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Key Credit Factors For The Agribusiness And Commodity Foods Industry

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(***Editor's Note:*** *This article is no longer current. We have included relevant content in "Guidance: Corporate Methodology," published on July 1, 2019.)*

1. This article describes S&P Global Ratings' methodology and assumptions for rating the global agribusiness and commodity foods industry. This article is related to our corporate criteria (see "Corporate Methodology") and to "Principles Of Credit Ratings".
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SCOPE OF THE CRITERIA

3. By agribusiness and commodity foods companies we mean issuers that derive the majority of their revenues either from the sourcing and distribution of crops and crop inputs, or from the processing, distribution, and marketing of commodity food products. These criteria apply globally to ratings on certain issuers in agricultural commodity merchandising (i.e., commodity trading) and processing (e.g., corn/wheat milling, soybean and sugar cane crushing, sugar refining, sweetener manufacturing, tobacco leaf merchants, etc.), feed and crop input distribution/wholesaling, and the commodity food subsectors of the consumer nondurables industry (including commodity meat production, and produce industries). These criteria do not cover miners and manufacturers of crop input products such as fertilizer, seeds, and crop protectants.
4. If certain agribusiness and commodity foods companies engage in commodities trading and such activity contributes more than 20% of expected normalized EBIT, EBITDA, or gross margin and less than 70%, we would apply section VI of "Commodities Trading Industry Methodology." If certain agribusiness and commodity foods companies engage in such trading with 20% or less contribution of expected EBIT, EBITDA, or gross margin but more than 10%, we would apply the accounting adjustment for adjusted readily marketable inventories, as described in our Ratios And Adjustments methodology.

SUMMARY OF THE CRITERIA

5. This article describes S&P Global Ratings' criteria for analyzing agribusiness and commodity food companies.
6. We view agribusiness and commodity food companies as an "intermediate risk" industry under our

methodology, given its "moderately high" cyclicality risk and "intermediate" degree of competitive risk and growth. In assessing the competitive position of an agribusiness and commodity food issuer, we put particular emphasis on market position, geographic and product diversification, operating scale and efficiencies, and strategic execution given the often volatile and/or seasonal earnings landscape and earnings sensitivity to agricultural commodity prices. In our financial risk profile assessment, we consider industry- or company-specific working capital characteristics when evaluating cash flow coverage ratios for grain merchandisers and crop input wholesalers, including the highly liquid nature of agricultural merchandising inventories and the impact of seasonal working capital requirements on adjusted debt balances. We also evaluate as part of our comparative ratings analysis issuers' use of derivatives and hedging strategies for companies with significant commodity price exposure to determine the degree to which such strategies have led or may lead to higher operating and/or liquidity risk compared with peers.

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METHODOLOGY

PART I--Business Risk Analysis

Industry risk

9. Within the framework of our general criteria for assessing industry risk (see "Methodology: Industry Risk"), we view agribusiness and commodity foods to be an "intermediate risk" industry (category 3). Our industry risk assessment for agribusiness and commodity food companies is derived from our view of the industry's moderately high degree of cyclicality (category 4), and our assessment that the industry warrants an intermediate (category 3) competitive risk and growth assessment. Although these companies have had high peak-to-trough (PTT) declines in profitability during periods of economic weakness, their intermediate competitive risk and growth characteristics offset their moderately high degree of cyclicality, in part reflecting the less discretionary nature of grain and commodity food demand compared with other, more cyclical industrial sectors.

10. Price volatility is a key driver of cyclicality. Agricultural commodity prices (grains, livestock, and other crops) are volatile. Price inflation frequently occurs because of supply shortages following a weak harvest or disease outbreaks, while short-term aggregate demand is fairly inelastic given the nondiscretionary nature of demand for commodity food products. Such periods of higher prices provide incentives for higher production, which then may lead to excess supplies, resulting in a declining price cycle. Price "bubbles" and "crashes" have occurred, with price swings of over 50% at the extreme. Such wide variations occurred in global sugar and cotton prices in 2011. Globally traded corn prices have also experienced price swings of close to 50% in recent years.

11. Volume volatility is also prevalent. Crop shortages, disease, and other factors, such as government import restrictions, can periodically weaken near-term volume trends. Still, the nondiscretionary nature of commodity food products, the portfolio effect of growing and producing more than one commodity, and favorable long-term demand trends underpinned by global economic and population growth, help mitigate volume and price volatility. In particular, growing emerging market middle classes whose diets are migrating to more protein-based offerings are requiring more grains to feed a rising demand for livestock. Thus, swings in revenues during periods of economic weakness are less pronounced in the sector than in other, more cyclical industries.

12. Cyclicality in profitability is moderately high given price and volume volatility. Agribusiness and commodity food companies' profits are sensitive to global supply and demand imbalances. Regional supply shortages and unpredictable price swings can squeeze margins on a near-term basis.

13. Supply and demand for grains and commodity foods tends to be based less on key macroeconomic indicators (global GDP growth notwithstanding) and more on global agricultural supply and demand factors, such as crop and livestock supplies, industry capacity utilization, and other demand factors that have an impact on pricing, such as trade restrictions, industry regulation (e.g., U.S. corn-based ethanol production mandates), and customer promotional activity, which can squeeze commodity processor margins. Although real GDP growth is an important long-term economic indicator, key short-term market factors include projected crop and livestock supplies, farm industry profitability, planting/growing intentions, commodity futures price trends, and grain processing capacity utilization trends. These also include projected production margins, such as a meat cut-out margin (the margin a meat processor earns from converting livestock to wholesale cut-out values).

Cyclicality

14. We assess the cyclicality for the agribusiness and commodity foods industry as "moderately high risk" (category 4). The industry has demonstrated "moderately high" cyclicality--relative to other industries--in profitability, which is one of two key measures used to derive an industry's cyclicality (see "Methodology: Industry Risk"). Based on our analysis of global Compustat data, agribusiness and commodity food companies have experienced an average PTT percentage decline in EBITDA margin of 15.3% during recessionary periods since 1952. Actual declines ranged between 0% and 50.9% and PTT profitability declines have been more pronounced in more recent recessions, with a PTT percentage decline of more than 24% in three of the past four recessions.

15. The other measure used to derive the industry's cyclicality, PTT percent decline in revenues, does not demonstrate a high degree of cyclicality, with an average PTT percentage decline of 3.7% since 1952, which calibrates to "very low." We believe this is because of the mitigating factors referenced in paragraph 11 above. Still, given our assessment of moderately high cyclicality in profitability, the cyclicality for the industry calibrates to "moderately high risk" (category 4). We generally consider that the higher the level of profitability cyclicality in an industry, the higher the credit risk of entities operating in that industry. However, the overall effect of cyclicality on an industry's risk profile may be mitigated or exacerbated by an industry's competitive and growth environment.

Competitive risk and growth

16. We view the agribusiness and commodity food sector as having an "intermediate" (category 3) competitive risk and growth assessment. To assess competitive risk and growth, we evaluate four subfactors as low, medium, or high risk. These subfactors are:

- Effectiveness of industry barriers to entry;
- Level and trend of industry profit margins, including ability to manage cost structure;
- Risk of secular change and substitution by products, services, and technologies; and
- Risk in growth trends.

Effectiveness of industry barriers to entry--Medium Risk

17. Barriers to entry for agribusiness and commodity food companies are moderate overall. Factors such as capital intensiveness and vertical integration are typically the most prevalent barriers to entry. Significant capital outlays to buy land, build a processing facility, and/or establish a distribution footprint with the requisite economies of scale to compete with well-established competitors, are meaningful barriers. So is vertical integration. For example, protein manufactures will generally either own livestock farms or have long-term supply agreements with farmers that supply their operating plants, which are strategically located near supply sources, thus prohibiting a competitor from outside a region from cost-effectively sourcing those supplies. Also, a few market leaders continue to dominate global grain sourcing, protein, and produce production through their entrenched global transportation and distribution infrastructure, including grain elevators, export terminals, and shipping capacity that supports the key growing regions of the world. Where these barriers exist, they can be significant differentiators in protecting existing market participants from new competition. The prevalence of these factors is not homogenous across the industry, however, resulting in our assessment of overall medium risk. Conversely, other segments (for instance, produce companies) are very fragmented and often composed of both large participants and many small, local operators, with limited geographic coverage, resulting in low protection against new entrants.

Level and trend of industry profit margins--High Risk

18. Several risk factors exist within the industry that can cause profit volatility, which is typically short-lived until supply/demand equilibrium is restored. These include weather-related harvest disruptions, disease outbreaks, government trade restrictions (or the possibility thereof), and excess industry capacity (particularly during supply shortages). In addition, several agribusiness and commodity food companies are subject to a highly competitive pricing environment because they typically cannot differentiate their product offerings sufficiently to maintain volume and share at above-market prices. Therefore, profitability can weaken significantly for the industry when cost inflation exists because higher pricing is not always a viable way to offset cost inflation. Although cost inflation may be short-term (such as temporarily higher shipping and rail rates, or higher feed costs until the next harvest), near-term cost inflation is often very material and not easily offset via pricing, which results in variable short-term profit trends.

Risk of secular change and substitution by products, services, and technologies--Medium Risk

19. Given the commodity nature of most agribusiness and commodity food companies' products, issuers in this industry are subject to substitution risk to varying degrees. For example, higher prices of commodity beef can lead to higher demand for pork and poultry offerings. Similar substitution also occurs for grains to varying degrees. Still, agribusiness and commodity food companies are critical to the food supply chain, and there is no fundamental substitute for food, so the risk of secular change in farming, sourcing, processing, and distributing food is low. The high degree of government regulation in this industry often helps mitigate substitution risk as well. For example, several governments impose regulations that generally favor domestic producers over imports by providing subsidies and imposing import tariffs and/or quotas, which limit the threat of import substitutes. Given these offsetting factors, we view this subfactor as medium risk.

Risk in growth trends--Medium Risk

20. Agribusiness and commodity foods companies have favorable long-term growth prospects, reflecting the high correlation of food demand to not only GDP growth, but also population growth irrespective of economic performance. Global demographic trends support above-average long-term emerging market demand because as these economies grow, their populations' diets migrate to protein-based diets, which leads to higher demand for agricultural commodities, particularly grains required to feed animals used for human consumption (e.g., cattle, pork, and poultry).

21. Still, short-term growth trends are difficult to forecast, given the uncertainty over crop and harvest sizes, which are key determinants of near-term volume and profit performance.

Country risk

22. Country risk plays a critical role in determining all ratings on companies in a given country. Country-related risk factors can have a substantial effect on company creditworthiness, both directly and indirectly. While our sovereign credit ratings suggest the general risk local entities face, the sovereign ratings may not fully capture the risk applicable to the private sector. We look beyond the sovereign rating to evaluate the specific economic, demographic, and other country risks that may affect the entity's creditworthiness. In assessing country risk for agribusiness and commodity food companies, our analysis uses the same methodology as with other corporate issuers (see "Corporate Methodology").

23. Because revenues for many agribusiness and commodity food companies are sensitive to commodity price changes, we generally determine exposure to country risk using EBITDA instead of sales. However, for companies with significant processing, sourcing, and/or distribution footprints, this may not capture country risks beyond those affecting demand and profit potential. Therefore, if country exposure by assets is available and indicative of a materially different country risk exposure profile, we may use assets to capture weak-link risk. This could be the case, for instance, if a company's production or sourcing footprint is in countries with a less favorable risk profile than that of where it derives its revenue from, and if those assets are not easily movable. Although less frequently, in some circumstances we would determine exposure to country risk using revenues, as this information is consistently available.

Competitive position (including profitability)

24. Under our corporate criteria, a company's competitive position is assessed as 1) excellent, 2) strong, 3) satisfactory, 4) fair, 5) weak, or 6) vulnerable. In assessing the competitive position for agribusiness and commodity food issuers, we review an individual company's

- Competitive advantage;
- Scale, scope, and diversity;
- Operating efficiency; and
- Profitability.

25. The first three components are independently assessed as either 1) strong, 2) strong/adequate, 3) adequate, 4) adequate/weak, or 5) weak. Profitability is assessed through the combination of the level and volatility of profitability.

26. After evaluating competitive advantage, scale, scope, diversity, and operating efficiency, we determine the preliminary competitive position by ascribing a specific weight to each component. The applicable weightings will depend on the company's competitive position group profile (CPGP). The CPGP assigned to most agribusiness and commodity food companies is "commodity focus/scale driven," whereby we weigh the first three subfactors of competitive position as follows: competitive advantage (10%); scale, scope, and diversity (55%); and operating efficiency (35%). Many of these companies require sizable capital investments and asset outlays to obtain economies of scale to cost effectively provide food and ingredient solutions to industrial food companies, and, to a lesser degree, branded product offerings to the retail consumer channel.

27. We also assign the "services and product focus" CPGP to commodity food companies that have a significant branded consumer product component to their product offerings, including more than 50% of EBITDA or operating income generated from such products. Examples include produce companies whose products consist primarily of branded retail offerings, and, to a lesser extent, meat processors who primarily offer branded, value-added retail products.

Competitive advantage

28. An assessment of agribusiness and commodity food companies' competitive advantage includes an assessment of market share, strength and breadth of product offerings and customer base, and overall effectiveness of operating strategy.

29. We evaluate market share and changes in share in key markets both regionally and globally. Market size and growth prospects are also components of this assessment.

30. We evaluate the strength and breadth of product offerings and customer base by assessing the degree to which a company has invested in a deep product portfolio as well as more value-added products. The latter includes ingredients and other value-added solutions for food manufacturers, or even having some branded products supported by intellectual property (low calorie sweeteners, for example). Being more solutions-oriented with consumers and offering additional services (such as agronomy services to farmers) are additional factors in our analysis of product offering strength. We also evaluate the strength of the relationships these companies have developed with their respective customer and supplier bases.

31. When assessing the overall effectiveness of operating strategy, we evaluate the degree to which a company's structure and strategy (e.g., being vertically integrated across various phases of production) enables a company to maintain above-average profitability and growth prospects.

32. An agribusiness and commodity food company with a "strong" or "strong/adequate" competitive advantage assessment typically is characterized by a combination of:

- Leading market shares, particularly if such shares are in more value-added products and in regions of the world with more favorable sourcing and/or growth prospects. This would typically include a top-two or -three market share position in at least three key growing/processing regions and/or global agricultural commodities. A significant portion of the product portfolio has some value-added aspect or service to distinguish it from a pure commodity input; for example, a tailored offering of sweeteners and/or texturizers for a food manufacturer that is difficult to duplicate without significant investment.

- Long-tenured, strong supply relationships either with farmers or leading global food manufacturers that result in a favorable competitive advantage versus companies selling in the commodity markets to intermediaries and other industry constituents. For example, a company may have above-average sourcing capabilities and/or customer retention because it offers a broad spectrum of services to customers, such as farmer agronomical and/or financial/risk management solutions to improve crop performance and minimize volatility.

- A distinct strategic advantage over competitors. For example, a company that has a comprehensive crop or commodity food sourcing, manufacturing, and distribution footprint across several key sourcing regions, which leads to more stable performance relative to its peers. This enables the company to achieve above-market-average processing margins, better logistics and basis management (the management of inter-regional price/cost disparities), benefits from superior market intelligence (e.g., profit "optimization" decisions among trading, storing, processing, and other strategies that maximize the profits), and limited exposure to food safety risk such as disease and food supply contamination.
- A favorable regulatory environment (e.g., tariffs and quotas that protect the company).

33. An agribusiness and commodity food company with a "weak" or "adequate/weak" competitive advantage assessment typically is characterized by a combination of:

- A below-average or below-mid-tier market leadership position, or a leadership position in a very narrow segment of the market, such as a single agricultural crop, or dominance in only one region. Alternatively, it participates in markets with weak growth prospects or limited value-added opportunities (examples include commodity protein processing serving one channel, such as foodservice or regional crop input wholesaling).
- A portfolio of product offerings that are a true commodity with very limited value-added characteristics, which results in a high degree of substitution risk and/or low customer retention rates.
- Limited or no discernible logistics or procurement advantage in the company's business strategy to distinguish it from the competition.
- A sector-specific regulatory framework that compromises profit stability (e.g., overly restrictive pricing directives, tariffs, and/or trade restrictions on certain commodity foods).

Scale, scope, and diversity

34. In assessing an agribusiness and commodity food company's scale, scope, and diversity, we measure diversity as a percentage of volume or earnings, and evaluate diversity by geography, product category, business function, concentration or breadth of customers, manufacturing/sourcing locations, as well as concentration of key commodities. Our analysis considers the following:

- Size of earnings base, relative to close competitors.
- Geographic footprint; location, diversity, and characteristics of markets. Size and reach of asset base and/or logistics infrastructure.
- Diversification of business function (range of commodity merchandising/distribution, processing, services). Customer and/or counterparty diversification.

35. An agribusiness and commodity food company with a "strong" or "strong/adequate" assessment of its scale, scope, and diversity typically is characterized by a combination of:

- A comprehensive origination, distribution, and manufacturing footprint covering more than three key agricultural growing/herding/fishing regions around the globe to help limit supply concentrations during weak crop cycles, harvests, herd growth, or catches.
- Strong earnings diversity. An example for grain companies includes a well-balanced mix between merchandising (physical trading or sourcing, storing, and distributing agricultural

grains and other commodities) processing, and agricultural services. This may include a variety of product, logistics, hedging, and agronomy solutions (to farmers) and/or ingredients solutions (to industrial users).

- Strong diversity of processed products. For example, expanded corn-based products into sweeteners, ethanol, feed, and other milling products; or for protein companies, participation in several animal protein categories like poultry, pork, and beef, or several fish species. Favorable product diversity also includes a balanced product mix between pure commodity inputs to other manufacturers and value-added branded offerings (including private-label commodity offering to retail).
- A diverse customer base and/or counterparty base with limited customer or credit concentrations. Issuers typically would not have any one customer representing more than 30% of their overall sales. For grain merchandisers, no significant counterparty exposures would exist, or it could result in a more than 15% consolidated operating earnings decline if such counterparty were to default on a contractual obligation.

36. An agribusiness and commodity food company with a "weak" or "adequate/weak" scale, scope, and diversity assessment typically is characterized by a combination of:

- Significant sourcing concentration, including participation in only a few regions (typically less than three).
- Processing concentration in two or fewer primary commodities; for example, producing just one commodity protein or one agricultural commodity.
- Significant manufacturing and/or production concentration as measured by reliance on fewer than three manufacturing plants, and a limited footprint of storage and/or mixing facilities (for grain merchandisers and/or crop input wholesalers).
- Reliance on a single or few customers accounting for more than 30% of revenues, and/or having significant counterparty exposure in merchandising where one customer accounts for more than 15% of earnings.

Operating efficiency

37. In assessing an agribusiness and commodity food company's operating efficiency, we analyze:

- The strategic location of a company's storage facilities, distribution hubs (such as port and rail terminals), and processing facilities to evaluate whether such asset positioning provides distinct logistics advantages over peers.
- Competitiveness of manufacturing processes, including cost, production (including utilization rates), and procurement efficiencies.

38. For a company to warrant a "strong" or "strong/adequate" operating efficiency, it typically has some combination of these characteristics:

- A well-positioned asset footprint in a key commodity growing area that provides lower procurement and transportation costs, and offers a stable supply source, all of which result in better profitability. For example, protein producers whose plants are located closer to key cattle herding regions have lower sourcing costs and better operating margins (measured by operating profit as a percentage of sales).
- Above-average plant operating efficiencies and/or harvest yield, including better

manufacturing utilization rates. Economies of scale and efficiencies that lead to better profit margins versus peers, taking into account differences in sales mix and average selling prices.

- Extensive reach and well-established distribution infrastructure. Most companies will have a global distribution footprint or a comprehensive footprint in a leading economy for their respective agricultural commodity.
- Above-average sourcing and logistics management, including better basis management and above-average distribution and/or manufacturing margins.

39. For a company to warrant a "weak" or "adequate/weak" operating efficiency, it typically has these characteristics:

- A disadvantaged sourcing footprint and/or plant locations.
- Inconsistent manufacturing performance, including more variable utilization rates or harvest yields compared with peers.
- Substantial seasonality in the business and working capital requirements that could lead to excess inventory levels if seasonal demand is weaker than anticipated.

40. A poor track record of executing its strategy, including a history of operating underperformance and/or operating disruptions, that is more likely to contribute to supply chain deficiencies and operating inefficiency.

Profitability

41. The profitability assessment can confirm or modify the preliminary competitive position assessment. The profitability assessment consists of 1) the level of profitability and 2) the volatility of profitability. The two components are combined into the final profitability assessment using a matrix (see "Corporate Methodology").

Level of profitability

42. Level of profitability is determined on a three point scale: "above average," "average," and "below average."

43. We use EBITDA margin (which offers the most cross-company data) as the primary indicator for most agribusiness and commodity food companies' level of profitability, based on the thresholds defined by industry segment in table 1 below. However, we recognize that there are certain factors, like price inflation, that may distort an EBITDA margin analysis for many of the low-margin businesses in agribusiness, particularly grain processing and merchandising. Therefore, we use return on capital (ROC) for grain processors and merchandisers as explained in paragraph 44 below or, when available, a comparison of EBITDA or EBIT per unit sold as a supplementary indicator to refine our assessment, either when EBITDA margin is close to the thresholds for "below average" or "above average," or when we estimate that price inflation has and will likely change EBITDA margins by more than 50 basis points on a year-over-year basis. For instance, if a company's EBITDA margin is at the high end of the defined range for "average" but its ROC is comfortably in the "above average" range, we may assess its level of profitability as "above average." In accordance with the corporate criteria, for this assessment we typically determine the five-year average EBITDA margin and ROC using the last two years of historical data and three years of forecast; we may put more emphasis on forecast years if historical data is not deemed representative, or take into account deteriorating or improving profiles where prospective ratios

meaningfully differ from average ratios. In some cases, the application of local accounting rules (for companies that don't follow U.S. generally accepted accounting practices [GAAP] or international financial reporting standards [IFRS]) may warrant using different thresholds to account for financial reporting differences.

44. For grain processors and merchandisers, 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. 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 also rely on peer comparisons in order to assess whether a grain processor or merchandiser's profitability is "above" or "below average." ROC takes into account adjusted capital (including the adjustment that we make for adjusted readily marketable inventories [ARMI], if applicable; see our "Corporate Methodology: Ratios And Adjustments" for more information).

45. Our assessment may also consider level of profitability compared with a company's closest competitors. For example, a protein processor may have an EBITDA margin slightly below the guideline ranges, yet it may have stronger profitability than its closest competitors. In this example, we may conclude that its level of profitability is stronger than what its EBITDA margin would indicate.

46. Paragraphs 47 to 50 provide additional circumstances when a company's level of profitability assessment and its EBITDA margin may not align in the table below. However, for the majority of companies, the level of profitability and EBITDA margin will align.

Table 1

Level Of Profitability By Industry Segment

	EBITDA Margin		
	Below Average	Average	Above Average
Grain processors, merchandisers, and crop input wholesalers	Below 3%	3% to 5%	Above 5%
Commodity food ingredient companies	Below 12%	12% to 15%	Above 15%
Meat and other non-dairy animal protein processors	Below 5%	5% to 10%	Above 10%
Sugarcane crushers and processors	Below 32%	32% to 42%	Above 42%

47. For grain processors, merchandisers, and crop input wholesalers (seeds, fertilizer, and crop protectants), margin analysis may be misleading because inflation can distort profit trends. For example, in a stable profit-per-unit scenario, the percent of sales will nonetheless decrease during inflationary periods. Therefore, profit margin analysis is generally supplemented with other profit measures, such as EBITDA or EBIT per unit, or return on capital.

48. In analyzing the level of profitability of commodity meat companies, we also take into account differences in margin structure related to different national economies (e.g., commodity meat margins are typically two to four percentage points higher in Latin America than in the U.S.), different commodity meats (e.g., U.S. beef packing/processing margins are generally lower than chicken and pork margins), as well as the product mix impact of a company's offerings on its consolidated margin. For example, if a company offers a combination of commodity boxed meat

that on average earns low- to mid-single-digit margins, and value-added further-processed products that on average generate closer to a low-double-digit margin, we would not view that company's consolidated margin as "above average" since it is being inflated by a higher-margin product mix.

49. The margin guidelines for sugar cane processors in table 1 apply to issuers in Latin America, where the predominance of our ratings for this subsector currently exist. Margin structures for sugar cane producers in other regions may differ from the ranges outlined in table 1. In such circumstances we would also compare the EBITDA margin for the processor in that region with our estimates for the industry average for that region.

50. For produce companies, margins depend on the product the company is marketing, and we would compare the EBITDA margin on a product-specific basis, and compare whether the issuer's EBITDA margin is above, in line, or below our estimates for the industry average for that specific product.

Volatility of profitability

51. The volatility of profitability is determined on a six point scale, from "1" (least volatile) to "6" (most volatile).

52. We typically use EBITDA to determine the standard error of regression (SER) for agribusiness and commodity food companies. When a company's EBITDA is distorted due to significant swings in foreign currency or acquisition activity, we will determine SER based on EBITDA margins or return on capital, if, in our opinion, those measures provide a more accurate picture of the underlying level of earnings (which we believe is the case for commodity food ingredient companies). We only determine SER when companies have at least seven years of historical data, to ensure the results are meaningful. In the event there are anomalies in the seven-year historical data, we use a peer proxy to establish the volatility assessment. If no peer exists, then we perform an assessment based on expected volatility as outlined in our corporate methodology.

PART II--Financial Risk Analysis

Accounting and analytical adjustments

53. In assessing the accounting characteristics of agribusiness and commodity food companies, the analysis uses the same methodology as with other corporate issuers. Our analysis of a company's financial statements begins with a review of the accounting to determine whether the statements accurately measure a company's performance and position relative to its peers and the larger universe of corporate entities. To allow for globally consistent and comparable financial analyses, our rating analysis may include quantitative adjustments to a company's reported results. These adjustments also enable better alignment of a company's reported figures with our view of underlying economic conditions. Moreover, they allow a more accurate portrayal of a company's ongoing business. Adjustments that pertain broadly to all corporate sectors, including this sector, are discussed in "Corporate Methodology: Ratios And Adjustments". Accounting characteristics and analytical adjustments that are unique to this sector are discussed below.

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Cash flow/leverage analysis

56. The pattern of cash flow generation, current and future, in relation to cash obligations is often the best indicator of a company's financial risk. Cash flow/leverage analysis is the foundation for assessing an issuer's financial risk profile. The assessment of a corporate's cash flow/leverage is assessed on a scale of 1) minimal, 2) modest, 3) intermediate, 4) significant, 5) aggressive, and 6) highly leveraged.

Core ratios

57. In assessing the cash flow/leverage of agribusiness and commodity food companies, we utilize two core ratios: debt to EBITDA and funds from operations (FFO) to debt. We determine these ratios in accordance with our ratios and adjustments methodology. When there is a divergence in ratios--for instance, when leverage indicates one financial risk descriptor and FFO to total debt indicates another--we will place more emphasis on certain supplemental ratios (see "Supplemental ratios" below).

58. If a company is working capital or capital intensive, or if the preliminary cash flow leverage assessment is "significant" or weaker, then two interest coverage ratios, EBITDA to interest and FFO plus interest to cash interest, will be given greater importance as supplemental ratios. These ratios become more important in our analysis of companies with highly seasonal businesses and resultant significant intrayear swings in working capital investment needs, such as crop input wholesalers. The seasonal companies typically borrow to fund their increased working capital investment and the interest coverage ratios capture all annual interest costs.

Supplemental ratios

59. In addition to our analysis of a company's core ratios, we also consider supplemental ratios in order to develop a fuller understanding of a company's credit risk profile and fine tune our cash flow analysis. We consider the following as supplemental ratios:

- Debt coverage ratios: free operating cash flow (FOCF) to debt and discretionary cash flow to debt.
- Interest coverage ratios: EBITDA to interest and FFO to interest.

60. For most agribusiness companies, we typically apply the standard supplemental ratio of FOCF to debt. This is done because of the somewhat capital intensive nature of commodity food processing, even though their ratio of ongoing capital spending to sales is generally less than 10% and depreciation to sales is less than 8%, ratios we consider reflective of capital-intensive companies.

61. For companies that make significant dividend distributions we apply the discretionary cash flow (DCF) to debt supplemental ratio.

62. If the preliminary cash flow leverage assessment is "significant" or weaker, then two coverage ratios, FFO plus interest to cash interest and EBITDA to interest, will be given greater importance as supplemental ratios.

63. Because several sectors of the agribusiness and commodity foods industry have a history of earnings and cash flow volatility, we often need to include a volatility adjustment to our final cash flow leverage assessment. This is done by applying the volatility adjustment defined in our corporate criteria.

PART III--Modifiers

Diversification/portfolio effect

64. In assessing the diversification/portfolio effect of agribusiness and commodity foods companies, we would apply the corporate criteria. However, it is rare to find such diversification as defined in our criteria in the agribusiness and commodity foods sector. To the extent a company does own several lines of businesses, the businesses tend to be interrelated and their earnings tend to correlate positively with each other (for example, grain merchandising and crop input wholesaling).

Capital structure

65. In assessing the quality of an agribusiness and commodity food company's capital structure, our analysis uses the same general methodology as with other corporate issuers (see "Corporate Methodology").

Liquidity

66. In assessing the liquidity of an agribusiness and commodity food company, our analysis uses the same general methodology as with other corporate issuers (see our liquidity criteria: "Methodology And Assumptions: Liquidity Descriptors For Global Corporate Issuers"), except for certain adjustments as described below.
67. This paragraph has been deleted.
68. This paragraph has been deleted.
69. This paragraph has been deleted.

Financial policy

70. In assessing financial policy on agribusiness and commodity food companies, our analysis uses the same methodology as with other corporate issuers (see "Corporate Methodology").

Management and governance

71. In assessing management and governance on an agribusiness and commodity food company, our analysis uses the same methodology as with other corporate issuers (see "Corporate Methodology").

Comparative ratings analysis

72. In assessing the comparative ratings analysis on an agribusiness and commodity food company, our analysis uses the same methodology as with other corporate issuers (see "Corporate Methodology").
73. One important factor to consider in our comparative ratings analysis is that grain merchandisers and vertically integrated livestock companies are heavy users of derivatives to hedge against price

risk of their commodity positions, which can lead to significant cash collateral calls, counterparty exposures, and even debt-like obligations for significantly out-of-the-money derivative positions. Therefore, we want to ensure that a company's use of derivative positions doesn't lead to any outsize losses, payment obligations, and/or margin calls that would otherwise compromise a company's financial leverage and liquidity position. If such credit risks are more prevalent for a company when compared with its peers at the same rating level, we may use an unfavorable rating modifier.

REVISIONS AND UPDATES

This article was originally published on Jan. 29, 2015. These criteria became effective on Jan. 29, 2015, and updated and superseded "Key Credit Factors For The Agribusiness And Commodity Foods Industry," published Nov. 19, 2013.

Changes introduced after original publication:

- Following our periodic review completed on Jan. 29, 2016, we updated contact information and criteria references and deleted paragraphs 2, 7, and 8, which were related to the initial publication of the criteria and no longer relevant.
- Following our periodic review completed on Jan. 27, 2017, we updated paragraph 69 to reflect the reference to paragraphs 86 and 87 of the criteria article titled "Commodities Trading Industry Methodology," published on Jan. 19, 2017.
- Following our periodic review completed on Jan. 19, 2018, we changed "Appendix: Change History" to the "Revisions And Updates" section.
- On March 4, 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 54 and 55 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 Dec. 4, 2019, we republished this criteria article to make nonmaterial changes. We deleted paragraphs 67, 68, and 69 because they were superseded by "Methodology And Assumptions: Liquidity Descriptors For Global Corporate Issuers" (liquidity criteria), published Dec. 16, 2014. The sector-specific liquidity adjustments previously included in those paragraphs are now included in the guidance supporting the liquidity criteria. We also updated criteria references.
- On July 28, 2020, we republished this criteria article to make nonmaterial changes to update criteria references.

RELATED PUBLICATIONS

Related Criteria

- Corporate Methodology: Ratios And Adjustments, April 1, 2019
- Commodities Trading Industry Methodology, Jan. 19, 2017

- Methodology And Assumptions: Liquidity Descriptors For Global Corporate Issuers, Dec. 16, 2014
- Corporate Methodology, Nov. 19, 2013
- Country Risk Assessment Methodology And Assumptions, Nov. 19, 2013
- Methodology: Industry Risk, Nov. 19, 2013
- Methodology: Management And Governance Credit Factors For Corporate Entities, Nov. 13, 2012
- General Criteria: Principles Of Credit Ratings, Feb. 16, 2011

Related Guidance

- Guidance: Liquidity Descriptors For Global Corporate Issuers, Dec. 4, 2019
- Guidance: Corporate Methodology: Ratios And Adjustments, April 1, 2019

These criteria represent the specific application of fundamental principles that define credit risk and ratings opinions. Their use is determined by issuer- or issue-specific attributes as well as S&P Global Ratings' assessment of the credit and, if applicable, structural risks for a given issuer or issue rating. Methodology and assumptions may change from time to time as a result of market and economic conditions, issuer- or issue-specific factors, or new empirical evidence that would affect our credit judgment.

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