

Article Title: Criteria | Corporates | Industrials: Commodities Trading Industry Methodology Data:

(EDITOR'S NOTE: —On July 26, 2023, we republished this criteria article to make nonmaterial changes. See the "Revisions And Updates" section for details.) 1. This article articulates the steps in developing the stand-alone credit profile (SACP) and issuer credit rating (ICR) for a commodities trading company. This article is related to our criteria article "Principles Of Credit Ratings." I. SCOPE OF THE CRITERIA 2. The criteria in section III apply to companies for which we view commodities trading as the chief source of earnings (accounting for 70% or more of EBIT, EBITDA, or gross margin; see paragraph 65), or to companies for which the risks related to the commodities trading business, in our view, overshadow a more diversified company's other business lines. 3. By "commodities trading," we mean the buying and selling of commodities not intended for internal processing (apart from storage and transportation) into more value-added products. This methodology applies to intermediaries whose trades are predominantly in the form of buying and selling physical commodities (including power trading and wholesale marketers), with derivatives typically used principally for hedging purposes and that, secondarily, have logistical assets or operations as an integral part of their physical trading activities. If a company trades mainly commodity-based derivatives, we apply our financial institutions criteria instead. These criteria do not apply to distributors of commodities that do not pursue arbitrage opportunities or act as credit intermediaries, are not exposed to confidence-sensitivity-related risks (although the distributors may be exposed to commodity price risk in their inventory), and act principally as a provider of physical logistics and distributors of the commodity to their customers. For these entities, we apply the relevant industry key credit factors criteria instead. 4. Elements of this methodology are applicable in assessing the commodities trading businesses of non-financial corporate entities that conduct commodities trading activities but which have other material businesses. Specifically, if companies that engage in commodities trading also have other business lines that contribute more than 30% of expected EBIT, EBITDA, or gross margin, and the trading operations contribute more than 20%, we apply the methodology discussed in section IV below. II. SUMMARY OF THE CRITERIA 5. We view commodities traders as hybrid entities in the sense that they have some characteristics of industrial companies as well as some traits of financial institutions that engage in trading. We use a unique framework in assessing commodities traders that draws on elements of our general corporate criteria, our financial institutions criteria, and other published S&P; Global Ratings criteria (see section VII, "Related Publications," below). 6. The criteria in section III describe the methodology we use to determine the SACP and ICR for commodities trading companies. We also assess a commodities trading business's credit effect on the SACP of a company that also participates in other businesses and for which trading activities constitute less than 70% of its expected EBIT, EBITDA, or gross margin (see section IV). For commodities traders, we combine our industry risk and country risk assessments to determine a Corporate Industry and Country Risk Assessment (CICRA; see chart 1). The industry risk assessment is a general assessment that we apply to all commodities traders. The country risk assessment depends, in part, on a specific commodities trader's geographic footprint. We then derive an anchor--taking into account the specific country risk component of the CICRA--that serves as the starting point for the rest of our analysis. 7. In determining the preliminary SACP, we may raise or lower the anchor depending on our assessment of the company's business position; trading risk management and trading risk position; profitability/track record; financial leverage/capital adequacy; and liquidity. We factor in our assessment of management and governance and our comparable rating analysis to derive the SACP. 8. Unlike in our "Corporate Methodology," we do not derive an overall assessment of a commodities trader's business risk profile and financial risk profile. Rather, our assessments of business position, trading risk management and trading risk position, profitability/track record, financial leverage/capital adequacy, and liquidity each may affect the anchor directly. We apply elements of our "Corporate Methodology" and other criteria only where specifically stated. We derive an ICR from the SACP using the same approach described in our "Corporate Methodology," including the treatment of group or government influence, and taking into account the limitations on when we assign an ICR that is above the relevant sovereign rating. 9. This paragraph has been deleted. 10. This paragraph has been deleted. III. METHODOLOGY A. Commodities Trading Industry Framework 11. To determine the preliminary SACP, we first assess the commodities trading industry in general, which we view as a high-risk industry, owing in part to our

perception of commodities traders as highly confidence-sensitive. We combine this with an assessment of the company's country risk to determine the company's CICRA (see chart 1). The CICRA and the underlying country risk assessment determine the anchor, as shown in table 1. We then assess five factors to determine the preliminary SACP: the company's (1) business position, (2) trading risk management and trading risk position, (3) profitability/track record, (4) financial leverage/capital adequacy, and (5) liquidity. We may modify our assessment of the company's financial leverage/capital adequacy based on our analysis of the capital structure and/or financial policy. (We view the company's business position, trading risk management and trading risk position, and profitability/track record as pertinent to the company's business risk profile. We view the financial leverage/capital adequacy and liquidity as pertinent to the company's financial risk profile.) We consider liquidity an integral part of the credit assessment for commodities traders. In deriving the SACP, the preliminary SACP can be affected by our assessments of two modifiers: management and governance, and comparable ratings analysis. Chart 1 12. The rating methodology does not allow for an issuer SACP below 'b-' (that is, in aggregate). Just as under our "Corporate Methodology," if we view an issuer's capital structure as unsustainable or if its obligations are currently vulnerable to nonpayment, and if the commodities trader is dependent on favorable business, financial, and economic conditions to meet its commitments on its obligations, we determine the company's SACP using "Criteria For Assigning 'CCC+', 'CCC', 'CCC-', And 'CC' Ratings." If the issuer meets the conditions for assigning a 'CCC+', 'CCC', 'CCC-', or 'CC' rating, we do not apply these criteria. Table 1 Assessing A Commodities Trader's SACP

DETERMINING THE ANCHOR INDUSTRY RISK COUNTRY RISK = CICRA = ANCHOR 5 1-4 5 bb- 5 5 5 b+ 5 6 6 b BUSINESS RISK PROFILE FACTORS Business position Strong +2 notches Strong/Adequate +1 notch Adequate 0 notches Adequate/Weak -1 notch Weak -2 notches Trading risk management and trading risk position Supportive +1 notch Neutral 0 notches Less supportive -1 or more notches Profitability/track record Positive +1 notch Neutral 0 notches Negative -1 notch

FINANCIAL RISK PROFILE FACTORS Financial leverage/capital adequacy (adjusted for capital structure and financial policy) Modest +1 notch Intermediate 0 notches Significant -1 notch Aggressive -2 notches Highly leveraged -3 or -4 notches# LIQUIDITY\* Strong + 1 notch Adequate 0 notches Less than adequate -1 or more notches; SACP capped at 'bb+' Weak SACP capped at 'b-' Preliminary SACP Determined from above MANAGEMENT & GOVERNANCE Strong, satisfactory, or fair 0 notches Weak -1 or more notches COMPARABLE RATINGS ANALYSIS Positive +1 notch Neutral 0 notches Negative -1 notch SACP Determined from above \*Where our liquidity assessment is "less than adequate" (as per paragraphs 83-102), the SACP is capped at 'bb+'. Where our assessment is "weak," the SACP is capped at 'b-'. In addition, where the commodity trader does not meet the threshold for the minimum current ratio or short-term liquidity stress, the SACP is capped at 'bb+'. Absent group or government support, the cap would also apply to the issuer credit rating (see paragraph 85). #For a highly leveraged financial risk profile, we generally notch down the SACP by three notches where a company's debt to EBITDA is less than 7x. For more highly leveraged companies, we will generally notch the SACP down by four notches. SACP--Stand-alone credit profile. CICRA--Corporate Industry and Country Risk Assessment. 13. The ICR results from the combination of the SACP and the group/government influence framework, the latter of which determines the extent of the difference between the SACP and the ICR, if any, for extraordinary group or government influence. (Please see "Group Rating Methodology" and "Rating Government-Related Entities: Methodology And Assumptions" for our methodology on group and government influence.) 14. We factor in ongoing influence by a government (for government-related entities) or from a group into the SACP. Although such ongoing influence does not affect our industry or country risk assessment, it can affect any other factor in the business or financial risk profile: a national industry analysis, other elements of the company's competitive position, the financial risk profile, the liquidity assessment, and our comparable ratings analysis. 15. For the ICR to be higher than the applicable sovereign rating or transfer and convertibility assessment, the entity has to meet the conditions established in "Ratings Above The Sovereign--Corporate And Government Ratings: Methodology And Assumptions." B. Setting The Anchor Industry risk 16. We view commodities trading as an inherently "high-risk" industry (the equivalent of category 5, as defined in accordance with our industry risk criteria; see "Methodology: Industry Risk"). The key factors underlying our industry risk assessment are: A high degree of

confidence sensitivity, as commodities traders need to sustain the confidence of trading counterparties and creditors, which if weakened, can erode the business franchise and funding flexibility precipitously; An inherent complexity and opacity to the business model, including a lack of transparency into risk positions; A high degree of dependence of trading results on market price fluctuations and arbitrage opportunities. In our view, commodities traders typically lack a base of recurring, annuity-like income; to varying extents, their business is transaction-driven and therefore difficult to forecast. In fact, trading companies may do best in periods of economic turmoil. Although earnings are not tied to commodity price cycles, they are nonetheless subject to wide and volatile fluctuations, as the historical performance of rated and unrated industry participants attests; Market basis risk, in that commodities traders set out mostly to exploit market inefficiencies rather than take directional risk positions. However, the extent to which it is possible to hedge price risk varies by commodity, and a commodities trader can seldom fully hedge market risk. Some basis risk is typically unavoidable, and correlations between markets sometimes break down, leading to wider basis risk than the traders initially anticipated. There can also be volatile changes in market liquidity, and this can have a significant effect on the outcome of trading strategies; Hedges, which can give rise to liquidity risks stemming from potential margin calls. Hedges can also give rise to counterparty credit risk relating primarily to in-the-money hedge positions, and commodities traders also bear credit risk from trade receivables and other sources; So-called "performance risk," where even creditworthy counterparties may refuse to honor the terms of contracts if market prices have moved against them, leaving the commodities trader with unhedged positions; The potential for lapses in trading risk management systems that enable, for example, "rogue trader" situations, fraud, and unauthorized trades that lead to large, unexpected losses; The risk that catastrophic storage or transportation failures could cause fatalities and economic damages for which a commodities trader would be liable; Relatively loose regulation. Prudential regulatory oversight of commodities traders is far less extensive than it is for banks. We do not believe regulation is a panacea, but where regulatory oversight is effective and intrusive, it can curb excessive risk-taking and identify defects in enterprise risk management; and The risk of regulatory sanctions resulting from compliance failures, such as violation of position limit restrictions or of position reporting requirements. 17. There are, however, some mitigating factors: Most rated commodities traders have an arbitrage-based business model and seek to minimize flat price risk through extensive hedging (subject to basis risk, though). This generally allows for at least some degree of profitability when prices rise or fall; We believe commodities traders' emphasis on physical markets, rather than contract/financial markets, makes for relatively less earnings volatility; Although commodities traders are working-capital-intensive (given the need to fund trading inventory), a substantial portion of trading inventory is typically highly liquid and can be easily disposed of on exchanges or in over-the-counter transactions, or, at least under normal circumstances, readily financed. Banks have an incentive to extend uncommitted, secured credit facilities to commodities traders because of traders' favorable capital treatment under Basel 4 and other bank regulations; Some investment in logistical assets is generally a competitive requirement, but the commodities trading industry is not inherently fixed-capital-intensive; The cost base is generally highly flexible, and variable compensation costs are among the largest cost components; Although commodities trading is open to new entrants, achieving sufficient mass and scale to be competitive typically requires many years; The dynamics of the commodity markets are constantly changing, but there is little risk of secular change or substitution of products, services, and technologies from other industries that could supplant the trading function; Continued growth in commodity consumption should support long-term growth in trading volume; and Firms with well-diversified trading portfolios, global reach, sufficient scale to attract necessary funding, and rigorous trading risk management have generally been able to sustain satisfactory profitability.

Country risk 18. We assess country risk for a commodities trader using the methodology in "Corporate Methodology" (section C) and "Country Risk Assessment Methodology And Assumptions." To determine country exposure, we generally use the geographical breakdown of EBIT, EBITDA, or gross margin. If a commodities trader derives a majority of its EBIT, EBITDA, or gross margin from trades in which one side or the other--as off-taker or supplier--is exposed to countries we consider particularly risky, we assess the trader's country risk as "high risk" (category 5) or "very high risk" (category 6). We could also reach this conclusion if we believe the commodities trader has large exposure in the form of

contractual commitments, or fixed assets or other investments in risky jurisdictions, even if this is not reflected in EBIT, EBITDA, or gross margin. Combining industry risk and country risk 19. To derive a CICRA for a commodities trader, we apply table 1 in our "Corporate Methodology," but we derive an anchor from the CICRA using a means akin to the method for determining the anchor SACP from economic risk and industry risk in accordance with our criteria "Financial Institutions Rating Methodology." Given our view that commodities traders warrant an industry risk assessment of '5', we assign a CICRA of '5' to a company with a country risk assessment of '1' to '5', and we assign an anchor of 'bb-' if the country risk assessment is '1' to '4', or 'b+' if the country risk assessment is '5' (see table 2 below). If the country risk assessment is '6', the resulting CICRA is '6', and we assign an anchor of 'b'. We believe this differentiation of the anchor based on country risk is warranted because of the extent to which commodities traders could be affected by significant exposures to relatively high-risk countries. Table 2 Determining A Commodities Trader's Anchor INDUSTRY RISK COUNTRY RISK = CICRA = ANCHOR 5 1-4 5 bb- 5 5 5 b+ 5 6 6 b C. Business Position 20. In accordance with the criteria, we determine a commodities trader's business position by assessing the following factors: Commodity diversity, Geographic diversity, Commodity risk profile, Market position, Market size, Producer/supplier relationships, Logistical assets, and Other non-trading-related activities. 21. Our assessments for business position are "strong," "strong/adequate," "adequate," "adequate/weak," and "weak." Commodity diversity 22. Different commodities exhibit different supply-and-demand dynamics and different trade patterns. Consequently, we believe a commodities trader that is diversified across different commodities, particularly commodities whose price movements are not closely correlated, is likely to have more stable earnings than otherwise. Diversity of earnings over time is the key consideration. From a credit perspective, it is not favorable for a company to pursue business lines that consistently have poor earnings performance. Trading in different commodities can facilitate the ongoing reallocation of capital based on perceived market opportunities and should lead to better relative profitability than otherwise, if well-managed. Geographic diversity 23. Given the global nature of commodity markets, traders with a strong global network are, in our view, better positioned to capture arbitrage opportunities and to be informed of global market flows. By contrast, local players may not find similar arbitrage opportunities and are more exposed to unforeseen event risks. Commodity risk profile 24. If a company has concentrations in particular commodities, we believe it is preferable from a credit perspective that these commodities be ones where there are highly liquid, exchange-traded markets. It may be more difficult in such markets for traders to capitalize on arbitrage opportunities, but trading positions are likely to be more easily hedged, more readily marked to market with a high degree of accuracy, and more quickly unwound in the face of trading losses. (See table 3 for a hierarchy of commodities based on our assessment of market liquidity and the availability of reliable hedges.) Table 3 Commodity Risk Assessments RISK CATEGORY I WTI and Brent crude oil Oil products, including gasoline, distillates, fuel oil U.S. and European natural gas Thermal coal LME-traded metals: aluminum, copper, lead, zinc, nickel Precious metals Soybeans, wheat, corn, sugar RISK CATEGORY II Biofuels, including ethanol Electricity Carbon credits Iron ore Alumina Coking coal Rice Cotton Cocoa Coffee Perishable agricultural commodities WTI--West Texas Intermediate. LME--London Metals Exchange. 25. Table 3 is not intended to be comprehensive, and we will assess other commodities as necessary. Also, each commodity included in the table encompasses a number of grades or product types, and we may choose to categorize one grade or product type different than the others, if it has exceptional market characteristics. 26. We also use this categorization of commodities as the basis for our calculation of adjusted readily marketable inventory (ARMI; see "Guidance: Corporate Methodology: Ratios And Adjustments"). Market position 27. We also consider the depth of a trader's presence in each of the commodity markets where it participates--for example, coverage of different product grades and different geographic markets. Apart from participation across unrelated commodities, diversity benefits may also be derived from a deep presence in a large commodity market--for example, where oil traders participate "across the full barrel," meaning in upstream, midstream, and downstream products subject to different market fundamentals. The extent of market reach and market share of trading activity in a given commodity can be a good indication of the depth of market coverage, and trends in market share can be a useful gauge of the effectiveness of management's growth strategies. In our view, if a company has a deep and long-standing presence in a

given commodity, the company is likely to be able to derive market intelligence it can use to differentiate itself in pursuing trading strategies. Also, a commodities trader that specializes in a narrow range of commodities could warrant a favorable business position assessment if the trader has a leading and defensible position in those commodities, for example with access to key producers and downstream consumers. Market size 28. A commodities trader's overall size (for example, its revenues, asset base, and earnings base) is important because it generally indicates product width and geographic presence. Large companies are likely to be better able to support investment in more sophisticated trading risk-management systems. Moreover, other things being equal, we believe large trading companies are also more likely than small traders to garner the support of banks and the capital markets during periods of market turmoil. However, having too large a presence in a commodity may ultimately prove detrimental: If a commodities trader "makes the market," it may lack the flexibility to adjust its trading positions as market conditions change. Producer/supplier relationships and diversity 29. In certain cases, commodities traders have long-standing off-take agreements--of varying degrees of formality--with commodity producers and supply relationships with industrial users. We believe such agreements can enhance the trader's market position, but we also assess the contract terms and the downside risks of purchase or sale obligations imposed--for example, on the purchase end, so-called "take-or-pay" obligations. We assess the diversity of the commodities trader's off-take and marketing agreements (formal and informal) and the extent to which they affect the trader's business position. Concentration with one or a small number of suppliers can increase the risk of supply disruptions, which can force the trader to rely on the spot market to meet its delivery commitments. In some cases, commodities traders take equity stakes in commodity producers to help secure access to supply. Where relevant, we assess the effectiveness of such investments, for example in terms of securing access to supply. Logistical assets 30. Commodities traders are variously positioned in terms of their degree of involvement in the steps along the value chain. Thus, to varying extents, commodities traders maintain logistical assets, such as storage and transportation assets--either owned or under lease--to broaden the services they provide to industrial counterparties, thereby solidifying supplier/customer relationships and increasing the range of arbitrage opportunities they can pursue. As part of our analysis, we try to understand the effectiveness of the trader's investment in such fixed assets and the incremental profits derived. In addition, we consider the company's track record for properly maintaining logistical assets and ensuring safety. This is of particular importance for commodities traders that engage in storing and transporting environmentally sensitive commodities, given that catastrophic failures could cause fatalities and economic damages for which the trader would be liable. In such cases, we also consider broadly the relevant insurance policies the company maintains and the protection these provide. (If such logistical activities account for more than 30% of expected EBIT, EBITDA, or gross margin, these activities would not be reflected in the business position assessment of the trading business; rather, the approach in section IV below would apply.) Other non-trading-related activities, if applicable 31. For a commodities trader that meets the characteristics in paragraphs 2 and 3 (i.e., 70% or more of its EBIT, EBITDA, or gross margin comes from trading), but the company has material non-trading businesses (for example, processing facilities for agricultural commodities or upstream investments in mines for metals, including equity investments), we assess the competitive positions of those other businesses using the relevant criteria. We then modify up or down our business position assessment of the trading business based on the extent to which we think the other businesses provide material diversity or enhance/detract from the group's core trading operations. (If such activities account for more than 30% of expected EBIT, EBITDA, or gross margin, these activities would not be reflected in the business position assessment of the trading business; rather, the approach in section IV below would apply.) 32. To warrant a "strong" or "strong/adequate" business position assessment, a commodities trader must demonstrate almost all of the following characteristics: Is long-established and among the largest independent commodities traders in the industry; Trades in a broad range of commodities, including major commodities that are exchange-traded; Is a global player, with high geographic diversity; Has a leading market share (among the top three positions) across a number of different commodities; Has long-standing ties with substantial commodity producers and industrial users, enhancing access to supplies and efficient turnover of trading inventory; Has access to substantial logistical infrastructure to support its trading operations; Has avoided major operating

problems related to logistical assets; and Has other business activities that we view as supportive of its trading operations or as enhancing earnings stability. (If such activities account for more than 30% of expected EBIT, EBITDA, or gross margin, these activities would not be reflected in the business position assessment of the trading business; rather, the approach in section IV below would apply.) 33. Companies with an "adequate" business position meet some of the above conditions but are typically large regional players rather than global in scale. Or they are more specialized traders with solid franchises but in a limited range of commodities, or with shorter track records. Alternatively, if a company's logistical operations were problematic but it otherwise met most of the above conditions, we could assess its business position as "adequate." 34. To warrant a "weak/adequate" or "weak" business position assessment, a commodities trader demonstrates some combination of the following characteristics: Has limited overall scale; Trades in a narrow range of commodities; Trades primarily in commodities that are not exchange-traded; Has limited geographic diversity; Does not have a leading market share in any major commodity; Lacks long-standing ties with commodity producers and industrial users or is highly concentrated in a few such trading counterparties, particularly where such counterparties have weak competitive positions in their own sectors; Has made only limited investment in logistical infrastructure; Has had significant operating problems related to logistical assets, including failures resulting in fatalities or major economic damages; and Is poorly positioned in other related business such that trading effectiveness is undermined or overall earnings volatility is heightened. (If such activities account for more than 30% of expected EBIT, EBITDA, or gross margin, these activities would not be reflected in the business position assessment of the trading business; rather, the approach in section IV below would apply.)

**D. Trading Risk Management And Trading Risk Position** 35. Assessing trading risk management and trading risk position is an iterative process in the sense that the adequacy of a commodities trader's risk-management capabilities is partly a function of the nature and extent of the risks the company faces through its trading activities. 36. In accordance with the criteria, we assess trading risk management as "neutral" or "less supportive," and trading risk position as "supportive," "neutral," or "less supportive." The two assessments are then combined (see table 4).

Table 4 Trading Risk Management And Trading Risk Position --TRADING RISK MANAGEMENT--	
TRADING RISK MANAGEMENT	TRADING RISK POSITION
Supportive	Supportive
Neutral	Neutral
Less supportive	Less supportive
Less supportive	Less supportive
Less supportive	Less supportive
Less supportive	Less supportive

\*"Less supportive" would apply if the company's deficiencies were relatively severe and/or we did not believe the deficiencies would be rectified within a year. 37. If we assess overall trading risk management and trading risk position as "less supportive," this would result in a one-notch or more adjustment downward to our preliminary SACP (see tables 1 and 4); one notch if we believe the shortcomings are relatively modest, and more notches if the company's shortcomings are widespread and/or if the company has a particularly severe shortcoming in a critical area. The adjustment would be more than one notch if we view the commodities trader as engaging in such risky trading activities and/or having such significant deficiencies in its trading risk-management capabilities that the company's viability could be jeopardized if trading outcomes are unfavorable. For example, significant unhedged price risk (if more than 10% of the commodities trader's net worth could be jeopardized with a two-standard-deviation adverse price movement) would result in a several-notch lowering of our assessment, in and of itself. Likewise, shortcomings in information systems that preclude management from having a timely understanding of aggregated risk exposures would generally result in at least a two-notch downward adjustment. Where our assessments of trading risk position and trading risk management are both "less supportive," that results in a downward adjustment of two or more notches. On the other hand, if we view shortcomings in trading risk management and trading risk position as unlikely to directly jeopardize the company except in extreme scenarios, these would result in a one-notch adjustment to our assessment. 38. We assess overall trading risk management and trading risk position as "less supportive" in most cases if we have assessed trading risk management as "less supportive," the exception being if we view the deficiencies in trading risk management as relatively less severe (that is, we expect the deficiencies to be rectified in the near term, without a material loss of confidence by counterparties and creditors) and the trading risk position is "supportive" (see table 4). Trading risk management 39. Our assessment of trading risk management is evidence-based, and we generally view as neutral any such consideration for which we have insufficient evidence to justify a "less

supportive" assessment. We may well take a more negative view if a company fails to disclose key trading risk-management information, as discussed in section F, "Accounting And Analytical Adjustments" (paragraph 64). 40. We consider the role and stature of the risk-management function and risk culture, including: Whether the company has a separate risk-management organization, and if so, its reporting structure, stature, and autonomy from the trading organization; If there is no separate risk management organization, how the trading organization is held accountable for performing this function; The risk culture, including the extent to which trading risk-management policies and practices are ingrained in the operations; and Trading experience and the trading organization managers' ability to effectively oversee trading activity. 41. In our view, there is no single optimal structure of the risk-management organization or function, but the active involvement of top management (CEO, CFO) and the board of directors (or the equivalent) in setting policies and monitoring trading risk positions and trading performance is key. We consider whether the design and application of compensation and other staff rewards provide strong, long-term incentives to support conduct consistent with risk limits and the risk culture. For example, special short-term bonuses given to individual traders or desks for successful trades may encourage excessive risk-taking. We typically take a favorable view of employee ownership of commodities trading companies because the employee-owners have an incentive to preserve their capital. This ownership structure is also well-suited to a trading enterprise from a credit perspective because there is less ambiguity about whose money is at risk. On the other hand, in the absence of restrictions, financial leverage could increase abruptly if major owners have the ability to withdraw their capital, the risk of which undermines the potential advantages afforded by private ownership. Also, employee ownership may imply limited disclosure and constrain access to the public capital markets. The absence of a clear means of discouraging excessive risk-taking by traders can contribute to a "less supportive" trading risk-management assessment. 42. When we consider how a trading company establishes and reassesses risk tolerance or limits, we start by looking for a clear elucidation of the company's overarching risk appetite. We also consider the process by which the company monitors risk exposures against risk limits and the procedure followed when risk limits are approached or exceeded. Risk limits are commonly expressed in terms of the maximum amount the company is prepared to lose from market, credit, or operational events during a given time period. Market risk appetite may be expressed in terms of VaR limits and other measures such as expected shortfall, stress limits, stop-loss limits, and intra-day limits. It is also typical for a company to define separate limits pertaining to single transactions, asset concentrations, and illiquid positions. In some cases, it is helpful for us to understand how a commodities trader establishes risk limits when it initiates trading in a market where it has not previously been active. If the processes for establishing and allocating its risk appetite and monitoring its risk posture, are unclear, we could assess the company's trading risk management as "less supportive." 43. We consider the company's trading operational infrastructure, including: The comprehensiveness and integration of the information systems; The effectiveness of the back-office operations; and The extent to which the company has made provisions for data recovery and business continuity in case of potential disruptions. 44. Shortcomings in any of these areas can add significantly to operational risks and thus contribute to a "less supportive" trading risk-management assessment. 45. We also consider the risk analytics the company uses for gauging market, counterparty credit, and operational risks, including: The valuation process whereby the company marks to market its trading positions, appropriate and independent valuations being a critical component of all trading performance measures; The robustness of the market risk models and techniques, for example VaR, stress testing, and scenario/sensitivity analysis; The means of aggregating and assessing counterparty credit risk, whether it arises from unmargined trading exposures, extension of trade credit or loans for other purposes (such as under various so-called "prepayment" arrangements), or investments; and How the company measures its operating efficiency, and how it monitors regulatory compliance. 46. We put the greatest emphasis on the company's means of assessing and containing market risk. We consider the whole suite of market risk measurement techniques that the commodities trader employs--including VaR (where applicable), but also stress testing, trading limits, loss limits, etc. In our experience, VaR typically plays a central role, and we use VaR for comparative purposes, where possible. However, we recognize the limitations of VaR as a measure, particularly for comparative purposes: There are different methods for calculating VaR; If the

VaR methodology relies heavily on recent market conditions for look-back purposes, VaR may during periods of relative stability significantly understate the extent of volatility that could result in a stress scenario; If companies calculate one-day VaR (as commodities traders normally do), this measure may significantly understate actual risks, given the time that might be necessary to actually liquidate trading positions in an orderly fashion; Certain trading positions may be excluded, such as relatively illiquid positions for which daily price discovery is not feasible; and VaR does a poor job of capturing the risks of trading positions for which changes in value are non-linear, such as options. 47. Moreover, VaR does not address "tail" risks, i.e., where there is a low probability of occurrence but high potential loss. Given the limitations of VaR, we also consider the suite of other trading risk management tools and measures the commodities trader uses and whether they provide a holistic assessment of potential market risk losses that could arise from trading positions in normal or stressful conditions. 48. We also consider the extent of the trader's disclosure of its trading risk-management guidelines and risk measures to its constituents. In some cases, we believe robust or detailed public disclosure enhances the credibility of such information. 49. For us to assess a commodities trader's risk management as "neutral," the company must demonstrate all of the following characteristics: A clear, long-term alignment of interest between traders and owners; A standardized and disciplined approach to establishing overall risk appetite, allocating it to specific business lines, and monitoring compliance with limits; The company culture, including compensation and other policies, appears likely to guide staff behavior in a way that conforms to the company's risk appetite; Top management is highly engaged in the trading risk-management process, and oversight appears satisfactory; Market risk measurement and control techniques address the full range of exposures to which the company is subject; Information systems are well-integrated; where a commodities trader has different systems for different commodities or trading units, we consider the company's ability to roll up information on an integrated basis; and The models and systems for gauging market risk, counterparty credit risk, and liquidity risk are comprehensive, in our view. 50. We assess a commodities trader's risk management as "less supportive" when it does not meet all the conditions for "neutral," instead demonstrating some of the following characteristics, which we view as indicative of heightened risks: A limited operating track record of less than five years (this could lead to a "less supportive" assessment by itself); Significant compliance or trading risk-management-related lapses in the past two to three years (this could lead to a "less supportive" assessment by itself); A substantial quarterly or annual group net loss (excluding nonrecurring items such as goodwill impairment charges or gains/losses on asset sales) in the past five years (this could lead to a "less supportive" assessment by itself); Unclear processes for establishing company-wide risk appetite, establishing and reassessing risk limits, and monitoring compliance with risk limits; The combination of the company's culture and compensation and other policies could lead to trader behavior that is inconsistent with risk appetite; Top management is distant from risk matters; Unexpected or repeated turnover of key personnel, such as the chief risk officer or CFO; Market risk measurement techniques and information systems have shortcomings in their comprehensiveness and integration, which have contributed to material trading losses; Significant limitations in the models and systems used for gauging market risk, counterparty credit risk, or liquidity risk; and Occasional bottlenecks in confirming and clearing trades, as reflected in data on the backlog of unconfirmed/uncleared trades. Trading risk position 51. In this component of our analysis, we consider the company's actual risk position, how it has evolved in recent years, and how it might change in the future. As part of our assessment, we consider the company's business model, recent market-risk measures, stress testing results, and scenario/sensitivity testing results. 52. A commodities trader's business model has implications for the extent to which the company can bear commodity price risk. We recognize that commodities-trading activities encompass a spectrum of riskiness. In some cases, trading companies serve primarily in an "agency" role, operating essentially as brokers or marketers, closely matching sellers (typically, commodity producers) and buyers (typically, industrial users) of commodities for a commission-type spread while taking on little unhedged inventory risk. This approach is indicative of a "supportive" risk position assessment. These trading companies often have long-standing ties with producers and industrial customers, which help solidify their position as middlemen. 53. In our experience, most commodities traders focus on arbitrage opportunities--among geographic markets, among different points in time along the forward curve, and among different



products that have some degree of interchangeability. One common example of timing-based arbitrage is commodities traders that capitalize on situations when the market is in "contango"--that is, the futures curve is upward sloping, meaning the price at which long-dated contracts are trading is higher than the price at which short-dated contracts are trading. In such a case, the commodities trader may accumulate physical inventory, store the material (in leased or owned storage facilities), and sell the position forward. If the trader's inventory financing costs and storage costs are lower than those implied in the forward curve, the trader should make at least a small profit. We view this as a fairly low-risk strategy compared with other business models, from a trading risk position perspective. However, contango plays tend to be temporary, often just complementing more complex time-, geographic-, or product quality-arbitrage trading. 54. Commodities traders may have varied appetites for basis risk mismatches and for trading in commodities for which hedges are not readily available. And traders sometimes enter into trades that represent essentially proprietary or speculative directional bets on price movements. This type of activity is the riskiest strategy for a commodities trader. 55. Beyond the matter of the business model, we also consider each of the following, where applicable, in assessing market risk position: The company's recent market risk measures, including VaR, stress-testing results, and scenario/sensitivity testing results. In assessing VaR, we consider how diversification effects are measured and the extent to which the company reduces gross VaR to reflect diversification benefits; Either daily trading P&L; results for the previous three years, or a histogram-type summary of gain and loss distribution. (It is important for us to understand the basis of this information because companies vary in what they include in the trading P&L--for; example, the treatment of ancillary revenues and special charges.) This enables us to back-test reported VaR against the actual incidents when VaR was exceeded. We try to understand the circumstances that gave rise to exceptional performance--favorable and unfavorable--and the extent to which heightened risk-taking may have been a contributing factor. Despite the limitations of VaR, 95% one-day VaR as a percentage of equity can be a useful measure for tracking a commodities trader's risk posture over time and for comparing a company to its peers; The composition of trading inventory, including concentrations in particular commodities; Exposure to illiquid, nascent, or extremely volatile commodities (for example, commodities classified in category 2, in table 3 above), and/or where hedges are not readily available; Risks from long-term or less liquid trading positions that have limited leeway to be unwound in advance of expiration; The frequency with which risk limits are changed and the rationale for material changes; Understanding the use of options, "economic hedges" (where the hedge instrument is based on a broad economic index that may not be closely tied to the price of the commodity being hedged) and "exotic" (that is, highly complex) derivatives; and Exposure to basis risk and correlation risk, and the commodities trader's historical performance during periods of extreme market distortions. 56. In assessing counterparty credit risk, we consider each of the following: Large counterparty risk concentrations, on both a gross basis and net of collateral, letters of credit, credit insurance, and credit default swaps; Problematic counterparty credit exposures among significant counterparties; How credit exposures could change with changes in market conditions; Sector concentrations with weak counterparties; The extent to which the commodities trader makes loans to counterparties, and the structure and quality of the loans; The extent and composition of bad loan/receivable reserves recorded; and The degree of reliance on clearing brokers. 57. In assessing operational risk, we consider the following: Any incidents of controls being contravened or of unauthorized trades, and the measures implemented subsequently to prevent a recurrence; Any incidents of fraud, and the measures implemented subsequently to prevent a recurrence; Any incidents of systems problems that disrupted trading operations, and the measures implemented subsequently to prevent a recurrence; The track record of regulatory compliance and any regulatory sanctions; The track record of significant litigation; and The extent of protection provided by insurance policies in place. 58. To warrant a "supportive" trading risk position assessment, a commodities trader generally must demonstrate the first three of the following characteristics and most of the others. A company's trading risk position will, however, be capped at "neutral" where a company has a material exposure to a long-dated or less-liquid trading position (refer paragraph 55), or to a large counterparty credit risk that is not covered (refer paragraph 56). A business model that emphasizes the agency role or arbitrage strategy over speculative flat-price trading; Trades predominantly (80% or more of its trading revenue, EBITDA or net

profit) in commodities with highly liquid exchange-traded or OTC markets (category 1, per table 3) or in commodities with well-developed associated derivatives markets; Hedges well over 90% of its trading positions, predominantly through futures, with minimal use of "economic hedges" or "exotic" instruments; More than 90% of its trading activity is in physical positions and related hedges, and contract-only (also called "paper") transactions are minimal; VaR levels, supported by daily P&L; back-testing data, indicate moderate risk-taking; A track record of daily trading profitability for at least several years that is consistent with the stated trading strategy; A track record of at least several years with only rare large daily trading losses (i.e., significantly exceeding VaR); Lacks disproportionately large (high risk) single-name counterparty credit exposures, or exposures to problem credits and sectors (in total, less than 10% of equity); A track record of minimal credit losses for at least several years; A track record of having avoided systems problems that disrupted trading operations for at least several years; A track record of avoiding control lapses for at least several years; A track record of avoiding substantial litigation expense for at least several years; and A track record of regulatory compliance and avoiding material sanctions for at least several years. 59. We view a "less supportive" trading risk position assessment as warranted if the commodities trader demonstrates some of the following characteristics: A substantial portion (more than 20% of trading revenue, EBITDA or net profit) of trading activity in "paper" rather than physical form; Puts significant capital at risk in the form of proprietary, speculative trading; Material positions in relatively illiquid (i.e., category 2, per table 3) commodities that do not have well-developed associated derivatives markets; Significant unhedged trading positions, or hedges that resulted in excessive basis risk (together, more than 20% of trading revenue); Daily trading profitability that is inconsistent with the stated trading strategy; Large daily trading losses with some frequency; Significant problematic counterparty credit exposures (in total, more than 20% of equity), perhaps including uncollateralized loans or advances; A track record of material credit losses; Repeated systems problems that have disrupted trading operations, or repeated significant lapses in controls; Involvement in costly litigation to an inordinate extent; and A track record of material regulatory compliance shortcomings. E. Profitability/Track Record 60. Our profitability assessment consists of two subcomponents: the level of profitability, and the volatility of profitability. We assess the level of profitability as "above average," "average," or "below average." We assess the volatility of profitability as "positive," "neutral," or "negative." We then combine the assessments using the matrix shown in table 5. Table 5 Profitability Assessment --VOLATILITY-- ABSOLUTE LEVEL

	Positive	Neutral	Negative
Above average	Positive	Neutral	Neutral
Average	Positive	Neutral	Neutral
Below average	Neutral	Negative	Negative

61. In assessing the level of profitability, we view return on capital (ROC) as the best measure for comparing commodities traders. We define this ratio the same way we do in "Corporate Methodology: Ratios And Adjustments," except that unrealized gains and losses on derivatives with a maturity of less than 12 months are included in EBIT in the numerator, and debt is net of ARMI in the denominator. If the maturities of unrealized gains and losses are not disclosed, we may estimate the amounts that have maturities greater than 12 months in order to exclude them from the ROC calculation. Further, if reasonable estimates of these long-dated unrealized derivative gains and losses cannot be made, but we believe that such exposures exist and are materially overstating a company's profitability, we may assign a "below average" absolute profitability assessment to the company. 62. We generally calculate ROC based on a three-year average of the trailing two years' results plus our projections for the current year (incorporating any reported year-to-date results and estimates for the remainder of the year). We may consider longer or shorter periods of historical results or expected/normalized results depending on such factors as availability of financial information or transformational events (such as mergers or acquisitions), and we take into account improving or deteriorating trends in profitability ratios. We also normalize for trading conditions, favorable or adverse, that we consider extraordinary in nature. Given the lack of visibility into commodities traders' performance drivers, we generally place lesser emphasis on financial performance forecasts. We currently consider a trailing-three-year average ROC of greater than 15% as "above average," ROC between 9% and 15% as "average," and ROC of less than 9% as "below average." In times of extreme market conditions, we may deviate from those ranges and rely on peer comparisons to assess whether a commodities trader's profitability is above or below average. ROC takes into account adjusted capital (including the ARMI adjustment to debt, if applicable); we therefore

believe these ranges are equally applicable to pure traders and traders with material non-trading businesses. 63. We assess a commodities trader's volatility of profitability as "positive," "neutral," or "negative." We consider whether a commodities trader will likely experience volatility that is lower than, in line with, or higher than the industry average. As part of our assessment, we may benchmark the standard error of regression (SER) of a commodities trader's EBITDA (or alternatively, ROC), measured over the previous seven years, compared with the SER ranges of relevant peers, where information is sufficient and we believe doing so adds value. We also consider the incidence of quarterly net losses. Given the confidence-sensitivity of the commodities trading industry, we believe reported net losses can have particular significance, potentially causing a decline in confidence by counterparties and creditors. If a company has experienced more than several quarterly net losses during the past five years or quarterly losses that are individually substantial, we could assess volatility as "negative." Just lacking an extended track record for relatively newly established commodities traders is itself a risk factor because there is little basis for assurance of earnings stability; thus, a short track record may well result in a "negative" assessment of volatility. F. Accounting And Analytical Adjustments 64. Given the limitations of commodities-trading companies' public disclosures and the complexity of their businesses, we are significantly more reliant on non-public information when rating companies in this sector than in most other industries. We believe commodities traders' lack of transparency can heighten confidence-sensitivity risks in certain scenarios by making counterparties and creditors more inclined to overreact to adverse "headline" events. Thus, without the specific information referred to in our criteria, we could be unable to rate the company, or we would make conservative assumptions in assessing a company's trading risk management and trading risk position, financial leverage/capital adequacy, liquidity, and/or management and governance. In this regard, we view information related to potential margin requirements stemming from hedge positions as particularly important (see paragraph 99). 65. To determine the significance of commodities trading to a more diversified company's business and financial risk profiles, we consider EBIT, EBITDA, or gross margin. EBIT may better reflect how much less capital-intensive trading activities are than industrial activities. Alternatively, we may consider EBITDA or gross margin, which better reflects a company's cash flow-based debt repayment capacity. Often, our approach will be determined by availability of information, given the varying reporting practices of companies that engage in commodities trading. 66. This paragraph has been deleted. 67. This paragraph has been deleted. 68. This paragraph has been deleted. 69. This paragraph has been deleted. 70. This paragraph has been deleted. 71. This paragraph has been deleted. 72. This paragraph has been deleted. G. Financial Leverage/Capital Adequacy 73. In accordance with the criteria, we assess financial leverage/capital adequacy as "modest," "intermediate," "significant," "aggressive," or "highly leveraged." Commodities traders do not qualify for a "minimal" leverage assessment because, given the potential for substantial and unforeseen earnings and cash flow shocks, we believe there are limits to the protection provided by even the strongest balance sheet. Core and supplemental ratios 74. We determine a commodities trader's financial leverage/capital adequacy by assessing the core and supplemental ratios shown in table 6. In calculating the three core ratios (debt to EBITDA, funds from operations [FFO] to debt, and FFO minus capital expenditures to debt), we make all the relevant adjustments provided for in "Ratios And Adjustments." In applying the accessible cash adjustment to adjusted debt, we also make the ARMI adjustment discussed in "Guidance: Corporate Methodology: Ratios And Adjustments." In calculating FFO minus capital expenditures to debt, we include maintenance capital expenditures (derived by comparing expenditures to depreciation levels, absent other information) plus contractually committed spending related to growth initiatives that could not be readily deferred. In calculating debt to debt plus equity we incorporate all other relevant adjustments (including netting of accessible cash), but we do not make the ARMI adjustment because we believe we can gain additional insight by also considering financial leverage excluding the effect of the inventory-related adjustments, which we view as best reflective of how a commodities trader funds its business and its balance sheet leverage. Table 6 Financial Leverage/Capital Adequacy Ratios --CORE RATIOS-- SUPPLEMENTAL RATIO DEBT TO EBITDA (X) FFO TO DEBT (%) (FFO - CAP. EXPEND.\*/DEBT (%) DEBT/DEBT + EQUITY (%)¶ Modest < 2.5 > 35 > 25 < 45 Intermediate 2.5-3.5 23-35 15-25 45-55 Significant 3.5-4.5 13-23 10-15 55-65 Aggressive 4.5-5.5 9-13 5-10 65-80 Highly leveraged > 5.5 < 9 < 5 > 80 \*Capital expenditures

refer to maintenance and contractually committed capital expenditures. ¶ Debt is not adjusted for ARMI.

75. We first analyze the core ratios to determine the preliminary financial leverage/capital adequacy assessment. The two "payback" ratios--debt to EBITDA, and FFO to debt--are best reflective of the company's ongoing ability to meet debt-service requirements. 76. FFO minus capital expenditures to debt, on the other hand, is a more dynamic measure, which we view as the best gauge of a company's deleveraging ability (leaving aside deleveraging that could occur from working capital releases). Because FFO excludes working capital fluctuations, unlike cash flow from operations or free operating cash flow (FOCF), the ratio holds aside the effect of volume growth strategies and fluctuations. 77. If the core ratios indicate different financial leverage/capital adequacy categories, we will select the relevant core ratio that provides the best indicator of a company's future leverage. 78. Then, if the financial leverage/capital adequacy assessment indicated by debt to debt plus equity deviates from the preliminary assessment derived from the three core ratios, we might adjust the preliminary assessment by one increment in the scale we use for assessing financial leverage/capital adequacy. We make this adjustment if, in our view, the supplemental ratio provides significant additional insight into the company's future leverage and peer benchmarking. 79. The benchmarks for debt to EBITDA and FFO to debt in table 6 are less conservative than the standard volatility ratios outlined in our "Corporate Methodology" (table 17) because the former reflect the fact that trading companies are not particularly fixed-capital-intensive, especially compared with commodity producers. 80. Weighting of years. In applying the benchmarks in table 6 in our assessment of financial leverage/capital adequacy, we tend to focus on recent EBITDA, FFO, and FFO minus capital expenditures, given the typical lack of visibility regarding commodities traders' future results. Consequently, we generally weight the past two historical years' data equally and include an estimate for the current year's data (that is, using a 33%/33%/33% weighting). With respect to our forecast, we typically adjust actual recent performance to reflect our view of expected/normalized performance to the extent that we view recent historical performance as including nonrecurring elements (for instance, if we expect volatility- and arbitrage-based opportunities to decrease) and believe we can better reflect normalized performance in a forecast. Capital structure and financial policy as modifiers of financial leverage/capital adequacy 81. We assess a trader's capital structure and financial policy using the same factors that we use in our "Corporate Methodology," sections G and H. For example, where relevant, we take into account the extent to which financial leverage may be otherwise overstated in our leverage measures, factoring in the equity investments held by certain companies (as discussed in "Corporate Methodology," paragraphs 153 to 156). Given commodities traders' relatively heavy ongoing funding needs and the degree of liquidity risk they face, we put particular emphasis on the company's diversity of funding sources, including the trader's presence in the capital markets and standing among its banks. Under normal circumstances, commodities traders generally have access to attractively priced, secured advances made by banks on a trade-by-trade basis under uncommitted credit facilities, but overreliance on this funding source would lead to a "negative" assessment of a trader's capital structure, given the uncommitted nature of the arrangement. We also consider the potential for a significant change in financial leverage resulting from a particularly conservative or aggressive financial policy (paragraphs 158 to 163), including where the company's financial policy is determined largely by a controlling financial sponsor (paragraphs 164 to 171). 82. For commodities traders, we do not follow the same approach to taking account of our assessment of capital structure and financial policy as described in our "Corporate Methodology." Depending on our assessments of capital structure and financial policy, we may instead raise or lower our preliminary assessment of financial leverage/capital adequacy. A "positive" or "very positive" capital structure assessment, or a "positive" financial policy assessment, would result in a one-category improvement (at most, on a combined basis) of the preliminary financial leverage/capital adequacy assessment. A "negative" or "very negative" capital structure assessment, or a "negative" financial policy assessment, would result in a one- or two-category weakening (at most, on a combined basis) of the financial leverage/capital adequacy assessment. For financial sponsor-owned companies, we will apply the financial policy modifiers as stated in table 24 of "Corporate Methodology," but we will consider the ratio guidelines applicable to commodities traders shown in table 6 of these criteria. That means, for example, that an assessment of FS-4 would require the issuer's debt-to-EBITDA to be less than 4.5x (or less than 5.5x for FS-5 or more than 5.5x for FS-6). We will also then apply the capital

structure modifier as described above. In addition, a financial policy assessment of FS-6 (minus) would not reduce the anchor by one notch, as stated in table 24 of "Corporate Methodology," because this incremental financial policy risk would be captured as part of the financial risk profile analysis described in this article, whereby we notch down the anchor by three notches when debt-to-EBITDA is less than 7x and by four notches for more highly leveraged companies.

H. Liquidity

83. Liquidity is a critical consideration in a commodities trader's financial risk. In applying our criteria "Methodology And Assumptions: Liquidity Descriptors For Global Corporate Issuers" to trading companies, we generally focus on the company's ability to meet funding requirements over a forthcoming 12-month period (and over two years to achieve the "strong" assessment). We further complement our analysis by assessing a firm's current ratio and its ability to withstand potential short-term liquidity stress over a 30-day period occasioned by margin calls and/or the breach of credit triggers.

Table 7 Commodities Trader Liquidity Assessment

LIQUIDITY IMPACT ON SACP	Strong	+ 1 notch	Adequate	0 notches	Less than adequate	-1 or more notches
SACP capped at 'bb+'	Weak SACP capped at 'b-'	SACP--Stand-alone credit profile.				

84. If our assessment in accordance with the "Liquidity Criteria" is "less than adequate," we cap the SACP at 'bb+', consistent with the "Liquidity Criteria" cap. If our assessment is "weak," we cap the SACP at 'b-'. In addition, if a commodities trader does not meet the threshold for the minimum current ratio (as defined in paragraph 92 below) or short-term liquidity stress (as defined in paragraphs 93 through 102 below), the liquidity assessment is capped at "less than adequate". (In the absence of group or government support, the cap also applies to the ICR.) For example, if, in applying the approach in table 1, we determined the preliminary SACP to be 'bbb', excluding the assessment of liquidity, but either our assessment using the "Liquidity Criteria" was "less than adequate" or our assessment of a commodities trader's current ratio or short-term liquidity stress test fell short of the threshold, we would initially lower the preliminary SACP to 'bb+' and then possibly lower it further (beyond the two notches already resulting from application of the cap) depending on the extent of the liquidity shortcomings. To give another example: If, in applying the approach in table 1, we determined the preliminary SACP to be 'bb+', excluding the assessment of liquidity, but either our assessment using the "Liquidity Criteria" was "less than adequate" or our assessment of a commodities trader's current ratio or short-term liquidity stress test fell short of the threshold, we would notch down from 'bb+' to arrive at the preliminary SACP.

"Liquidity Criteria"

85. In assessing a commodities trader's long-term liquidity, we apply our "Liquidity Criteria" comparing liquidity sources (referred to as "A" below) to liquidity uses ("B"), but with certain modifications as detailed below. For commodities traders, we base our analysis on up to two years of expected/normalized FFO or EBITDA.

86. For purposes of calculating a company's liquidity uses, we net ARMI against dedicated, short-term inventory financing (whether secured or unsecured), given that the trade and related financing typically mature at the same time. If ARMI exceeds short-term inventory financing (including if the company does not make use of short-term transactional lines but, for example, finances part of its working capital through unsecured corporate debt or with equity), we will treat only 40% of the excess as a liquidity source. In the context of our "Liquidity Criteria," we give only partial credit for ARMI (i.e., 40% of such excess ARMI) because the length of time that might be required to effectively monetize the ARMI may not match the corporate debt maturity, and because we are sensitive to the potential franchise implications for the commodities trader were it to actually downsize its trading positions excessively to meet liquidity needs.

87. We assume that the equivalent value of ARMI that has been netted against short-term financing in the first 12 months of our liquidity calculations (as per paragraph 86) will need to be reinvested in working capital in the following 12 months. This reflects our opinion that a trading company needs to reinvest at least this amount of ARMI to generate future cash flows. This working capital outflow would be in addition to any other working capital movements expected in the 12 to 24 month period. We may adjust this working capital outflow to incorporate our future commodity price assumptions when these assumptions are materially different from the price implied in the value of the ARMI netted against short-term financing.

88. We include among liquidity uses contingent claims, such as new collateral-posting requirements in the event of a downgrade of up to three notches, consistent with paragraph 30 of "Liquidity Criteria." For commodities traders, we also include among liquidity uses what we view as typical margin-call movements, i.e., under a normal 10% price variation rather than the stress scenario assumption. Consistent with our "Liquidity Criteria," we do not include uncommitted

credit lines as a source of liquidity; however, we do consider them in our broader view of financial flexibility. 89. Our "Liquidity Criteria" specify certain tests for defining each liquidity category ("strong," "adequate," "less than adequate," and "weak"), including the requirement that defined sources cover defined uses of liquidity, even with a specified percentage decline in EBITDA. (We do not use the "exceptional" designation for commodities traders because of the industry risk in this sector.) 90. Because we view the commodities trading industry as volatile, we apply standards for "strong" and "adequate" that are tougher than those we use in assessing most other industries: Strong--For liquidity to be assessed as "strong," the second condition in our "Liquidity Criteria" (paragraph 36)--positive A-B, even if forecasted EBITDA were to decline by 30%--is 50% for commodities traders. Adequate--For liquidity to be assessed as "adequate," the second condition in our "Liquidity Criteria" (paragraph 37)--positive A-B, even if forecasted EBITDA were to decline by 15%--is 30% for commodities traders. 91. When assessing the liquidity of trading companies with significant nontrading operations, we evaluate whether the A-B of the commodities trading operations is positive, even if forecasted EBITDA were to decline by 50% for "strong" or 30% for "adequate" assessments. Similarly, we evaluate whether the A-B of the other business is positive, even if forecasted EBITDA were to decline by 30% for "strong" or 15% for "adequate" assessments for most other sectors. (Please see the sector-specific Key Credit Factors Criteria for each sector's thresholds.) To calculate these liquidity thresholds for the combined operations, we use a weighted average of the expected/normalized EBITDA of the respective operations. For example, if the commodities trading operations represented half of the expected/normalized EBITDA of the total enterprise and mining operations represented the other half, then our thresholds for evaluating whether A-B is positive are based on an EBITDA decline of 40% for liquidity assessments of "strong" or 22.5% for liquidity assessments of "adequate". We do not use the "exceptional" designation for these enterprises because of the industry risk of the commodities trading operations. Current ratio test 92. In the case of commodities traders, we apply an additional, sector-specific test: To be assessed as having "strong" or "adequate" liquidity, a commodities trader must have a current ratio of 1.1x or greater. We define the current ratio as current assets divided by current liabilities. Current assets consist of cash, cash equivalents, short-term investments, inventory, and trade and other receivables. Current liabilities consist of all liabilities coming due within 12 months, including maturities of long-term debt. For this calculation, we exclude from current assets and current liabilities amounts relating to special-purpose entities (in relation to securitization of receivables or inventories). Short-term liquidity stress test 93. In addition, for commodities traders, we view the key liquidity-related risk as the potential for sudden and extreme price movements that result in margin-posting requirements under derivative contracts with so-called "maintenance" or "variation margin" requirements. Because commodities traders typically have long physical positions that they hedge with derivatives, such collateral-posting requirements generally arise when commodity prices rise. (When prices decline, commodities traders typically experience a temporary inflow of cash as their hedge counterparties post collateral.) However, commodities traders may have some trading positions in which declining prices result in margin requirements, although this is far less common in our experience. Posting collateral reduces sources of liquidity available for other purposes. Given the confidence-sensitive nature of commodities traders, we take into account the potential for a crisis of confidence resulting from a breach of contractual credit triggers, facing the roll-off of its inventory-related funding, and/or having to meet other maturing debt such as commercial paper and maturing bonds. 94. In assessing the short-term liquidity stress test, we compare a commodities trader's ready sources of liquidity to the potential cash needs in such a scenario. To be assessed as having "strong" or "adequate" liquidity, the ratio of stressed sources of liquidity to stressed uses of liquidity must exceed 1.2x. 95. Stressed sources of liquidity. A commodities trader's ability to weather short-term liquidity stress depends on its having the following chief sources of liquidity: Cash and liquid investments (we do not include ARMI, which we assume would be liquidated as trades expired and the proceeds used to extinguish related short-term debt); and Availability under committed credit facilities, including only lines with a six-month maturity or more. 96. In the absence of evidence to the contrary, we assume that companies would be able to tap available credit under committed credit facilities, even though we recognize that in a severe stress scenario, lenders could invoke material adverse change (MAC) clauses (where applicable) or pursue other means to avoid having to advance funds. We do not

include uncommitted credit lines as a source of liquidity, even if those lines are secured. We recognize that such lines are generally readily available to commodities traders for inventory financing purposes. However, we cannot predict banks' behavior, and thus, whether this means of financing would be available in a stress scenario. Still, where uncommitted credit has been tapped to fund trades, we assume that such loans would remain outstanding for the full financing cycle (typically 30 to 90 days), rather than being called immediately, even if additional funding had been curtailed. 97. We also do not include operating cash flow as a source or use of liquidity because of the short time frame of our liquidity stress test and the uncertainty about the commodities trader's cash flow performance during this period. 98. Stressed uses of liquidity. We calculate the aggregate liquidity outflow that could arise from price shocks or credit events. 99. Price shocks. Substantial calls on liquidity (in the form of cash, letters of credit, or the pledge of assets) can arise when changes in commodity prices result in sizable margin-posting requirements. A periodic mark-to-market mechanism, with maintenance margin postings, minimizes credit risk borne by the counterparty. As trades mature or are liquidated, the draw on liquidity reverses. For our analysis, we consider a scenario in which all derivatives with margin provisions experience adverse price movements (whether "adverse" means price increases or decreases, from the trader's perspective). We generally apply a 20% price shock in the case of commodities traders that are well-diversified across different commodities (and so the potential for a severe price shock across the whole trade portfolio is diminished), or a 30% price shock in the case of commodities traders that are concentrated in three or fewer commodities. We assume the price change applies instantaneously and to the same extent to prices across the futures curve, i.e., a parallel shift. We assume that each commodity's price will move in an adverse direction, whether that means a rise or fall in each case. Our assumptions of a correlation in the price of all commodities and of a parallel shift across the futures curve are deliberately conservative, particularly in the case of more diversified commodities traders, for whom varying price trends could be an offsetting factor. We utilize an analysis that applies these price shocks to trading positions in place as of the most recent reported balance sheet date and that calculates the call on liquidity that could arise. We consider the aggregate exposure by commodity and factor in the benefit of bilateral netting arrangements that may be explicitly provided for under contracts with counterparties. (Under these arrangements, we net in-the-money and out-of-the-money contracts with the same counterparties against one another.) 100. Credit events. Commodities traders often enter into over-the-counter derivatives contracts in which maintenance/variation margin requirements become effective only when the commodities trader's credit rating falls below a specified level or some financial test is breached. Such collateralization triggers may also be found in loan agreements, surety bonds, structured transactions, and performance-based contracts such as power purchase agreements or tolling agreements. For our liquidity stress test, we factor in liquidity outflow that could occur as a result of a three-notch change in the company's rating or, for other financial tests, the equivalent deterioration in financial condition. 101. In some cases, commodities traders enter into financial contracts with so-called "soft triggers," in which collateral posting requirements are unspecified. The company is bound to provide adequate assurance to the counterparty in the event of a MAC, but the definitions of "adequate assurance" and MAC are left to the interpretation of the parties involved and are generally resolved through negotiations. We include in stressed uses 50% of the total potential collateral calls related to such soft triggers, to the extent the commodities trader has an un-margined contractual position. 102. We believe that, amid a credit event, it may not be possible for the commodities trader to roll over short-term debt, notably borrowings under uncommitted credit facilities, commercial paper and current maturities of long-term debt. Rather than factoring in such impacts in the short-term liquidity stress, we take account of the company's funding mix and debt maturity structure in our assessment of capital structure (see paragraphs 81 and 82 above) and under the "Liquidity Criteria" (see above). I. Modifiers Of The Preliminary SACP Management and governance 103. In assessing a commodities trader's management and governance, we apply our general management and governance criteria (see "Methodology: Management And Governance Credit Factors For Corporate Entities") but apply it only to areas other than risk management, which the trading risk-management factor addresses. The range of assessments for a company's management and governance strategy is: "strong," "satisfactory," "fair," and "weak." For a commodities trader, a "strong," "satisfactory," or "fair" assessment is neutral to the SACP. A "weak"

assessment reduces the SACP by one or more notches, depending on the extent of the negative effect to the commodities trader's risk profile. Comparable ratings analysis 104. In assessing our comparable ratings analysis on a commodities trader, we use the same methodology that we use with other corporate issuers (see "Corporate Methodology," section K). A "positive" comparable ratings analysis assessment results in a one-notch increase to the SACP. A "negative" assessment results in a one-notch decrease to the SACP. For commodities traders, one example of when we would use the comparable ratings analysis modifier is if we believe the company's participation in logistical or non-trading businesses is not fully reflected in the business risk and profitability assessments, or if these businesses limit the appropriateness of the financial leverage/capital adequacy benchmarks in table 6. If such activities account for more than 30% of expected EBIT, EBITDA, or gross margin, such activities would not be reflected in the comparable ratings analysis; rather, the approach in section IV below would apply. J. Short-Term/Long-Term Rating Linkage 105. In applying our criteria for determining a commodities trader's short-term corporate credit rating (see "General Criteria: Methodology For Linking Long-Term And Short-Term Ratings"), we use the liquidity descriptor determined in accordance with our "Liquidity Criteria." IV. ASSESSING COMMODITIES TRADING OPERATIONS OF COMPANIES WITH OTHER SIGNIFICANT BUSINESSES 106. In accordance with our methodology, this section applies to the assessment of companies with commodities trading operations that account for less than 70% of expected/normalized group EBIT, EBITDA, or gross margin and, at the same time, are sufficiently material to warrant a separate analysis--typically accounting for more than 20% of expected/normalized EBIT, EBITDA, or gross margin. In such a case, the applicable general framework is our "Corporate Methodology," whereby we consider the trading segment as one of the business lines. This section explains how we apply our "Corporate Methodology" framework to our analysis of such a company's commodities trading business. Chart 2 illustrates how our assessments of industry risk, preliminary competitive position (a sub-component of the overall competitive position depicted below), cash flow/leverage, and liquidity are adapted to conform to the framework outlined in our "Corporate Methodology." (Note: In case of limited public or confidential disclosure of the segment split or in case of complexity to carve out trading profits from more integrated [processing or industrial] operations, we will apply our own judgment to estimate a representative through-the-cycle breakdown of segment profits. We recognize our estimated share of trading profits may be different from management figures; when deriving our estimate of trading EBIT, EBITDA, or gross margin, we may further rely on benchmarking and secondary measures such as revenues or readily marketable inventories, or by considering peer comparisons of the amount of tangible assets.) Chart 2 A. Country Risk 107. We determine country risk on a company-wide basis, using the same methodology described in our "Corporate Methodology." B. Industry Risk 108. If commodities trading represents more than 30% of expected/normalized EBIT, EBITDA, or gross margin, we assess industry risk for the commodities trading segment as "high risk" ('5'). We may take a different view of industry risk if commodities trading operations represent 30% or less because we believe a commodities trader operating in the context of a company that derives 70% or more of its consolidated EBIT, EBITDA, or gross margin from businesses other than trading could be less confidence-sensitive than an independent commodities trader, even if the latter conducts trading in a separate subsidiary without group guarantee; in such cases, we generally use an adjusted industry risk assessment for the commodities trading business of "moderately high risk" ('4'). 109. In line with our "Corporate Methodology," we derive the company's industry risk assessment from the weighted average of the industry risk of its commodities trading business and of its other industrial businesses, with the weights proportionate to their contributions to group expected/normalized EBIT, EBITDA, or gross margin (as illustrated in the Appendix, see paragraphs 126 and 127). C. Competitive Position Assessing the preliminary competitive position of the commodities trading business 110. We derive the preliminary competitive position assessment of the commodities trading business from our assessments of the business position and the trading risk management and trading risk position using the methodology described above (see section III, parts C and D). For this purpose, in analyzing the trading operations' business position, we use the same assessment categories as mentioned in part C (ranging from "strong" to "weak"). In analyzing trading operations' trading risk management and trading risk position, we translate the assessment categories used in part D into a five-category system, such that:



"Supportive" corresponds to "strong" ('1') or "strong/adequate" ('2'); "Neutral" corresponds to "adequate" ('3'); and "Less supportive" corresponds to "weak/adequate" ('4') or "weak" ('5'). 111. The specific mapping is based on our view of the company's relative position within these assessments, assigned in accordance with the methodology described above. 112. In deriving the preliminary competitive position assessment of the commodities trading business, we apply a 50% weighting to each of our assessments of 1) business position (see section III, part C) and 2) trading risk management and trading risk position (see section III, part D). 113. This paragraph has been deleted. 114. This paragraph has been deleted. Determining the preliminary competitive position for the group 115. We subsequently combine the weighted-average assessment (on a scale of 1 to 5) of the preliminary competitive position components for the commodities trading business with those of the company's other businesses, weighted by proportionate contributions of each business line to group EBIT, EBITDA, or gross margin (i.e., similar to the approach outlined in the "Corporate Methodology"). 116. Finally, the combined weighted-average assessment of the business lines (on the 1 to 5 scale) results in a preliminary competitive position assessment for the group (on a scale of 1 to 6), using the conversion matrix shown in the "Corporate Methodology," table 14 (as illustrated in the Appendix, table 9). 117. Assessing profitability. The profitability assessment is on a consolidated basis, generally using ROC as the core measure, because combined EBITDA or EBITDA margin could be of limited usefulness, given the distortion that could typically result from the generally thin margins associated with trading activities. In calculating ROC, we reduce the denominator by ARMI. Finally, the level of profitability for the group is benchmarked to ROC guidance for the dominant industry (as provided in the relevant "Key Credit Factors" article for that industry). Absent such specific ROC guidance, we would generally see ROC above 15% as "above average"; 9% to 15% as "average," and below 9% as "below average." Similarly, the group's volatility of profitability is benchmarked calculating the SER of the consolidated figures (typically EBITDA) compared with the SER of the dominant industry (or in the absence thereof, the wider rated corporate SER ranges). Our conclusion regarding volatility of group profitability reflects the influence of the trading business without being formally linked to a separate assessment of the trading unit's volatility of trading profitability. 118. Combining the preliminary competitive position assessment with profitability. We combine the consolidated preliminary competitive position assessment with the group profitability assessment by applying "Corporate Methodology" table 16 to derive the final competitive position assessment. We then combine the competitive position assessment with the CICRA to determine the business risk profile assessment by applying "Corporate Methodology" table 2. D. Cash Flow/Leverage 119. In accordance with the cash flow/leverage assessment set out in the "Corporate Methodology," we assess financial leverage/capital adequacy as "modest," "intermediate," "significant," "aggressive," or "highly leveraged." However, companies with significant commodities trading operations do not qualify for a "minimal" leverage assessment, given the potential for substantial and unforeseen earnings and cash flow shocks (see paragraph 73). 120. The time horizon for ratio calculations is identical to that used in the "Corporate Methodology," i.e., typically based on the previous one to two years, the current-year forecast, and two forecasted years. Bearing in mind the difficulty in predicting trading conditions, the two-year forecast for the trading segment may aim to capture normalized or average profit levels rather than roll forward the current performance. 121. An important difference with the "Corporate Methodology" relates to identifying the benchmark table. For these criteria, the benchmark table is company-specific in that the benchmark ratios for FFO to debt and debt to EBITDA are calculated as a weighted average of the general corporate ratios (see tables 17 through 19 of the "Corporate Methodology") and the commodities trading-specific ratios (see table 6 above), pro rata for their respective EBIT, EBITDA, or gross margin contributions (see the examples in the Appendix, table 10). The benchmarks for the supplemental ratios are, however, those set out in the "Corporate Methodology" (typically, those of table 17). We do not consider debt-to-debt-plus-equity among the supplemental ratios in this context because there is no directly comparable measure under the "Corporate Methodology." 122. The preliminary cash flow/leverage assessment of the consolidated group is based on two core ratios, debt to EBITDA and FFO to debt. When assessing this, we continue to make trading-specific adjustments such as the adjustment for ARMI. 123. The adjusted cash flow/leverage assessment may differ from the preliminary assessment because of the analysis of supplemental ratios, in line with the "Corporate Methodology."

For companies with a material commodities trading business line, we tend to focus on FOCF to debt, but here we calculate free cash flow excluding trading-related working capital swings, effectively replacing FOCF with FFO minus capital expenditures. The adjusted assessment equally takes into account the adjustment for ARMI. 124. Lastly, the final cash flow/leverage assessment will take into account the volatility adjustment in line with paragraph 124 in the "Corporate Methodology." E. Modifiers 125. To assess group liquidity, we apply the "Liquidity Criteria" based on overall group sources and uses (with the modifications discussed in paragraphs 85 to 91 above). If commodities trading is the dominant industry for the group, we consider the current ratio (see paragraph 92), but not otherwise. In all cases, we evaluate the short-term liquidity stress test using the methodology described above (paragraphs 93 to 102), taking into account group-wide sources of liquidity. If the short-term liquidity stress ratio were below 1.2x, the group's liquidity assessment would be no better than "less than adequate," thereby constraining the SACP at 'bb+'. V. APPENDIX Illustrative Example: Analyzing A Diversified Company With Commodities Trading Operations A group's weighted-average industry risk assessment 126. We consider the hypothetical example of Company XYZ, where commodities trading operations contribute 25% of overall expected EBITDA and agribusiness & commodity foods operations account for 75% of overall EBITDA. Applying paragraph 108, the industry risk assessment for this company would be '3' (derived from the weighted average of '4' for the commodities trading business [25%] and '3' for the agribusiness and commodity foods operations [75%]), which yields 3.25 and is rounded to '3'). We combine the group's country risk and industry risk assessments to derive the group's CICRA by applying table 1 of our "Corporate Methodology." 127. By contrast, if commodities trading were to represent a more material 35% of expected/normalized EBIT, EBITDA, or gross margin, the industry risk for the commodities trading segment would be '5' and the weighted-average industry risk would be '4' (calculated as  $[35\% \times 5] + [65\% \times 3] = 3.7$ , which is rounded to '4'). A group's weighted-average preliminary competitive position 128. To illustrate the build-up of the combined preliminary competitive position, we continue our example of Company XYZ, which we assume has a commodities trading unit. 129. In accordance with paragraph 112, we analyze the preliminary competitive position of the trading unit using a 50% weight for its "adequate/weak" business position and a 50% weight for its "adequate" trading risk management and risk position (see table 8). 130. We then combine the weighted-average assessment for the trading business with the weighted-average assessment for the agribusiness and commodity foods business line, given that the trading business contributes 25% of XYZ's overall EBITDA and the agribusiness & commodity foods business contributes 75% of EBITDA (see table 9). A group's benchmark ratios, using the weighted average of standard volatility and trading-specific ratios 131. To illustrate the calculation of the benchmark ratios for a group with a trading segment, consider a hypothetical Company XYZ, where the commodities trading operations contribute 25% of overall EBITDA and the agribusiness operations contribute 75% to overall EBITDA. The benchmark reference ratios applied to Company XYZ would be calculated as shown in table 10: If the company's consolidated-FFO-to-debt ratio was 19%, this would result in a "significant" preliminary cash flow leverage assessment. (This compares with the threshold of 20% of an industrial company with standard volatility). 132. By way of additional illustration, if a company's trading business represented 40% of EBIT, EBITDA, or gross margin, the range for the benchmark ratios would be 17% to 27% (i.e., derived from a 40% weighting for the 13% to 23% range and a 60% weighting for the 20% to 30% range) for "significant." Finally, for a company whose trading business is the dominant activity, for instance accounting for 65% of EBIT, EBITDA, or gross margin, and other industrial activities represent the remaining 35%, the benchmark ratios range for a "significant" assessment would be 15% to 25% (i.e., a 65% weighting for the 13% to 23% range and a 35% weighting for the 20% to 30% range). VI. REVISIONS AND UPDATES This article was originally published on Jan. 19, 2017. These criteria became effective upon publication. Changes introduced after original publication: Following our periodic review completed on Jan. 16, 2018, we updated outdated criteria references and added the criteria references "Reflecting Subordination Risk In Corporate Issue Ratings," published Sept. 21, 2017, and "Recovery Rating Criteria For Speculative-Grade Corporate Issuers," published Dec. 7, 2016, in the "Related Publications" section. On July 9, 2018, we clarified paragraph 82 with regard to the application of the financial policy and capital structure modifiers for traders owned by financial sponsors. On March 14, 2019, we republished

this criteria article to make nonmaterial changes to the contact information. On April 1, 2019, we republished this criteria article to make nonmaterial changes. We deleted paragraphs 66-72 because they were superseded by "Corporate Methodology: Ratios And Adjustments," published on April 1, 2019 (Ratios and Adjustments). The sector-specific accounting and analytical adjustments previously included in those paragraphs are now included in the Guidance supporting the Ratios and Adjustments criteria. We also updated the criteria references. On Feb. 12, 2020, we republished this criteria article to make nonmaterial changes to criteria references. On Feb. 18, 2021, we republished this criteria article to make nonmaterial changes to criteria references. On July 27, 2021, we republished this criteria article to make nonmaterial changes to criteria references. On May 31, 2022, we republished this criteria article to make nonmaterial changes. We updated criteria references throughout the article, removed references to outdated related research in paragraph 47, and updated the "Related Publications" section. On July 26, 2023, we republished this criteria article to make nonmaterial changes to criteria references.

VII. RELATED PUBLICATIONS

Related Criteria Corporate And General Criteria Group Rating Methodology, July 1, 2019 Methodology: Ratios And Adjustments, April 1, 2019 Reflecting Subordination Risk In Corporate Issue Ratings, March 28, 2018 General Criteria: Methodology For Linking Long-Term And Short-Term Ratings, April 7, 2017 Recovery Rating Criteria For Speculative-Grade Corporate Issuers, Dec. 7, 2016 Methodology For Rating General Trading and Investment Companies, June 10, 2015 Rating Government-Related Entities: Methodology and Assumptions, March 25, 2015 Methodology And Assumptions: Liquidity Descriptors For Global Corporate Issuers, Dec. 16, 2014 Corporate Methodology, Nov. 19, 2013 Methodology: Industry Risk, Nov. 19, 2013 Country Risk Assessment Methodology And Assumptions, Nov. 19, 2013 Ratings Above The Sovereign--Corporate And Government Ratings: Methodology And Assumptions, Nov. 19, 2013 Methodology: Management And Governance Criteria For Corporate Entities, Nov. 13, 2012 Criteria For Assigning 'CCC+', 'CCC', 'CCC-', And 'CC' Ratings, Oct. 1, 2012 General Criteria: Stand-Alone Credit Profiles: One Component Of A Rating, Oct. 1, 2010 Financial Institutions And Insurance Criteria Alternative Investment Funds Methodology, Dec. 9, 2021 Financial Institutions Rating Methodology, Dec. 9, 2021 Insurers Rating Methodology, July 1, 2019 Related Research S&P; Global Ratings Definitions, Nov. 10, 2021 Lifting The Lid On Traded Market Risk, Oct. 31, 2006 Why Hedging Isn't Always A Sure-Fire Ratings Strategy For U.S. High-Yield Oil And Gas Producers, Sept. 18, 2006 Exploring The Limits Of Hedging On U.S. Oil And Gas Company Ratings, Aug. 1, 2006 Chasing Their Tails: Banks Look Beyond Value-At-Risk, July 12, 2005 Related Guidance Guidance: Corporate Methodology, July 1, 2019 Guidance: Corporate Methodology: Ratios And Adjustments, April 1, 2019