

Criteria | Corporates | Industrials:

**Key Credit Factors For The Specialty
Chemicals Industry**

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Key Credit Factors For The Specialty Chemicals Industry

(Editor's Note: We're republishing this article following our periodic review completed on Dec. 7, 2017. See the "Revisions And Updates" section for details.)

1. This article describes Standard & Poor's Ratings Services' methodology and assumptions for the specialty chemicals industry. This article aims to help market participants better understand the key credit factors in this industry. This article is related to our global corporate criteria (see "Corporate Methodology," published Nov. 19, 2013) and to our criteria article "Principles Of Credit Ratings," which we published on Feb. 16, 2011.
2. This paragraph has been deleted.

SCOPE OF THE CRITERIA

3. These criteria apply to specialty chemical companies, globally. By specialty chemical companies we mean issuers that derive a majority of their revenue from the production of specialty chemicals. This includes producers of industrial gases, coatings, advanced materials, and numerous other specialty chemicals. These criteria do not cover companies deriving more than 50% of sales from chemical products distribution. For those companies, see "Key Credit Factors For The Business and Consumer Services Industry," published Nov. 19, 2013. These criteria also do not cover companies that derive a majority of their revenue from the production of commodity chemicals; for those issuers we apply our criteria "Key Credit Factors For The Commodity Chemicals Industry," published Dec. 31, 2013.

SUMMARY OF CRITERIA UPDATE

4. We view specialty chemicals as a "low risk" industry under our criteria, given its "intermediate" cyclicity risk and "low" degree of competitive risk and growth. In assessing the competitive position of a specialty chemical issuer, we put particular emphasis on market position and growth prospects of its market segments, product differentiation, technical and service capabilities, level of product and end-market diversity, production efficiency, and ability to pass through volatile raw material costs effectively. In our assessment of the financial risk profile, we believe capital investment requirements and industry- or company-specific working capital characteristics (including seasonality and cyclicity of cash flows) are important factors, so we focus on the ratio of free operating cash flow to debt in addition to our core ratios.
5. This paragraph has been deleted.
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METHODOLOGY

Part I--Business Risk Analysis

Industry risk

7. Within the framework of our corporate methodology for assessing industry risk, we view specialty chemicals as a "low risk" industry (category 2). This is derived from our view of the segment's "intermediate" (category 3) cyclicalities, and our assessment that the industry warrants a "low risk" (category 2) competitive risk and growth assessment.
8. Key drivers of cyclicalities in the specialty chemicals industry include the level of global economic growth, industrial and manufacturing production, capacity utilization, and the balance of industry supply and demand. Because of the heterogeneous nature of specialty chemicals, overall cyclicalities of demand can vary significantly across industry segments depending on the characteristics of specific end markets. For many specialty chemical producers, cyclicalities can be exacerbated by volatility in energy costs or the price of raw materials, which are often commodity chemicals. However, many specialty producers have the ability to mitigate this volatility with pass-through provisions or value-added pricing.
9. Pricing competition is not typically a significant factor for specialty chemical companies. The price sensitivity of customers tends to be limited because specialty chemicals often represent a small proportion of customers' overall cost of production. Along with differentiated products, many companies also include a significant technological service component. In addition, in certain highly engineered or regulated end markets, customers can face very high switching costs once a product is specified.

Cyclicalities

10. We assess cyclicalities for the specialty chemical industry as "intermediate risk" (category 3). The industry has demonstrated greater cyclicalities--relative to other industries--in profitability, with more moderate cyclicalities in revenue. We use revenue and profitability as two key measures to derive an industry's cyclicalities assessment (see "Methodology: Industry Risk"). Based on our analysis of global Compustat data, specialty chemical companies experienced an average peak-to-trough (PTT) decline in revenues of about 4% during recessionary periods since 1950. In only the most recent recession (2007-2009) did revenue decline significantly more than the 4% average, with a decline of 18%. Over the last 63 years, specialty chemical companies experienced an average PTT decline in EBITDA margin of about 12% during recessionary periods. In the two most recent periods, declines exceeded the 12% average.
11. With an average drop in revenues of 4% and an average profitability decline of 12%, the specialty chemicals sector cyclicalities assessment calibrates to "intermediate risk" (category 3). We generally consider that the higher the level of profitability cyclicalities in an industry, the higher the credit risk of entities operating in that industry. However, the overall effect of cyclicalities on an industry's risk profile may be mitigated or exacerbated by an industry's competitive and growth environment.

Competitive risk and growth

12. We view specialty chemicals as warranting a "low" (category 2) competitive risk and growth assessment. To assess competitive risk and growth, we assess four subfactors as low, medium, or high risk. These subfactors are:
- Effectiveness of industry barriers to entry;
 - Level and trend of industry profit margins;
 - Risk of secular change and substitution by products, services, and technologies; and
 - Risk in growth trends.

Effectiveness of the specialty chemicals industry's barriers to entry--Low Risk

13. Barriers to entry in the specialty chemical industry are typically high. The specialized nature of products leads to significant differentiation. Substantial research and development (R&D) requirements, technical know-how, capital intensiveness, service capabilities, customer relationships, and engineered or regulated specifications also create important barriers to entry. Although these barriers are not homogeneous across the industry, most specialty chemical companies enjoy the benefits of one or more of them. Because of this, even fragmented industry sectors tend to be protected against new entrants.

Level and trend of specialty chemicals industry profit margins-- Medium Risk

14. Industry profit margins show a moderate degree of sensitivity to global economic growth, although they tend to be somewhat more stable than profit margins in commodity chemical industry. Because of their differentiated and value-added nature, many specialty product lines enjoy higher sustained profitability levels than commodity products. The ability to consistently develop new products and successfully bring them to market typically provides both revenue and profit margin growth potential. Extending existing products to new applications can also enhance competitiveness and profit margins. Many specialty chemical producers are actively engaged with customers in R&D and deliver a high level of contracted or in-house technical assistance.
15. Nevertheless, industry market share, the balance of supply and demand, competitive dynamics, and end-market demand conditions play a major role in profitability. In addition, because of the evolving and technical nature of many specialty products, new developments can pose a risk to profit margins of existing product lines and some weaker or more concentrated industry participants.
16. Specialty chemical companies are exposed to changes in input costs, including raw materials, energy, and labor. Companies are generally able to offset the impact of higher input costs via higher selling prices and maintain or improve profitability. However, in cases where there are competitive pressures that do not allow for higher selling prices, the ability to offset input cost increases through productivity gains or other cost reductions gains importance with respect to maintaining profit margins.

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

17. The technical and service attributes of many specialty products substantially limits the risk of substitution. Due to engineering or regulatory requirements in many end markets, specialty chemical products are often specified in the early stages of customer production and cannot be altered without significant cost. Even without specification, customers are typically reluctant to switch specialty chemical products because they tend to impart specific and integral performance attributes, which cannot be easily replicated, and they usually represent a small portion of total

production costs. In addition, the ubiquitous and varied nature of specialty chemical products means that there is little risk of substitution from outside the industry. Nevertheless, many late-cycle specialty chemical products are at risk of commoditization or replacement by newly developed products or new applications of existing products.

Risk in specialty chemicals industry growth trends--Low Risk

18. Specialty chemical industry growth trends are generally tied to global economic conditions, but can vary significantly by product line. Although there are a diverse range of products in the industry, many specialty chemical producers are able to fund growth projects internally because of healthy margins, return on capital, and cash generation. This investment, along with steadily growing global demand for specialty products, generally allows industry growth to exceed global GDP growth.
19. Factors that are generally supportive of long-term demand for specialty chemical industry growth include rising standards of living in developing regions, a secular shift to higher performing products and specific application requirements in industrial production, and shifting global or country-specific energy, health, or environmental policies or regulations that require specialty chemical attributes.

Country risk

20. 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. In assessing country risk for a specialty chemical company, our analysis uses the same methodology as with other corporate issuers (see "Corporate Methodology"). A key factor in our business risk analysis for corporate issuers is the country risk assessment, which includes the broad range of economic, institutional, financial market, and legal risks that arise from doing business in a specific country.
21. We generally determine exposure to country risk using revenues, as this information is consistently available. However this may not capture country risks beyond those affecting demand potential. Therefore, if country exposure by EBITDA or assets is available and indicative of a materially different country exposure profile, we may use EBITDA or assets to capture weak-link risk. This could be the case, for instance if a company's production footprint is in countries with a higher risk profile than where it derives its revenue from, and if those assets are not easily movable.

Competitive position (including profitability)

22. Under our corporate methodology, 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 specialty chemical issuers, we review an individual company's
 - Competitive advantage;
 - Scale, scope and diversity;
 - Operating efficiency; and
 - Profitability.
23. 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 two subcomponents: the level of profitability and the volatility of profitability.

24. After evaluating separately competitive advantage, scale, scope, diversity, and operating efficiency, we determine the preliminary competitive position assessment 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 the majority of specialty chemical issuers is "capital or asset focus," whereby we weight the first three components of competitive position as follows: competitive advantage (30%); scale, scope, and diversity (30%); and operating efficiency (40%). Most specialty chemical companies manufacture products with a meaningful degree of differentiation and require moderate capital investment to sustain market position and operating performance. In order to minimize the impact of volatile raw material costs and cyclical demand patterns, controlling costs and maximizing production efficiency are generally the most important determinants of competitiveness.

Competitive advantage

25. In assessing the competitive advantage of a specialty chemical company, we consider:
- Its market position, the robustness and sustainability of its business strategy, and its track record of execution;
 - Its product or service profile, including differentiation attributes, technical expertise, and service capabilities; and
 - Its ability to maintain sufficient R&D and capital investment.
26. In evaluating business strategy and execution, we consider a company's relative success, or lack thereof, at establishing leadership positions in the markets in which it competes, and at protecting or growing market shares in a profitable manner. Leading specialty chemical producers are generally able to adjust their strategies to evolving market conditions in order to build a pricing advantage and sustain revenue and profitability growth even amid somewhat adverse market conditions. Because of the heterogeneous nature of the specialty chemical industry, it is important to consider a company's positioning in the context of its specific industry segment, including growth prospects, barriers to entry, capital-intensity, and supply-demand balance profile of those markets. Generally, revenue or margins trends that are at odds with prevalent industry conditions or that of other competitors can be indicative of an improving or deteriorating competitive advantage.
27. In evaluating a specialty chemical company's product or service profile, we consider a company's ability to differentiate its products from those of competitors, to customize its products to the specifications of customers, and to develop new and innovative product lines. Brand name recognition is often associated with product quality and added value in the specialty chemical industry. Specialty chemical companies that successfully differentiate their products from those of competitors are often characterized by innovative product development, value-added formulations, high-performance attributes, and a high level of technical service. These qualities can create greater customer loyalty and allow those producers greater power to enact regular price increases and maintain higher and more stable margins.
28. We consider the ability to maintain sufficient R&D spending and capital investment as important for specialty chemical companies. R&D and capital projects in the specialty chemical industry tend to rely on market knowledge and technical strength in product innovation to achieve success. A subpar or limited track-record of successful capital investment and innovation would limit competitive advantage and likely indicate weaker profitability.
29. A specialty chemical company with a "strong" or "strong/adequate" competitive advantage assessment typically is characterized by a combination of:

- Leading or near-leading market position and successful strategic positioning demonstrated by an ability to profitably protect or grow leading market shares in the key industry segments in which it competes;
 - Participation in industry segment(s) with favorable medium and long-term growth prospects and/or supply-demand balance characteristics;
 - Strong leverage with customers and customer stickiness, achieved through a high degree of product differentiation, highly valued science or technical expertise, or product specification;
 - Robust R&D and technical capabilities, leading to proficiency at developing and bringing to market new product formulations and applications to reflect market demand.
30. A specialty chemical company with a "weak" or "adequate/weak" assessment of its competitive advantage typically is characterized by a combination of:
- Meaningfully weaker or eroding market position and strategic positioning than leading competitors in the industry segments in which it competes;
 - Participation in industry segment(s) with unfavorable medium and long-term growth prospects and/or supply-demand balance characteristics;
 - Inability to maintain leverage with customers or customer stickiness, because of lack of differentiated product or limited technical expertise;
 - Lack of or limited R&D capabilities and constrained technical abilities, leading to inability to develop new product formulations or applications.

Scale, scope, and diversity

31. In assessing the scale, scope, and diversity of a specialty chemical company, we consider:
- The depth and breadth of its product offering, and the diversity of its raw material inputs and end-markets;
 - The relative size of its revenue base and that of its target markets;
 - the geographic balance of its sales, profits, and manufacturing footprint; and
 - Its level of supplier and customer concentration.
32. Size and scale of operations often afford better diversity. Many rated issuers in specialty chemicals are relatively small niche players with limited product and geographic diversity, high dependence on relatively few customers or end markets, and, therefore, have a high sensitivity to relatively small changes in demand, market share loss, or other adverse market conditions.
33. Product, end-market, and raw material diversity are important factors for specialty chemical companies, because a narrow focus can make a company more vulnerable to cyclical pressures. However, the degree to which these factors are correlated affects the potential benefit to a company's stability of earnings and cash flows. A wider range of inputs can mute the impact of volatility of any particular raw material cost. Exposure to a wide array of end markets can lead to more stable demand patterns and improve the stability of earnings. The relative attractiveness of these end markets (in terms of size, expected growth, cyclicalities, barriers to entry, intensity of competition, etc.) and how the company is positioned in those markets also impacts our assessment.
34. Diversity of production is important to the sustainability of earnings and cash flows. Multiple production facilities can insulate a chemical producer from event risks, such as extreme weather or facility-specific operational problems. Multiple production lines at a single facility could serve to partially mitigate the lack of diversity for a single-site

producer. Geographic diversity can offer enhanced growth prospects through exposure to developing regions with higher growth rates than more mature markets. Globally diversified specialty chemical companies typically feature multiple production facilities spread across geographic regions. Such diversity of sales and production limits exposure to economic or political risk in any given nation or region.

35. Significant customer concentration (i.e., sales to a single customer that exceed 10% of total sales) often limits pricing flexibility, and can adversely affect operating performance if that customer is facing its own business or financial challenges. In the same way, significant supplier concentration often limits a company's flexibility to control costs in the absence of a beneficial contractual agreement. In certain cases, there can be a high level of interdependence between chemical companies and suppliers or customers. In such cases where there are co-located facilities or sole-supplier arrangements, some degree of concentration could be favorable.
36. A specialty chemical company that warrants a "strong" or "strong/adequate" assessment of scale, scope, and diversity typically is characterized by a combination of:
- Revenue base and/or target markets of large size relative to that of other participants in the industry;
 - Well-diversified portfolios, in which all products are not subject to the same external factors, such as raw material prices, regulations, or cyclicalities;
 - Products aimed at a wide array of not closely correlated end markets with an adequate balance of cyclical and noncyclical demand and favorable supply-demand fundamentals;
 - Geographically diversified revenue base and production footprint in both developed and developing markets;
 - Well diversified raw material supplier base and no significant dependency on any single raw material, and well diversified customer base.
37. A specialty chemical company warranting a "weak" or "adequate/weak" assessment of scale, scope, and diversity typically is characterized by a combination of:
- Revenue base and/or target markets of limited size relative to other participants in the industry;
 - Narrowly focused product portfolio, reflecting participation in only a very small number of end markets, regions, or product categories that have limited growth prospects, or that are closely correlated to one another;
 - Reliance on a single raw material or single source thereof;
 - Concentration of production at a single facility or a very small number of facilities;
 - An elevated degree of customer or supplier concentration (for instance the largest customer accounts for 10% or more of sales or operating profit) that is not mitigated by the characteristics of the customer or supplier base.

Operating efficiency

38. In assessing operating efficiency for a specialty chemical company, we consider:
- Its relative cost position versus industry peers;
 - The flexibility of its cost structure in absorbing volatility of demand or input costs;
 - Its success in passing through raw material costs; and
 - Its flexibility of production.
39. To the extent a specialty chemical company has a high degree of operating efficiency, it should be able to generate better profit margins than peers that compete in the same markets, whatever the nature of the prevailing market conditions.

40. In evaluating the relative cost position of a specialty chemical company compared to that of its peers, we primarily consider its EBITDA margin profile, supplemented by various indicators of cost efficiency and capital intensity, such as gross margin, the ratio of SG&A (selling, general, and administrative expenditures) to sales, margin over raw material costs, time lag in passing through raw material costs, percentage of contracts with raw material pass-through provisions, and the ratio of capital spending to sales. Both the overall cost and margin profile of a specialty chemical company and that of its various reporting segments are important in our analysis.
41. A specialty chemical company can demonstrate cost structure flexibility by limiting profit margin and cash flow deterioration in a cyclical downturn or by improving margins relative to industry segment peers in more stable periods. During weaker periods, a company's ability to quickly reduce costs, either naturally through reduced variable costs, or through specific actions, such as permanent labor force reductions or facility closures, is an indicator of cost flexibility. During other periods, companies that can minimize costs through production process improvements and improve cash flow through working capital management demonstrate cost efficiency.
42. The ability to pass through volatile raw material costs without jeopardizing profitability is critical for many specialty chemical companies. In many cases, raw materials and energy account for greater than 50% of the cost of goods sold, so volatility has a significant impact on profitability. Specialty chemical companies that have positioned themselves to pass through these costs typically demonstrate more stable margins and better operating efficiency. The amount of time it takes to pass through these costs determines the extent of this benefit.
43. In reviewing a specialty chemical company's flexibility of production, we consider the company's ability to reduce its raw material input requirement, shift raw material inputs, or optimize production across facilities. Companies that can improve production processes to reduce the amount of raw material inputs required can enhance profitability and improve their competitive positions relative to peers. In addition, companies that are able to use different inputs--whether entirely different inputs or different grades of the same material--can often achieve a similar benefit. The ability to optimize production across facilities can also improve profitability by maximizing fixed cost absorption and taking advantage of differences in regional production costs.
44. A specialty chemical company with a "strong" or "strong/adequate" operating efficiency assessment typically is characterized by a combination of:
- Profitability, as measured primarily by EBITDA margins, that is consistently higher than peers (after taking into account differences in sales mix that also affect profit margins);
 - A track record of ongoing cost structure improvements, such as ongoing measurable lean manufacturing practices, variable cost optimization, labor cost reductions, low cost sourcing, working capital management, or capacity rationalization;
 - Strong ability to pass through raw material costs and a high percentage of contracts with raw material pass-through provisions;
 - Flexibility to optimize global production, by altering the balance of raw material inputs or shifting production to more favorable facilities.
45. A specialty chemical company with a "weak" or "adequate/weak" assessment of its operating efficiency typically is characterized by a combination of:

- Profitability, as measured primarily by EBITDA margins, that is below its peer group (after taking into account differences in sales mix that also affect profit margins);
- Limited track record of cost reduction initiatives reflected by higher-than-industry peers' labor and sourcing costs, excess capacity, poor working capital management, or lack of measurable lean manufacturing practices;
- Inability to pass through raw material costs effectively and/or limited or lack of protections from contracts;
- Limited or lack of production flexibility.

Profitability

46. The profitability assessment can confirm or modify the preliminary competitive position assessment. The profitability assessment consists of two components: (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

47. The level of profitability is determined on a three point scale: "above average," "average," and "below average."
48. We use EBITDA margin as the primary indicator of a specialty chemical company's level of profitability, based on thresholds identified in Table 1 below. We use return on capital (ROC) as a supplementary indicator to refine our assessment when EBITDA margin is close to the thresholds for "below average" or "above average" (see ROC thresholds in Table 2). For instance, if a company's EBITDA margin is at the high end of the defined range for "average" but its return on capital is comfortably in the "above average" range, we would assess its level of profitability "above average." In accordance with the global corporate criteria, for this assessment we typically determine the five year average EBITDA margin and ROC using the last two years of historical, and our forecast for the current year and the following two years; we may put more emphasis on forecast years if historical data is not deemed representative or does not 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 non-U.S. GAAP [generally accepted accounting principles] or non-IFRS [international financial reporting standards] reporting companies) may warrant using different thresholds to account for financial reporting differences.
49. We use EBITDA margin and ROC thresholds to differentiate all specialty chemical companies.

Table 1

EBITDA Margin Thresholds		
Below average	Average	Above average
<12%	12-20%	> 20%

Table 2

Return On Capital Thresholds		
Below average	Average	Above average
< 8%	8-18%	> 18%

Volatility of Profitability

50. The volatility of profitability is determined on a six point scale, from '1' (lowest volatility) to '6' (highest volatility).
51. In accordance with our global corporate criteria, we generally determine the volatility of profitability assessment using the standard error of regression (SER), subject to having at least seven years of historical annual data. We generally

use nominal EBITDA as the metric to determine the SER for specialty chemical companies, although we may also use EBITDA margin or ROC. In accordance with the global corporate criteria, we may--subject to certain conditions--adjust the SER assessment by up to two categories better (less volatile) or worse (more volatile). If we do not have sufficient historical information to determine the SER, we follow the global corporate criteria guidelines to determine the volatility of profitability assessment.

Part II-Financial Risk Analysis

Accounting and analytical adjustments

52. In assessing specialty chemicals companies' accounting characteristics, our analysis uses the same methodology as with other corporate issuers (see "Corporate Methodology"). Our analysis of a company's financial statements begins with a review of its accounting to determine whether the statements accurately measure the 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 industries, including this industry, are discussed in "Corporate Methodology: Ratios And Adjustments," published Nov. 19, 2013.

Cash flow/leverage analysis

53. In assessing the cash flow adequacy of a specialty chemical issuer, our analysis uses the same methodology as with other corporate issuers (see "Corporate Methodology"). Cash flow/leverage is assessed on a six point scale--ranging from (1) minimal to (6) highly leveraged--by aggregating the assessments of a range of credit ratios, predominantly cash flow based, which complement each other by focusing attention on the different levels of a company's cash flow in relation to its obligations.

Core ratios

54. For each company, in accordance with our ratios and adjustments criteria, we determine two core debt payback ratios: funds from operations (FFO) to debt and debt to EBITDA.

Supplemental ratios

55. 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 refine our cash flow analysis in accordance with the corporate methodology. For specialty chemical companies, we generally use:
- Free operating cash flow (FOCF) to debt as the preferred supplemental ratio when the cash flow and leverage assessment indicated by the core ratios is intermediate or stronger. Working capital and capital expenditure cycles can significantly shape specialty chemical companies' cash flow generation patterns. Alternatively, in less common cases, we might use cash flow from operations to debt for highly working-capital-intensive companies (i.e., a working capital to sales ratio greater than 25%) or discretionary cash flow to debt for companies with unusually large dividend distributions (greater than 50% of FOCF).
 - We would generally use the debt service coverage ratio, EBITDA to interest, when the cash flow and leverage assessment indicated by the core ratios is significant or weaker. For such companies, the ability to service

outstanding debt on a near-term basis is of greater importance. In less common cases where non-cash interest represents a significant portion of interest expense, we might use the ratio FFO plus interest to cash interest.

Part III-Rating Modifiers

Diversification/portfolio effect

56. In assessing the diversification/portfolio effect on a specialty chemical company, our analysis uses the same methodology as with other corporate issuers (see "Corporate Methodology").

Capital structure

57. In assessing a specialty chemical company's capital structure, our analysis uses the same general methodology as with other corporate issuers (see "Corporate Methodology").

Liquidity

58. In assessing the liquidity of a specialty chemical company, our analysis uses the same general methodology as with other corporate issuers (see "Corporate Methodology").

Financial policy

59. In assessing financial policy on a specialty chemical company, our analysis uses the same methodology as with other corporate issuers (see "Corporate Methodology").

Management and governance

60. In assessing management and governance on a specialty chemical company, our analysis uses the same methodology as with other corporate issuers (see "Corporate Methodology").

Comparable ratings analysis

61. In assessing the comparable ratings analysis on a specialty chemical company, our analysis uses the same methodology as with other corporate issuers (see "Corporate Methodology").

REVISIONS AND UPDATES

This article was originally published on Dec. 31, 2013. These criteria became effective on Dec. 31, 2013.

Changes introduced after original publication:

- Following our periodic review completed on Dec. 11, 2015, we deleted paragraphs 2, 5, and 6, which were related to the initial publication of the article and no longer relevant.
- Following our periodic review completed on Dec. 7, 2017, we changed "Appendix: Material Related To Initial Publication Of This Criteria" to the "Revisions And Updates" section.

RELATED CRITERIA AND RESEARCH

Related Criteria

- Methodology And Assumptions: Liquidity Descriptors For Global Corporate Issuers, Dec. 16, 2014
- Key Credit Factors For The Commodity Chemicals Industry, Dec. 31, 2013

- Corporate Methodology, Nov. 19, 2013
- Corporate Methodology: Ratios And Adjustments, 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 And Insurers, Nov. 13, 2012
- General Criteria: Principles Of Credit Ratings, Feb. 16, 2011

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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