as letters of credit, draws and borrowing-base limitations, are typically taken into account.

Reliance: After considering size, maturity and availability, we typically assess the company's relative reliance on the facility by examining how much the company has used the facility (how much is drawn and/or used for letters of credit), and how much is expected to be used during the next 12 months relative to the amount available.

Adequacy

In assessing adequacy, we typically consider the projected amount of unused availability[5] relative to the company's potential needs, including to cover unexpected working capital demands, backstop payables, or to bridge cyclicality or unexpected volatility in cash flow. A company may have a portion of its long-term committed credit facility drawn but still retain very large unused availability relative to potential unexpected needs.

[5] Because the focus of the external component is generally unused availability, a $1 billion revolver with $500 million of unused capacity, for example, can be viewed similarly to a $500 million undrawn revolver. However, the covenant and overall liquidity situation can be meaningfully different in the two scenarios. For example, if a company's only financial maintenance covenant applies to the revolver and is triggered based on a certain percentage usage of the facility, the second scenario would likely provide more covenant and overall liquidity flexibility.

1	2	3	4
Little reliance on external sources. Large unused committed availability under a revolver or within the asset base of an asset-based lending facility.	Reasonable but not necessarily large amount of committed availability. May need the facility for seasonal swings or to bridge the timing of major capital expenditures during the next 12 months, although a majority of the committed availability is expected to be undrawn during the projected 12-month period.	More likely to rely on the facility. While there is a sufficient amount of committed availability, a majority of it is expected to be drawn during the next 12 months.	No committed multiyear liquidity facility or inadequate amount of committed availability.

Covenant Compliance

Considerations for this SGL component generally include the following:

» Volatility of financial performance that could trigger covenant violations.

» To achieve a score of 1 for this component, there should be no question that the company will remain in full compliance with its covenants throughout the projection period, absent an unexpected, external event.

» The majority of speculative-grade companies' bank credit facilities contain a MAC clause, and the clauses' presence typically does not preclude a high score for this component or the overall SGL assessment, unless there is a material risk of a breach.

» The ability and likelihood of using cash balances to mitigate covenant concerns. We typically do not consider potential new external cash through mechanisms such as an equity cure because these are viewed as raising or injecting new capital.

» We typically review covenant definitions because metrics such as EBITDA can be defined to add back a broad spectrum of items that can range from limited and proscribed to very aggressive. Examples of aggressive adjustments include those with wide latitude for management judgment on projected cost savings and whether certain expenses are non-recurring. From the borrower's perspective, more liberal EBITDA and covenant definitions provide additional flexibility to comply with covenants even when the company is facing operating challenges. For example, wide latitude for management judgment on projected cost savings and whether certain expenses are non-recurring means a potentially increased likelihood of compliance and thus continued access to the liquidity facility, albeit also greater forecasting uncertainty.

» We believe asset based loans (ABLs) or revolvers that generally have no financial maintenance covenants until unused availability falls below a pre-set threshold provide greater covenant flexibility than revolvers or term loans where the maintenance covenants are in force throughout the term of the agreement. We typically balance the likelihood of the ABL/revolver covenant condition being activated with the potential for a covenant violation if the covenant is activated. Conditional maintenance covenants do not automatically result in a high covenant score; however, having ample headroom relative to the covenant threshold provides greater leeway if that covenant is activated. In the overall SGL assessment, we typically assess the interplay between covenant headroom and a company's willingness and ability to access the revolver, because a company may be reluctant to draw the revolver to the extent it activates a springing covenant.

Exhibit 1 provides basic guidance that is a starting point for assessing this scoring component for conditional maintenance covenants, based on two considerations: (1) the likelihood that unused availability falls below the pre-set threshold defined in the credit agreement and activates the financial maintenance covenant(s); and (2) the likelihood of breaching the required covenant threshold independent of whether the relevant covenant is activated. An issuer's score for the covenant component may not match the chart in all cases, because the likelihoods are assessed along a more nuanced continuum than the simple high-versus-low categories presented in the chart.

Exhibit 1: Basic Guidance for Assessment of Conditional Covenants

Likelihood that Covenant Is Activated		Likelihood of Covenant Violation: High	Likelihood of Covenant Violation: Low
	High	4/3	2/1
	Low	3/2	1

1	2	3	4
Compliance is highly likely over the next 12 months based on current expectations and absent exogenous events. Companies are amply in compliance.	Covenant compliance is likely over the next 12 months. Good cushion and low probability of a covenant breach. However, cushion may not be large enough to absorb an unexpected and/or substantial drop in earnings or cash flow.	Company is expected to remain in compliance over the next 12 months, but the cushion is modest. Although not considered likely, the possibility of a violation exists.	Company is or is likely to be in default of one or more covenants over the next 12 months.

Alternate Liquidity

In this component, we consider the extent to which a company could sell assets, a product line or division in an orderly and timely manner. Generally, only sales in progress or potential sales that could be consummated relatively quickly are considered viable sources of alternate liquidity within the liquidity horizon of the SGL assessment. An ability and willingness to execute on a sale of non-core assets that is somewhat beyond this horizon may enhance overall financial flexibility, but is not usually incorporated in our scoring of this component.

Because many speculative-grade companies have secured debt, the disposition of assets may reduce availability under credit facilities. Bond indentures and credit agreements usually require that a portion of asset-sale proceeds be used to repay debt. As a result, speculative-grade companies typically have limited ability to generate discretionary cash through asset sales.

An important consideration when scoring alternate liquidity is the potential for an asset sale to negatively affect core enterprise value, and we typically assess whether the sale would have a materially detrimental impact on earnings and cash flow, or would substantially weaken the company's competitive business position. Additionally, while some assets are saleable, there can be impediments to the quick realization of cash, such as regulatory approvals. We generally view possible asset sales as meaningfully positive in our liquidity assessment only if we consider the probability of cash realization during the SGL projection period to be high.

The existence of less encumbered, more divisible assets enhances alternate liquidity. We typically consider the degree to which lenders have a perfected security interest in the issuer's assets and the potential to realize full value when assets are sold. We also may assess debt agreement terms related to asset sales, with smaller required debt repayments from asset sale proceeds and longer permitted reinvestment windows providing greater liquidity flexibility.

1	2	3	4
There is a "back door" — there are alternatives for the company to raise cash within a 12-15 month horizon; e.g., company could sell a product line or assets without any pressure that would otherwise impair value. Assets are largely unencumbered.	There is a "back door" but it is more limited. There may not be assets that could be readily sold within a 12-15 month horizon without impairment to value. Assets are mostly encumbered.	Alternate liquidity is limited to the sale of assets at distressed value due to obvious liquidity pressures. Assets are largely or fully encumbered. Proceeds from asset sales would likely go to secured lenders leaving little new liquidity for the company. Company may be allowed to reinvest a portion of asset sale proceeds as opposed to the repayment of debt.	Assets are fully encumbered and do not have realizable cash value independent of the company's primary operations. Proceeds from asset sales have to be applied to the repayment of debt. No alternatives available to raise cash.

Moody's Related Publications

A list of potentially related sector and cross-sector credit rating methodologies can be found here.

For data summarizing the historical robustness and predictive power of credit ratings assigned using our sector credit rating methodologies, please click on this link.

Please refer to *Rating Symbols and Definitions*, which is available here, for further information.

A link to *Moody's Basic Definitions for Credit Statistics (User's Guide)* can be found here.

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