

MOODY'S

INVESTORS SERVICE

CROSS-SECTOR RATING METHODOLOGY

Assessing Affiliate Support in the Absence of a Guarantee

Table of Contents:

INTRODUCTION	1
SCOPE OF THIS METHODOLOGY	2
GENERAL PRINCIPLES FOR ASSESSING THE CREDIT IMPACT OF AFFILIATE SUPPORT IN THE ABSENCE OF A GUARANTEE	3
TYPICAL CHARACTERISTICS OF AN AFFILIATE THAT RECEIVES NO SUPPORT UPLIFT	6
TYPICAL CHARACTERISTICS OF AN AFFILIATE THAT RECEIVES LIMITED SUPPORT UPLIFT	8
TYPICAL CHARACTERISTICS OF AN AFFILIATE THAT RECEIVES HIGHER SUPPORT UPLIFT	8
THE IMPACT ON THE SUPPORT PROVIDER'S CREDIT PROFILE OF AN EXPECTATION THAT IT IS LIKELY TO PROVIDE SUPPORT	9
RATINGS OF AN AFFILIATE BASED SOLELY ON SUPPORT FROM A SUPPORTING ENTITY	10
APPENDIX A: ILLUSTRATIVE EXAMPLES OF THE ASSESSMENT OF AFFILIATE SUPPORT IN THE ABSENCE OF A GUARANTEE	11
MOODY'S RELATED PUBLICATIONS	14

Analyst Contacts:

NEW YORK +1.212.553.1653

Jeffrey Berg +1.212.553.3611
Associate Managing Director/RPO
jeffrey.berg@moodys.com

LONDON +44.20.7772.5454

William Coley +44.20.7772.8799
Associate Managing Director/RPO
william.coley@moodys.com

This cross-sector rating methodology replaces the *Rating Non-Guaranteed Subsidiaries: Credit Considerations in Assigning Subsidiary Ratings in the Absence of Legally Binding Parent Support* methodology published in December 2003. We have replaced point-in-time examples with illustrative examples, while retaining the same core principles. We have also made editorial changes to enhance readability.

Introduction

In this cross-sector rating methodology, we explain our general principles for assessing the impact of financial support from a parent, subsidiary or affiliate on ratings in the absence of a guarantee, letter of credit or similar legally binding mechanism that provides for full, timely support.

Support may flow from a parent to its subsidiaries, from a subsidiary to its parent, or among the affiliates in a group.¹ Our general approach to assessing the credit impact of affiliate support in the absence of a guarantee starts with an assessment of the credit profiles of the supporting entity and, on a standalone basis, the affiliate receiving the support.² We then assess the likelihood that the supporter will provide financial support to the affiliate during periods of stress or distress.

Our assessment of the impact on an affiliate's standalone credit profile can range from zero notches of uplift to the number of notches that would result in a rating that is near or even fully aligned with the credit quality of the supporting entity. Support considerations may also imply credit drag for the supporting entity where we consider that support may be extended to an affiliate that is experiencing stress or distress in a manner that will negatively affect the supporting entity's financial profile, liquidity or access to capital and credit markets. Where the supporting entity is rated and the weaker affiliate is not rated, the only potential ratings impact of this approach would be a potential drag on the supporting entity's rating.

¹ In the private sector, groups are typically entities that file consolidated financial results, but there can be cases of support that flows to entities that are outside the perimeter of the consolidated group from an accounting perspective. Similarly, in the public sector, support is likely to flow to entities in which the government has a meaningful ownership interest, but in some cases it may flow to entities in which the government has a strong policy interest.

² In the context of this methodology, a standalone credit profile can be thought of as the rating that would be assigned to the subsidiary or affiliate if the subsidiary or affiliate did not benefit from an expectation of parental support.

Our assessment of the likelihood of support and the related credit impact for the supported entity are primarily based on the supporter's willingness and ability to extend financial assistance. This assessment also considers the supporting entity's ability to resist requests for support from the affiliate.

Where we consider meaningful support to be likely, we analyze the impact from this support on the credit profiles of the supporting entity and of the affiliate. In many cases, our approach includes a standalone credit assessment of the supported affiliate or affiliates, based on the applicable sector rating methodology or methodologies.³ Our approach typically includes the following considerations:

- » The relevant entities that may be a source of credit support or credit drag.
- » The standalone credit quality of the relevant entities before receiving or providing support.
- » The likelihood of support, encompassing the willingness and ability to provide support.

Where support is considered likely, there may be some credit drag on the supporting entity, the magnitude of which depends on the relative sizes and credit profiles of the entities and the likelihood that support will be needed.

Our presentation proceeds with (i) the scope of this methodology; (ii) our general principles for assessing the credit impact of affiliate support in the absence of a guarantee; (iii) typical characteristics of an affiliate that receives no support uplift; (iv) typical characteristics of an affiliate that receives limited support uplift; (v) typical characteristics of an affiliate that receives higher support uplift; (vi) the impact on the support provider's credit profile of an expectation that it is likely to provide support; and (vii) ratings of an affiliate based solely on support from a rated entity. In Appendix A, we provide examples of how we may assess of affiliate support in the absence of a guarantee.

Scope of This Methodology

This methodology applies globally to non-financial corporate issuers, corporate infrastructure issuers, financial institutions, private-sector nonprofit enterprises⁴ and public-sector enterprises outside the US that are not government-related issuers.

In this methodology, we define affiliate support in the absence of a guarantee as any form of support that does not meet our criteria for credit substitution, as described in our cross-sector methodology that discusses our approach to assigning ratings based on credit substitution.⁵ Affiliate support in the absence of a guarantee can take many forms, including written agreements (such as keepwell agreements or comfort letters that do not fully meet our criteria for credit substitution), verbal support commitments and imputed support. Even where a strong parent asserts that its weaker affiliate should be assessed on a standalone basis in the ordinary course of business, we may consider that the presence of the strong parent provides some uplift to the credit profile of the supported affiliate, even though that support might only crystalize in some stress scenarios.

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on www.moodys.com for the most updated credit rating action information and rating history.

³ A link to a list of our sector and cross-sector methodologies and to *Rating Symbols and Definitions* can be found in the "Moody's Related Publications" section.

⁴ Examples include European social housing providers and hospitals and educational institutions organized as nonprofits. A link to a list of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

⁵ As a corollary, when we refer to a guarantee in this methodology, we mean any agreement that meets our criteria for credit substitution. A link to a list of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

More specific guidance in certain sector-specific methodologies on how we incorporate affiliate support into ratings supersedes the guidance in this cross-sector methodology.⁶ This methodology does not apply to structured finance issuers or US public finance issuers.

General Principles for Assessing the Credit Impact of Affiliate Support in the Absence of a Guarantee

Where there is a group of related entities with a strong parent but no guarantee, there is no certainty that parental support for subsidiaries⁷ will be forthcoming. There have been many cases where parent companies have decided not to support their subsidiaries, and also cases where a parent acts to protect the longer-term viability of the subsidiary without shielding all creditors from a default. Protecting a subsidiary does not always mean fully protecting the subsidiary's creditors. These cases illustrate the weaknesses of non-legally enforceable support, such as comfort letters and verbal statements, and that a subsidiary may be "strategic" and yet not be supported by its parent, in the absence of a persuasive return on incremental investment to justify the parent's continuing support. In these cases, a parent typically can decide whether or not to extend guarantees to weaker entities where needed. While a parent may face some practical constraints in providing a guarantee, the absence of a guarantee, combined with the decision to maintain a subsidiary at a weaker financial profile, often reflects a choice by the group to allocate risk to creditors and retain optionality, including the option to allow a subsidiary no longer viewed as strategically important to default.

We generally expect that support will be provided only when it is in the best economic interests of the supporter to provide sufficient support in a timely manner. A parent may not support a distressed subsidiary if it perceives that the investment required brings in limited, uncertain or no value, or that allowing the subsidiary to fail results in limited or no contagion risk to the overall group. In these cases, there is typically little or no uplift in the subsidiary's rating, and little or no drag on the parent. Alternatively, where there is some meaningful incentive to provide support, we may assess that some uplift relative to the subsidiary's standalone credit profile is warranted, the level of which can vary between one notch to equalization with the parent's rating.

The impact of support on a parent's or subsidiary's rating relative to its standalone credit profile is based on our assessment of the likelihood that meaningful support (i.e., timely support sufficient to avoid a default) will be provided by the parent during periods of subsidiary stress or distress. In this assessment, we primarily consider two factors: the willingness and the ability to support, based on the individual characteristics of each entity as well as existing and prospective linkages between those entities.

In the remainder of this section, we discuss these factors, some other considerations that may affect the likelihood of meaningful support in certain circumstances, credit drag and special considerations related to a subsidiary's support for a parent.

⁶ Our sector methodologies for banks and certain other types financial institutions, for example, describe how we incorporate affiliate support in those sectors, and our methodology that discusses government-related issuers (GRIs) describes our view of the credit links between GRIs and their supporting central, regional and local governments. For clarity, this methodology would apply when considering support for subsidiaries of GRIs that are not themselves classified as GRIs.

⁷ For simplicity, we often refer to a supporter as the parent and the supported entity as the subsidiary in this section and the sections that follow. For clarity, whether the supporter is actually the parent, the subsidiary or an affiliate, the concepts of credit drag on the supporter and credit uplift for the supported entity are very similar. However, as discussed in this section, the parent typically has a greater ability to influence the management and actions of a subsidiary.

Willingness of a Parent to Provide Support

In general, in our assessment of the willingness of a parent to provide support to a subsidiary, we consider whether the subsidiary has and will have substantial economic value and enduring strategic importance to the parent, particularly under prospective circumstances where the affiliate would need support, i.e., when in stress or distress. We also consider the impact of a subsidiary default on the parent. A willingness to provide support is motivated by the parent's view of the subsidiary's economic value and any financial benefit from avoiding business interruption and reputational damage relative to the financial resources the parent would need to provide to stabilize the subsidiary.

In our assessment of the parent's willingness to support, considerations include the percentage of ownership, the subsidiary's financial track record, operational integration, strategic alignment, market confidence, the role of financial and other regulators, and other incentives or barriers to support. These dimensions are assessed in the context of the parent's economic self-interest.

We base our assessment of the likelihood of support considering a scenario where the subsidiary is under stress or distress, i.e., where its economic value may be greatly diminished and possibly negative. Reputational damage to the parent from not providing support is also likely to be diminished when a subsidiary is in distress if it is viewed as a drag on the parent's credit standing. Experience has shown that sunk costs of financing the subsidiary, both the initial investment and ongoing historical cash support, are not a reliable indicator of future support. Our assessment of support typically incorporates the substantial uncertainty in estimating the value that a parent expects to receive from providing support under stress and distress scenarios, which are often very different from the current conditions. Therefore, we typically consider that meaningful support will be provided only when the motivation is expected to be durable as well as extremely clear.

For financial institutions, the degree of confidence sensitivity often drives economic self-interest and willingness to support. The more connections there are between a parent financial institution and its subsidiary (such as shared customers, a shared name, or significant operational links), the harder it may be for the parent to abandon its subsidiary without suffering a loss of confidence and significant material adverse consequences of its own. This may provide a parent financial institution with a strong incentive to support even a weak subsidiary. In addition, financial institutions are often highly regulated, and a parent may choose to support a subsidiary to avoid suffering adverse regulatory consequences. Because of these additional considerations, in many cases financial institutions may be more willing and thus more likely to support weaker affiliates or subsidiaries than non-financial corporations. Thus, ratings uplift may often be greater for financial institutions.

Ability of a Parent to Provide Support

In assessing the ability of a parent to provide support to a subsidiary, we consider the parent's own credit quality (its standalone credit quality and ability to draw on group resources other than the supported subsidiary), the links between the parent's and the subsidiary's financial conditions, and the relative magnitude and timing of any investments. For example, if a subsidiary constitutes most of a parent's business activities, the parent's motivation to support the subsidiary will likely be high, but the parent will likely lack the ability to provide support under circumstances when the subsidiary needs it.

Other Considerations that May Affect Likelihood of Meaningful Support

Other Incentives and Barriers

We also consider other incentives and barriers to providing support. For issuers in some sectors, regulators may create incentives to support that contribute to the economic value received, such as better treatment for the group as a whole if support for a failing affiliate is provided. In other circumstances, there may be regulatory, legal or other barriers that prevent a parent from providing support, even if it would be in the parent's economic interest. Where there are multiple parents, the inability or unwillingness of one parent to provide support may delay or prevent support from the other parent(s).

Cross-default Provisions

Cross-default and cross-acceleration clauses in bond indentures or loan documentation of the parent or very important subsidiaries may factor into a parent's decision to support a subsidiary. In practice, however, creditors often waive these provisions, especially with bank loans, where a subsidiary's stress or distress poses little contagion risk to the parent, so these provisions may be somewhat credit negative for the supporter without support being reliable enough to lift the subsidiary's rating. If we assess that these clauses are likely to be exercised and not waived, the presence of a weak entity in the cross-default group would cause ratings drag on the other members of that group.

Terms and Provisions of Support Agreements

While not typically a primary consideration in our assessment of whether support will be forthcoming, we do consider the terms of support agreements that are not guarantees, because they may add to the parent's reputational risk if it fails to meet the terms of the support agreement. A support agreement may increase the likelihood that the parent protects the subsidiary from default risk in many, if not all, scenarios. The terms of these agreements, as well as the extent of any support they provide, vary widely. For example, under many maintenance agreements, the supporting entity agrees to provide a specific kind of support to the subsidiary (not to its creditors). Support terms are typically limited in amount, duration or circumstances of applicability, are usually not very specific as to the timing of the support, and do not require the parent to provide full and timely payment on obligations that the issuer has not met. Stronger maintenance agreements often include quantifiable measures of support, such as minimum net worth agreements, operating agreements, and debt service reserve make-up provisions. A guarantee of some but not all of a subsidiary's debt may also increase the likelihood that the parent will provide support to the subsidiary in a manner that also benefits non-guaranteed creditors. Weaker forms, which generally do not contain quantifiable measures of support, include keep-wells, comfort letters and moral obligations. The weakest forms of support are represented by verbal statements of intent to provide financial support and verbal statements regarding the strategic importance of a subsidiary.

Credit Drag on a Rated Supporter

Credit drag is the corollary to an expectation of support for a weaker entity. Where we see a rated parent as likely to bail out a weak subsidiary in case of stress, we consider the cost of intervention and the negative impacts on the parent's credit profile. If the expected cost is meaningful, the rating of the supporter may be lower than its standalone credit assessment would otherwise suggest. This assessment may often be more qualitative than quantitative, because it encompasses a range of future scenarios surrounding an unspecified future need for support as well as the supporter's circumstances when that need arises.

Please see "The Impact on the Support Provider's Credit Profile of an Expectation That It Is Likely to Provide Support" section below.

Special Considerations Related to a Subsidiary's Support for a Parent

In cases where the stronger entity is a subsidiary that we think may provide meaningful support, willingness, ability and the other considerations discussed above are relevant to our analysis of likelihood of support. However, since the parent typically has meaningful ability to direct the affairs of the subsidiary, our assessment typically focuses more on external considerations, such as contractual or regulatory barriers that may prevent the subsidiary from providing support to a parent. In assessing credit drag, we also consider the extent to which the subsidiary is able to reliably resist pressure from the parent to provide support.

The subsidiary's ability to reliably resist such pressure is typically limited if the controlling parent has the power to replace the subsidiary's management team and to determine the subsidiary's financial policy. The subsidiary's ability to reliably resist is typically stronger if the subsidiary has outside shareholders and independent board members that have a veto of major corporate decisions, such as entering bankruptcy proceedings. Covenants in financing agreements may limit the support that a subsidiary can provide to the parent, but in most cases management retains the power to refinance or otherwise eliminate such obstacles to support.

In the sections that follow, we provide more detail on typical characteristics of supported and supporting entities that may lead us to consider different levels of willingness to support and rating uplift or credit drag.

Typical Characteristics of an Affiliate That Receives No Support Uplift

The general principles described above for determining whether to assign rating uplift to a subsidiary⁸ have been informed by many examples of parents deciding not to support in a stress situation and our observations of the more common characteristics in these cases.

Where one or more of the following characteristics are present, we typically consider that support will be unlikely or unreliable and attribute no uplift to the subsidiary's standalone credit assessment:

- » A low level of ownership is usually indicative of more limited operational, financial and reputational linkages. Even a strong shareholder that has the ability and willingness to provide support may be unwilling to act on a timely basis unless other shareholders take similar support actions. However, even subsidiaries that are wholly or close to wholly owned may not bear any significant linkage with their parent or any reputational risk should the parent decide not to extend support.
- » Limited operational and financial linkages also typically indicate a low incentive to support, because the failure of the subsidiary would be unlikely to cause material economic or financial damage to the parent or the group. Operational linkages typically stem from mutual business interests, such as shared production capacities, supply or sales relationships or research and development synergies with the parent or other economically important affiliates within the group. Entities that operate in noncontiguous markets typically exhibit more limited operational linkages. For example, in cases where a parent has invested in an overseas company principally with the expectation of a financial return, or the subsidiary has its own supply chains or production and distribution channels, the parent may well decide to let the subsidiary default on its obligations if the investment required to stabilize it, plus any future investment needed for the subsidiary to generate meaningful financial returns (e.g., through dividend payouts), is viewed as too high, or if the prospects for generating those returns are uncertain.

⁸ As stated above, for simplicity we often refer to a supporter as the parent and the supported entity as the subsidiary in this section and the sections that follow. For clarity, whether the supporter is actually the parent, the subsidiary or an affiliate, the concepts of credit drag on the supporter and credit uplift for the supported entity are very similar. However, as discussed in the prior section, the parent typically has a greater ability to influence the management and actions of a subsidiary.

- » Reputational damage also forms part of the parent company's assessment of economic value that may be received (or not lost) by providing support. Reputational damage can include business losses resulting from reduced confidence on the part of customers, suppliers, credit and capital markets, and liquidity providers. Reputational risk typically raises the perception of the importance of the affiliate to the parent company's business activities, and companies whose excellent reputation or high credit standing are important to their success typically place higher value on maintaining their reputation. For other companies, negative publicity may be less likely to damage their reputation, or they may have a lower credit standing that would not meaningfully deteriorate due to bankruptcy of an affiliate. Ownership level, operational and financial linkages, as described above, are considerations that may create a perception of reputational risk, but even in the absence of these, a shared company name, brand name or management staff may also change the risk-reward tradeoff for the supporter. Where there is very limited reputational risk to not providing support (i.e., economic losses resulting from reputational damage would be essentially immaterial) there is typically no rating uplift due to support considerations.

In some circumstances, laws, regulations or even government policy may prevent, limit or delay the support that a company may otherwise be willing to provide an affiliate or that a government may provide to a related entity. For example, under some regulatory regimes, a utility may be prevented from advancing funds to its parent, and regulation may prevent even a well-capitalized insurance company from making dividend payments to support a parent or affiliate. Barriers may exist in a would-be supporter's establishing documents (e.g., articles of incorporation) or its financing agreements.

A parent's incentives may change over time, which is a reason for caution in attributing support and for reassessing support when circumstances change. For example, a group's management, strategy and corporate structure may evolve. Guarantees insulate creditors from such changes while unguaranteed creditors remain fully exposed. Where a decision to extend support will materially weaken the parent, management is more likely to curtail support to limit the contagion from a failing subsidiary to the parent or other members of the group.

While there are many reasons why a parent may determine that it will no longer support a subsidiary it previously stated was strategic and would receive support, some examples include:

- » The sector is changing rapidly, for example the sector is attracting many new entrants based on high growth expectations or deregulation, creating a risk of oversupply and heavy competition, or regulation in the sector is changing in a way that meaningfully limits prospective returns.
- » The subsidiary is consuming a substantial amount of cash from the parent to fund negative operating cash flow, debt service, growth in working capital or capital expenditures that are required to eventually achieve positive free cash flow at the subsidiary at some point in the future.
- » Future cash flow needs of the subsidiary are increasing rapidly or are hard for the parent to predict
- » The subsidiary's main activity is becoming less viable, the subsidiary is having a negative effect on the parent's credit profile, or ceasing support would improve the parent's profile or access to credit and capital markets.
- » The subsidiary raised debt at a time when it was core to the group's strategy, but that strategy has failed or been changed by a new management team, and the subsidiary is now non-core.

Typical Characteristics of an Affiliate That Receives Limited Support Uplift

Using the general principles described above and considering the specific characteristics and circumstances, we may consider that support is highly likely (i.e., the parent is substantially more likely than not to support the subsidiary), typically because there is a compelling return on the marginal investment needed to support the subsidiary in a scenario where support is needed. In these cases, we typically consider the standalone credit profile of the subsidiary and the rating or credit profile of the parent (which would incorporate any credit drag from the expected support).

Where the willingness and ability to provide support confers a meaningful benefit in terms of reducing the subsidiary's probability of default or the loss to creditors if there is a default, support may result in rating uplift of the subsidiary, typically by no more than one to two notches above the subsidiary's standalone credit profile.

Incorporating one notch of uplift is consistent with the expectation of support from the parent in a meaningful number of stress scenarios. We may incorporate two notches of uplift where we expect that support is more likely than not in all stress scenarios, irrespective of any unexpected event that would lead to stress. We would not generally expect to form a view that support is sufficiently reliable to provide more than two notches of support when the parent has deliberately chosen not to provide a guarantee.

Typical Characteristics of an Affiliate That Receives Higher Support Uplift

In some unusual cases, we may assign higher uplift, such that the subsidiary's rating is close to, or even at par, with the parent's rating. This would likely only be the case where we consider the parent's incentive to support is extremely high and the subsidiary's continued financial health is critical to the parent's credit standing or the group's business strategy.

Typical characteristics of such subsidiaries include: (i) they are wholly owned; (ii) they carry the name of the parent or group; (iii) they are highly and enduringly integrated with the group, such that a separation would be very difficult; (iv) failure to support would pose a meaningful risk to the parent's brand, reputation, or access to capital and credit markets; (v) the parent has taken meaningful actions indicating support in the past, such as financial contributions or advances.

Even if the incentive to support is extremely high, there is often a differential between the supporter's credit profile and the rating of the supported entity. We typically assign a rating to a subsidiary that is at the same level as the supporting parent's rating only where the parent has provided a guarantee that would result in credit substitution.⁹ However, we may equalize the ratings of the subsidiary and parent where the parent is viewed as prioritizing the repayment of a subsidiary's financial obligations at par with the parent's own financial obligations, which essentially implies a 100% expectation that support will be provided when needed.

We generally consider extremely high support to be more likely for financial institutions than for non-financial corporate issuers. The credit profiles of some types of financial institutions are very sensitive to investor confidence. The absence of support to a failing subsidiary may cause materially higher damage to the group than we would expect for non-financial corporate issuers, resulting in a strong incentive to provide financial support to protect the credit standing of the parent or group. The more connections there are between a financial institution and its subsidiary (such as consolidated treasury management, shared

⁹ For more information, see our methodology that describes our approach to credit substitution. A link to a list of sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

funding sources and derivatives counterparties, shared customers, a shared name, or other significant operational links), the greater the incentive to extend support. In addition, financial regulators often provide an incentive to support to avoid a failure, especially where there are concerns about contagion to other financial institutions or to the overall financial system. In these cases, a parent may choose to support a subsidiary to avoid adverse regulatory consequences.

In some cases, we may consider that support for subsidiaries of government-related institutions (GRIs), where the subsidiary itself is not a GRI, is highly likely or even extremely likely. Consistent with the general principles described above, a primary consideration is whether there is strong self-interest on the part of the GRI to provide support, i.e., the operations of the subsidiary are sufficiently important to its financial or policy goals to maintain the subsidiary's financial integrity. We also consider the importance of the subsidiary to the ultimate parent government, because the GRI may depend heavily on this entity to support its own credit profile. Where the subsidiary's operations are sufficiently important to the GRI supporter's goals, we would typically expect a high level of support and may therefore lift the rating close to the rating of the supporter or ultimate government parent. However, we would not expect the implied support for the subsidiary to be stronger than the implied support for its parent.

For sukuk transactions, we consider the structure and material terms. Typically, these transactions are structured in a manner that permits a full pass-through of the obligor's credit, and the rating of the sukuk instruments issued by the special purpose vehicle are aligned with the rating of the obligor's senior unsecured ratings.

The Impact on the Support Provider's Credit Profile of an Expectation That It Is Likely to Provide Support

Support may bring the credit profiles of group members closer together, facilitate the extension of credit by third parties to group members, and simplify credit analysis. For example, where there are reciprocal binding support agreements among all members of a group, our credit analysis may focus on the group's consolidated financial statements, if they provide a reasonably accurate reflection of the risk of extending credit to each of those group members. However, from the perspective of the standalone credit profile of a stronger supporter for a weaker affiliate, there is a potential cost to providing support that creates credit drag.

When support is considered likely, the credit profile lift provided to a subsidiary by a parent implies that the parent's credit profile is weakened to a reciprocal extent, although the actual rating impact may be greater or lesser, depending on the relative sizes and credit profiles of the entities. In cases where we consider parent support likely, and especially where it is sufficiently likely to result in uplift to an affiliate, the supporter's credit profile (incorporating the potential need to support a weak subsidiary) may be lower than its standalone credit profile. In other words, the provision of support from a parent to a subsidiary may provide lift to the credit profile and rating of that subsidiary, but the resultant higher rating of such a subsidiary does not lift the credit profile of the group or the parent because the aggregate resources across the group remain unchanged.

We may use scenario analysis to quantify the credit drag on a rated supporter. Our analysis considers the amount of support that the subsidiary is likely to need and we assess the impact of extending the support on the supporter's financial metrics, including its leverage and coverage, as well as liquidity and access to capital and credit markets. We may also assess the impact qualitatively where the range of support scenarios (and resulting cost to the supporter) is very wide. In general, the greater the likelihood that support will be needed and extended, the larger the associated credit drag on the supporter, leading to a larger differential between the supporter's standalone credit profile and its rating.

Ratings of an Affiliate Based Solely on Support from a Supporting Entity

In some relatively rare cases, we may have sufficient information about the strategic or financial importance of a substantial operating entity in the group to assign a rating in the absence of standalone financial statements for the supported subsidiary. In these cases, the assigned rating is based on the supporting entity's credit profile and on the level of expected support for the entity. We use the general principles described above and consider the specific characteristics and circumstances in assessing the likelihood of expected support to determine the extent to which the supported entity's rating may be aligned with the supporter's rating, or may be some number of notches lower than our view of the supporter's rating.

Appendix A: Illustrative Examples of the Assessment of Affiliate Support in the Absence of a Guarantee

The variety of cases involving affiliate support without a guarantee is very broad, preventing any formulaic approach. The illustrative examples that follow help to show how we may integrate the general principles described in the methodology in our analysis, and the potential impact of support on rating outcomes in these hypothetical cases.

Illustrative Example of a Subsidiary that May Receive Support Uplift with Ratings Close to or at the Parent Rating

Seagull Motors Company is a leading global automobile manufacturer based in Canada with a mid-investment grade rating. Its subsidiary, Seagull Finance Australia (SFA), provides customer financing to purchasers of its products in Australia. Australia is Seagull's second largest market, consistently representing over 25% of consolidated revenues for over a decade. SFA is a wholly-owned, captive finance company with a high non-investment grade standalone credit profile. SFA does not have an independent management team. SFA's business is vital to the sale of the parent's products in Australia. In addition to sharing the Seagull name with the parent and a popular car brand, the affiliate's operations are fully integrated with the manufacturer's sales and distribution (e.g., onsite financial representatives are authorized to promote and sell the financial products to prospective car buyers). Additionally, the parent company is party to a keepwell agreement (not a guarantee) under which the parent agrees to maintain 100% ownership of SFA and to generally manage the business of the financing subsidiary such that SFA maintains positive net worth and has sufficient funds to service its debt and other financing obligations. The parent has provided support in the form of financial contributions to the financing affiliate regularly and a failure to provide such support would likely result in significant reputational damage to the manufacturer, including damage to its brand and reduced access to capital and credit markets.

Illustrative Example of a Subsidiary that May Receive Support Uplift of Multiple Notches with Ratings Multiple Notches Below the Parent Rating

Warbler Oil and Gas is a major global energy company based in the United States with a high investment grade rating. Its indirect, wholly owned subsidiary, Warbler Energy Europe (WEE) manages all of the parent company's trading in natural gas in Europe, the company's largest natural gas market. WEE represents less than 5% of the parent's consolidated income, and has a low investment grade standalone credit profile. The wholesale natural gas trading is a high-volume, thin-margin businesses, with earnings, cash flow and working capital requirements subject to volatile natural gas price movements, seasonal demand and various other factors. However, WEE's debt needs are modest. We consider that WEE plays a very important role in the parent company's integrated gas value chain, and the affiliates share a name. Since oil and gas are commodities, Warbler would be able to sell its hydrocarbon production, which typically provide high margins, without WEE. Warbler has consistently provided WEE with support by providing significant lines of credit that finance the affiliate's considerable working capital needs and has made equity injections from time to time to allow the business to grow. The parent does not guarantee the subsidiary's debt or trading obligations, but it provides oversight over WEE's trading and marketing activities, including risk management. A severe reduction in liquidity support would likely result in reputational damage to the parent company with its trading partners and could somewhat reduce its access to capital and credit markets.

Illustrative Example of an Indirect Government-Owned Subsidiary that May Receive Support Uplift of Multiple Notches

The Republic of Parrotia is a resource-rich island nation with a high-investment grade rating, based in part on the substantial cash flow of the government's mining operations (primarily silver and rare earths). Parrotia has established Parrot Holding Company (PHC), a government-related issuer, which acts in part as a sovereign wealth fund and also owns a variety of subsidiaries formed to develop and diversify the economy of Parrotia, including subsidiaries engaged in renewable energy and agro-tourism. PHC also owns 95% of Mallard Water Company (MWC), the country's only water utility, which has low-to-mid investment grade profile. In addition to granting MWC a water monopoly with a cost-based regulatory framework that provides stable revenues, the government of Parrotia has significant influence over MWC's management and has sold watershed lands and properties suitable for reservoir development to MWC at a nominal cost. Given MWC's operating and financial stability and ability to access capital markets to finance expansion of the water infrastructure, there is not a clear history of financial support from PHC. However, due to the importance of MWC's operations to Parrotia's population as well as the mining and agricultural sectors, it is expected that the PHC would support MWC if needed, and PHC has sufficient resources to provide support.

Illustrative Example of an Affiliate that Receives Support Uplift of One or Two Notches

Ostrich Telecom is a US-based provider of wireline and wireless telecommunication and data services, largely in the US and Canada, whose markets represent, respectively, 64% and 28% of the company's total net revenues. Ostrich has a high investment grade rating. Ostrich also has a market presence in Mexico through its subsidiary, Cormorant Wireless, which has a high non-investment grade standalone credit profile. Ostrich is the largest shareholder in Cormorant, owning slightly more than a majority of shares. Ostrich's influence over Cormorant's management team is somewhat limited, given a minority ownership stake by the Mexican Government (Cormorant is also listed on the Mexican stock exchange). There is some history of support for Cormorant by Ostrich, as Ostrich injected equity and gradually increased its ownership to help finance Cormorant's expansion into Central American wireless markets. Cormorant has demonstrated a generally solid track record of growth, and Ostrich considers it a successful investment. However, any reputational damage to Ostrich Telecom for a failure to fully support Cormorant would be limited, based on the companies' different names and management, and the lack of any operational overlap.

Illustrative Example of an Affiliate that Receives No Support Uplift

Grackle Corporation is a mid-investment grade power company and electricity retailer based in, and largely operating in, Australia. Formerly an incumbent regulated utility, Grackle has expanded its energy retailing business to become one of the largest in Australia. Its fleet of power stations is almost entirely conventional, predominantly coal- and gas-fired. Its only renewable energy resources in Australia are its hydro plants. Grackle's subsidiary, Tertiary Energy, acts as a holding company for Grackle's power generation business in the emerging power markets of Southeast Asia, with a low non-investment grade credit profile. Tertiary's subsidiaries, which rely heavily on project financing, develop wind farms. While Tertiary's initial projects received feed-in tariffs, merchant wind power has recently become the largest share of the business. Tertiary has its own administrative team in Australia and maintains regional managers as well as operational

personnel in the various countries where it operates. While Grackle's market share of the Australian power markets has remained stable to growing, Tertiary continues to struggle to generate consistent returns on its wind farms, due to a combination of operational issues, delays in connecting to the local grids, changes in feed-in tariffs and oversupply in some markets. Grackle has stated publicly that Tertiary's wind generation business is strategic. Grackle provided some requested capital support from Tertiary on initial projects, but Tertiary has more recently taken on holding company debt to invest in its projects. Operating under different names and in different markets, Grackle would face little reputational risk if Tertiary were to become insolvent.

Moody's Related Publications

Cross-sector credit rating methodologies are typically applied in tandem with sector credit rating methodologies, but in certain circumstances may be the basis for assigning credit ratings. A list of sector and cross-sector credit rating methodologies can be found [here](#).

For data summarizing the historical robustness and predictive power of credit ratings, please click [here](#).

For further information, please refer to *Rating Symbols and Definitions*, which is available [here](#).

Author
William Coley
Bill Hunter
Daniel Marty
Geordie Thompson

Production Associate
Chethan C

Report Number: 1269284

CLIENT SERVICES:

Americas:	+1.212.553.1653
Asia Pacific:	+852.3551.3077
Japan:	+81.3.5408.4100
EMEA:	+44.20.7772.5454

© 2021 Moody's Corporation, Moody's Investors Service, Inc., Moody's Analytics, Inc. and/or their licensors and affiliates (collectively, "MOODY'S"). All rights reserved.

CREDIT RATINGS ISSUED BY MOODY'S CREDIT RATINGS AFFILIATES ARE THEIR CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES, AND MATERIALS, PRODUCTS, SERVICES AND INFORMATION PUBLISHED BY MOODY'S (COLLECTIVELY, "PUBLICATIONS") MAY INCLUDE SUCH CURRENT OPINIONS. MOODY'S DEFINES CREDIT RISK AS THE RISK THAT AN ENTITY MAY NOT MEET ITS CONTRACTUAL FINANCIAL OBLIGATIONS AS THEY COME DUE AND ANY ESTIMATED FINANCIAL LOSS IN THE EVENT OF DEFAULT OR IMPAIRMENT. SEE APPLICABLE MOODY'S RATING SYMBOLS AND DEFINITIONS PUBLICATION FOR INFORMATION ON THE TYPES OF CONTRACTUAL FINANCIAL OBLIGATIONS ADDRESSED BY MOODY'S CREDIT RATINGS. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK, INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK, MARKET VALUE RISK, OR PRICE VOLATILITY. CREDIT RATINGS, NON-CREDIT ASSESSMENTS ("ASSESSMENTS"), AND OTHER OPINIONS INCLUDED IN MOODY'S PUBLICATIONS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. MOODY'S PUBLICATIONS MAY ALSO INCLUDE QUANTITATIVE MODEL-BASED ESTIMATES OF CREDIT RISK AND RELATED OPINIONS OR COMMENTARY PUBLISHED BY MOODY'S ANALYTICS, INC. AND/OR ITS AFFILIATES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS DO NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS DO NOT COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR. MOODY'S ISSUES ITS CREDIT RATINGS, ASSESSMENTS AND OTHER OPINIONS AND PUBLISHES ITS PUBLICATIONS WITH THE EXPECTATION AND UNDERSTANDING THAT EACH INVESTOR WILL, WITH DUE CARE, MAKE ITS OWN STUDY AND EVALUATION OF EACH SECURITY THAT IS UNDER CONSIDERATION FOR PURCHASE, HOLDING, OR SALE.

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS, AND PUBLICATIONS ARE NOT INTENDED FOR USE BY RETAIL INVESTORS AND IT WOULD BE RECKLESS AND INAPPROPRIATE FOR RETAIL INVESTORS TO USE MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS OR PUBLICATIONS WHEN MAKING AN INVESTMENT DECISION. IF IN DOUBT YOU SHOULD CONTACT YOUR FINANCIAL OR OTHER PROFESSIONAL ADVISER.

ALL INFORMATION CONTAINED HEREIN IS PROTECTED BY LAW, INCLUDING BUT NOT LIMITED TO, COPYRIGHT LAW, AND NONE OF SUCH INFORMATION MAY BE COPIED OR OTHERWISE REPRODUCED, REPACKAGED, FURTHER TRANSMITTED, TRANSFERRED, DISSEMINATED, REDISTRIBUTED OR RESOLD, OR STORED FOR SUBSEQUENT USE FOR ANY SUCH PURPOSE, IN WHOLE OR IN PART, IN ANY FORM OR MANNER OR BY ANY MEANS WHATSOEVER, BY ANY PERSON WITHOUT MOODY'S PRIOR WRITTEN CONSENT.

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS ARE NOT INTENDED FOR USE BY ANY PERSON AS A BENCHMARK AS THAT TERM IS DEFINED FOR REGULATORY PURPOSES AND MUST NOT BE USED IN ANY WAY THAT COULD RESULT IN THEM BEING CONSIDERED A BENCHMARK.

All information contained herein is obtained by MOODY'S from sources believed by it to be accurate and reliable. Because of the possibility of human or mechanical error as well as other factors, however, all information contained herein is provided "AS IS" without warranty of any kind. MOODY'S adopts all necessary measures so that the information it uses in assigning a credit rating is of sufficient quality and from sources MOODY'S considers to be reliable including, when appropriate, independent third-party sources. However, MOODY'S is not an auditor and cannot in every instance independently verify or validate information received in the rating process or in preparing its Publications.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability to any person or entity for any indirect, special, consequential, or incidental losses or damages whatsoever arising from or in connection with the information contained herein or the use of or inability to use any such information, even if MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers is advised in advance of the possibility of such losses or damages, including but not limited to: (a) any loss of present or prospective profits or (b) any loss or damage arising where the relevant financial instrument is not the subject of a particular credit rating assigned by MOODY'S.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability for any direct or compensatory losses or damages caused to any person or entity, including but not limited to by any negligence (but excluding fraud, willful misconduct or any other type of liability that, for the avoidance of doubt, by law cannot be excluded) on the part of, or any contingency within or beyond the control of, MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers, arising from or in connection with the information contained herein or the use of or inability to use any such information.

NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY, TIMELINESS, COMPLETENESS, MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OF ANY CREDIT RATING, ASSESSMENT, OTHER OPINION OR INFORMATION IS GIVEN OR MADE BY MOODY'S IN ANY FORM OR MANNER WHATSOEVER.

Moody's Investors Service, Inc., a wholly-owned credit rating agency subsidiary of Moody's Corporation ("MCO"), hereby discloses that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by Moody's Investors Service, Inc. have, prior to assignment of any credit rating, agreed to pay to Moody's Investors Service, Inc. for credit ratings opinions and services rendered by it fees ranging from \$1,000 to approximately \$5,000,000. MCO and Moody's Investors Service also maintain policies and procedures to address the independence of Moody's Investors Service credit ratings and credit rating processes. Information regarding certain affiliations that may exist between directors of MCO and rated entities, and between entities who hold credit ratings from Moody's Investors Service and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at www.moody's.com under the heading "Investor Relations — Corporate Governance — Director and Shareholder Affiliation Policy."

Additional terms for Australia only: Any publication into Australia of this document is pursuant to the Australian Financial Services License of MOODY'S affiliate, Moody's Investors Service Pty Limited ABN 61 003 399 657 AFSL 336969 and/or Moody's Analytics Australia Pty Ltd ABN 94 105 136 972 AFSL 383569 (as applicable). This document is intended to be provided only to "wholesale clients" within the meaning of section 761G of the Corporations Act 2001. By continuing to access this document from within Australia, you represent to MOODY'S that you are, or are accessing the document as a representative of, a "wholesale client" and that neither you nor the entity you represent will directly or indirectly disseminate this document or its contents to "retail clients" within the meaning of section 761G of the Corporations Act 2001. MOODY'S credit rating is an opinion as to the creditworthiness of a debt obligation of the issuer, not on the equity securities of the issuer or any form of security that is available to retail investors.

Additional terms for Japan only: Moody's Japan K.K. ("MJKK") is a wholly-owned credit rating agency subsidiary of Moody's Group Japan G.K., which is wholly-owned by Moody's Overseas Holdings Inc., a wholly-owned subsidiary of MCO. Moody's SF Japan K.K. ("MSFJ") is a wholly-owned credit rating agency subsidiary of MJKK. MSFJ is not a Nationally Recognized Statistical Rating Organization ("NRSRO"). Therefore, credit ratings assigned by MSFJ are Non-NRSRO Credit Ratings. Non-NRSRO Credit Ratings are assigned by an entity that is not a NRSRO and, consequently, the rated obligation will not qualify for certain types of treatment under U.S. laws. MJKK and MSFJ are credit rating agencies registered with the Japan Financial Services Agency and their registration numbers are FSA Commissioner (Ratings) No. 2 and 3 respectively.

MJKK or MSFJ (as applicable) hereby disclose that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by MJKK or MSFJ (as applicable) have, prior to assignment of any credit rating, agreed to pay to MJKK or MSFJ (as applicable) for credit ratings opinions and services rendered by it fees ranging from JPY125,000 to approximately JPY550,000,000.

MJKK and MSFJ also maintain policies and procedures to address Japanese regulatory requirements.