S&P Global
Ratings

RatingsDirect®

ARCHIVE | Criteria | Corporates | Industrials:

Key Credit Factors For The Building Materials Industry

December 19, 2013

PRIMARY CREDIT ANALYST

Thomas J Nadramia
New York
+ 1 (212) 438 3944
thomas.nadramia
@spglobal.com

SECONDARY CONTACT

Renato Panichi
Milan
(39) 02-72111-215
renato.panichi
@spglobal.com

CRITERIA CONTACTS

Peter Kernan
London
(44) 20-7176-3618
peter.kernan
@spglobal.com

Marta Castelli
Buenos Aires
(54) 114-891-2128
marta.castelli
@spglobal.com

*(**Editor's Note:** This article is no longer current.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 the building materials 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") and to our "Principles Of Credit Ratings."

2. This paragraph has been deleted.

SCOPE OF THE CRITERIA

3. We define "building materials" as basic construction products such as cement, bricks, concrete, and aggregates (i.e., sand, rock, and gravel). We define "building products" as finished goods that require additional labor or installation, such as flat and specialty glass, wallboard, roofing materials, sanitary ware, plumbing, lighting fixtures, doors, windows, tools, hardware, HVAC (heating, ventilation, and air conditioning) equipment, and other specialty products, including products used in repair, maintenance, and remodeling of buildings. By building materials (or building materials and products) companies, we mean companies that derive most of their revenues from the manufacture, distribution, and sales of building materials and products. These criteria do not cover companies that produce steel, lumber, and plywood used in construction.

SUMMARY OF THE CRITERIA

4. This article reflects S&P Global Ratings' global criteria for analyzing building materials and products companies by applying S&P Global Ratings' global corporate criteria.

5. We view the building materials industry as having "intermediate" risk under our criteria, given the industry's "moderately high" cyclicality and "intermediate" competitive risk and growth. In assessing a building materials and products company's competitive position, we put particular emphasis on the following factors:

- Market position and growth prospects;
- Geographic, customer, and end-market diversity;
- Market consolidation;

- Pricing power;
- Products offered and brand strength;
- Operating efficiency; and
- The flexibility of capital expenditures and the cost base.

6. Our assessment of a company's financial risk profile takes into account the company's ability to generate cash flow consistently, working capital characteristics, capital intensity, and the effect of these on cash flow coverage ratios.

7. This paragraph has been deleted.

8. This paragraph has been deleted.

METHODOLOGY

Part I--Business Risk Analysis

Industry risk

9. Within the framework of S&P Global Ratings' general criteria for assessing industry risk, we view building materials as an "intermediate-risk" industry (category 3). Our assessment is derived from our view of the segment's "moderately high" (4) cyclicality and "intermediate" (3) competitive risk and growth.

10. Key drivers of demand and revenue cyclicality for building materials and products are consumer confidence, employment growth, household formation, interest rates, and the availability of consumer credit.

11. In most cases, we believe building materials and products companies serve customers similar to those of residential and commercial construction contractors, homebuilders, wholesale distributors, mass-market retailers, and "do-it-yourself end users. We view building materials and products companies as serving four major end markets:

- New residential construction (new single- and multi-family housing);
- Nonresidential construction (commercial, office, retail, and industrial buildings and facilities);
- Repair, remodeling, and maintenance (home improvements; commercial office, retail, and institutional repair; and renovation); and
- Infrastructure or public works (roads, highways, bridges, water, electrical, and energy projects).

12. Demand varies by product. Some products are highly discretionary (kitchen cabinets, high-end bath fixtures) and therefore subject to higher swings in demand based on consumer confidence and employment levels. Other products, such as roofing shingles and heating and air-conditioning products, are much less discretionary and more likely to be replaced at regular intervals, regardless of the economy.

13. Therefore, companies whose product demand is highly correlated to new-home construction (which is prone to "boom-and-bust" cycles) will experience higher-than-average swings in revenues and profitability. Conversely, companies whose products are correlated to more stable repair and remodeling, institutional, or commercial markets will experience much lower revenue

and earnings volatility.

14. For example, certain window manufacturers may sell a large percentage to the homebuilding sector and therefore are exposed to the demand swings of that market, as opposed to a manufacturer that sells windows primarily to repair and remodeling markets, which have more stable demand. In reality, few building materials and products companies are exposed solely to one subsector. However, the degree of exposure to one sector or changes in product mix (during recessions end users tend to trade down to lower-priced products) can have an outsized effect on sales.

15. Real estate markets, particularly in the residential sector, have been subject to boom-and-bust cycles marked by strong demand during an upswing, followed by significant demand declines for certain building materials and products, such as in the 2005-2010 housing cycle in the U.S. and much of Europe.

16. Profit cyclicality is also influenced by energy and raw material costs, as fluctuations can temporarily depress profit margins. Some building materials companies can be heavily exposed to input cost inflation (e.g., cement producers and energy costs, or faucet manufacturers and brass prices), but these companies can generally pass on such costs to their consumers, albeit with a potential time lag.

17. Despite revenue and profit cyclicality, most companies in this segment benefit from large cash inflows derived from working capital contraction when sales fall by reducing levels of accounts receivable and inventory (i.e., on the downside of a cycle) and from being able to scale back capital expenditures considerably when capacity utilization is low. Companies have used these large cash flows to reduce debt or enhance liquidity, offsetting declining profitability at the later stages of an industry downturn. This cash flow is, however, a finite source of cash and can reverse rapidly when demand recovers.

Cyclicality

18. We assess the building materials industry's cyclicality as (4) "moderately high risk" based on our analysis of revenue and profitability, the two key measures we use (see "Methodology: Industry Risk"). Based on our analysis of global data from Compustat, the average peak-to-trough (PTT) declines in revenue and profitability (EBITDA margin) were 8% and 16%, respectively, during recessionary periods since 1952.

19. The largest PTT declines in revenue were just over 23% (1979-1982 recession) and 16% (2007-2009 recession), both of which were caused by a sharp decrease in new-home construction after a housing bust, followed by mediocre demand from repair, remodeling, and commercial construction markets.

20. Profitability declines slightly exceeded 30% in the 1979-1982 and 1989-1992 recessions, driven not only by a steep drop in demand when homebuilding fell in both of those periods, but also by very volatile energy costs. The largest PTT profitability drop was 32% during the 1979-1982 downturn, which was also the period with the steepest PTT revenue decline.

Competitive risk and growth

21. We view the building materials industry as having "intermediate" (3) competitive risk and growth based on four sub-factors:

- Effectiveness of barriers to entry;
- Level and trend of industry profit margins;

- Risk of secular change and substitution by products, services, or technologies; and
- Risk in growth trends.

22. **Effectiveness of barriers to entry: Low risk.** Barriers to entry are high across the sector. Materials companies (aggregates, cement, concrete) are often subject to lengthy and stringent permitting requirements and very large investments in plant and equipment. Companies that produce finished products (cabinets or tools) require significant manufacturing assets and expertise, as well as extensive distribution networks and systems to be competitive. For the smaller and more commoditized building product manufacturers, for whom barriers to entry are lower, size and scale become increasingly important and have spurred consolidation.

23. Access to capital can be an important differentiator during difficult market conditions. This factor favors large players, as most building materials and products companies have seasonal working capital needs that follow annual construction patterns. Third-party financing and access to bank lines, therefore, can be critical to small, less-well-capitalized participants.

24. During the most recent recession (2007-2009), most companies were able to produce large amounts of liquidity from declining working capital. However, in periods of recovery, access to capital can be critical for small companies to fund investment for the build-up of inventories and receivables.

25. **Level and trend of profit margins: Medium risk.** In general, operating profit margins for most building materials companies have been fairly stable. This, we believe, is because the industry is relatively concentrated among a small number of producers, which leads to fairly rational pricing and competition in most segments. Also, as we saw in the most recent recession (2007-2009), most companies benefit from highly variable costs (energy, raw materials, labor, sales commissions), which allowed companies to reduce costs as demand fell. As a result, operating profit margins eroded much less than sales did. Absolute profitability fell significantly for many building materials companies, but margins, for the most part, fell much less on a percentage basis before stabilizing.

26. Demand is subject to moderately high seasonality in much of the world, where construction activity slows or ceases completely in cold weather, followed by an active building season during warm weather. For many building materials and products companies, this results in increased working capital requirements early in the annual construction cycle as companies build inventories in anticipation of increased construction activity and subsequently finance receivables during the height of construction, followed by inventory and receivable reduction and large cash collections as cold weather approaches and construction activity declines.

27. Severe weather conditions may have a significant, but usually short-term, effect on construction schedules, leading to lost sales days that are rarely fully recovered.

28. Increases in the cost of building materials and labor may pressure margins, but costs usually can be recovered (depending on end-market conditions) with price adjustments, albeit with a time lag.

29. However, margins can be structurally affected in some more fragmented, regional markets if there is competition to sell spare capacity, resulting in potentially significant pricing pressure. This can be typical following a rapid drop in demand after a boom cycle.

30. Despite significant required investment in plant and assets, many building materials and products companies' cost structures have highly variable costs that can be reduced when demand drops (as in the 2007-2009 recession).

31. **Risk of secular change and substitution by products, services, or technologies: Low risk.** We see limited risk of basic building materials (cement, aggregates, glass, masonry, etc.) facing substitution by other products or new technologies. The focus on energy-efficient products and "green" building technologies is influencing the industry globally, and most producers have made technological innovations to improve these aspects of their products and processes.

32. The finished-products sector has greater product innovation and differentiation than the materials sector. Still, the risk of large-scale replacement of products and services by new technologies is remote because construction methods and materials evolve slowly, and new materials and technologies are subject to governmental and architectural approval, entities that are slow to embrace new methods and materials over proven technologies. Most building products companies have broad product breadth and offer similar products at multiple price points.

33. Government incentives and subsidies can encourage home ownership and bolster new-home sales as well as trends toward using more energy-efficient and "green" products and manufacturing methods, often bringing about a shift toward higher-margin product mixes. Changes or expiration of those programs, however, can cause temporary disruptions in certain product markets, like what occurred in insulation and HVAC products when incentives were reduced.

34. **Risk in growth trends: Medium risk.** Although demand from new-home construction is highly cyclical, more stable demand from repair, remodeling, commercial, and public works sectors has reduced volatility in industry demand and earnings. The aging housing supply aids continued investment in repair and remodeling markets.

35. Demographic trends, particularly in emerging markets, help long-term demand for housing, commercial, industrial, and infrastructure development, all of which point to long-term growth in building materials and products markets.

36. Residential and commercial construction market growth can vary significantly by country or region based on differences in economic growth rates, employment levels, income, construction methods, local governmental policies, and economic development initiatives. In effect, the industry consists of a myriad of local housing and commercial markets with varying development fundamentals. Companies that operate effectively on a national scale must have decentralized decision making that enables them to adapt to local market conditions.

37. The following indicators are most relevant in our assessment of market conditions for building materials and products companies. These factors have been good predictors of construction and remodeling activity, which drives demand for building products and materials:

- Demographic trends, i.e., population growth (including from immigration), and household formation;
- Job growth and unemployment;
- GDP growth;
- Consumer confidence;
- Single-family housing starts and sales (new homes, total);
- Building permit issuance volume;
- Architectural growth index;
- Remodeling activity index;
- Commercial development;

- Office occupancy; and
- Local Public works spending.

38. Other market factors and conditions that affect demand for building materials and products are:

- The consumer banking system and availability of mortgage and home improvement financing;
- The availability of credit for commercial and public projects;
- The ease of permitting/licensing/entitlement processes for residential, commercial, and public works construction;
- The extent to which local governments seek to stimulate construction through tax credits and rebates, subsidized mortgage financing programs, and economic development; and
- Interest rates and government fiscal and monetary policy, which are the key drivers of housing sales and prices, home improvement spending, and financing of commercial and governmental projects.

Country risk

39. 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, directly and indirectly. In assessing country risk for building materials and products companies, we use the same methodology that we use for other corporate issuers (see "Corporate Methodology"). Country risk covers the broad range of economic, institutional, financial market, and legal risks that arise from doing business in a specific country.

40. For the building materials industry, we prefer to determine exposure to country risk by reviewing the EBITDA a company generates in specific countries or regions. If EBITDA or earnings information by country is not available, we look at revenue information, which is usually more readily available.

Competitive position (including profitability)

41. Under our global corporate criteria, we assess a company's competitive position as '1', excellent; '2', strong; '3', satisfactory; '4', fair; '5', weak; or '6', vulnerable. In assessing the competitive position for building materials and products companies, we review the following components:

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

42. We assess each of the first three components as "strong"; "strong/adequate"; "adequate"; "adequate/weak"; or "weak." We assess profitability separately by analyzing two subcomponents: the level of profitability, and the volatility of profitability.

43. After evaluating the first three components, 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).

44. The CPGP we assign to most building materials companies we rate is "Capital or Asset Focus"

because such companies require sizable capital investments and asset outlays to sustain their market positions. We weight "Capital or Asset Focus" components as follows: competitive advantage (30%); scale, scope, and diversity (30%); and operating efficiency (40%).

45. We may assign a minority of building materials companies, but a higher number of building products companies, a CPGP of "Services or Branded Products" because certain companies are less asset-intensive and have brand identity and meaningful product differentiation (home improvement products, fixtures, installation services, HVAC equipment, etc.). We weight "Services or Branded Products" components as follows: competitive advantage (45%); scale, scope, and diversity (30%); and operating efficiency (25%).

46. **Competitive advantage.** In assessing a building materials and products company's competitive advantage, we consider the following:

- Market share;
- Product differentiation, diversity, and demand;
- Product distribution;
- Pricing power and purchasing power; and
- Brand equity.

47. In reviewing market share, we consider the company's revenue and sales volume share in its categories, key markets, and regions. Market size and growth prospects are also components of this assessment. Building materials companies that are able to defend and increase market share are likely to adjust their strategies to evolving market conditions, be innovative, have some pricing advantage, and maintain sales growth and profitability, even during adverse economic conditions.

48. Market position can be a significant aspect of a company's competitive advantage. Companies with sizable market shares and strong sales may garner some pricing advantage and maintain good sales performance during adverse market conditions. Our assessment covers:

- The size of a company's revenue base and unit sales volumes;
- Market share by sales or production capacity in the key markets and regions in which a company competes;
- Reputation and brand recognition; and
- Geographic diversity and penetration.

49. In our assessment of product characteristics, we consider the diversity of products offered (some companies offer only one basic product, others thousands), pricing breadth, and demand characteristics (discretionary or nondiscretionary). Products range from basic commodity-like materials with little or no differentiation (cement, aggregates) to highly specialized, value-added products with wide differentiation (tools, plumbing fixtures, kitchen cabinets).

50. In reviewing a building materials company's distribution network, we consider the method and scope of how products are brought to market. Companies may own their own distribution network, rely on third-party one- or two-step distributors, or sell a significant portion of their products to "big box" home improvement centers. Distribution arrangements can be exclusive, or distributors may also sell competitors' products.

51. In assessing pricing power with key customers and purchasing power with key suppliers, we consider a building materials company's ability to pass through direct cost increases or to avoid accepting cost increases. Evaluating gross margin trends among direct competitors can provide a quantitative measure of a company's ability to pass along cost increases. We also consider

information provided by management about its customer and supplier relationships.

52. A building materials company with a "strong" or "strong/adequate" competitive advantage assessment typically is characterized by a combination of the following factors:

- A No. 1 or No. 2 market share position in its markets;
- Products or materials that have stable demand characteristics or command high prices and margins because of their value-added differentiation from competitors' products;
- The ability to raise prices when costs rise;
- Pricing power derived from product differentiation, high service levels, or strong brand loyalty;
- An effective business strategy, as demonstrated by maintaining or strengthening market share positions;
- A well-entrenched distribution network, or a system that would be difficult and expensive for competitors to replicate; and
- Relatively attractive and diverse end markets with growth potential.

53. A building materials company with a "weak" or "adequate/weak" competitive advantage assessment typically is characterized by a combination of the following factors:

- Highly fragmented markets subject to intense competition;
- Limited product offerings;
- Lack of product differentiation, brand recognition, or value-added products compared with its competitors';
- An ineffective business strategy, as demonstrated by an inability to maintain market share or penetrate new markets; and
- Limited ability to adjust pricing to offset cost pressures or competition.

54. **Scale, scope, and diversity.** In assessing a building materials company's scale, scope, and diversity, we consider the following:

- The size of the revenue base relative to that of close competitors;
- The extent to which revenues and cash flows are derived from products, end markets, or geographic regions that are independent or have low correlation to each other;
- The number of producing assets;
- Product breadth and diversity;
- Geographic diversity; and
- Customer or supplier concentration.

55. We generally assume that a company with a variety of attractive markets and good operating scale will have greater financial performance stability in market downturns.

56. We measure diversity as a percentage of sales volume or revenues by geography, brands, and product category; concentration or breadth of customers; manufacturing or sourcing locations; and concentration of key commodities. We also examine a company's exposure to a mix of emerging and mature markets.

57. The attractiveness of a company's product mix based on product-line maturity, growth potential,

competitive advantages (price and performance), and the existence, if any, of high-value rather than commodity-grade products.

58. Most building materials companies serve multiple end markets (residential, commercial, infrastructure, etc.) that have widely differing cyclicality. In certain submarkets, demand can range from highly cyclical (demand from homebuilders) to low risk (demand for repair and replacement materials). Some companies may be closely correlated to highly cyclical end markets, while others serve mostly less volatile replacement markets (roofing materials).

59. A building materials company with a "strong" or "strong/adequate" scale, scope, and diversity assessment typically is characterized by a combination of:

- Large size relative to its peers, i.e., higher revenues, wider geographic and customer distribution, and higher brand recognition than its nearest competitors;
- Multiple manufacturing or distribution assets;
- Relatively attractive product markets with growth potential;
- Distinct regional or international markets, which can offset regional cyclicality;
- A diverse range of products, serving different end-use markets at multiple price points;
- The ability to serve various construction markets (new residential, repair, commercial, etc.) that are subject to different economic cycles; and
- No more than 10% of sales from one customer unless that customer purchases multiple, distinct, and unique products from the company, (often the case with "big box" retailers).

60. A building materials company with a "weak" or "adequate/weak" scale, scope, and diversity assessment typically is characterized by a combination of:

- A small or minority market share relative to its peers;
- Limited product offerings with little brand strength or differentiation from those of its competitors;
- A limited number (one to five) of manufacturing or distribution facilities;
- Concentration of sales or customers in one or two geographic regions; and
- High customer or supplier concentrations with more than 20% of sales or purchases from one entity.

61. **Operating efficiency.** In assessing a building materials company's operating efficiency, we consider the following factors:

- Age, size, and location of production assets;
- Selling, general, and administrative (SG&A) expenses and margins;
- Ability to raise prices to pass on cost increases;
- Vertical integration; and
- Investment and maintenance of production assets.

62. Operating efficiency is a critical aspect of a building materials company's competitive position because most materials and products are subject to pricing pressures. High operating efficiency achieved by minimizing manufacturing and other operational costs and embedding flexibility in the cost base (i.e., a higher percentage of variable costs) may result in better relative profitability

and cash flow over the business cycle.

63. The age, size, and location of production assets influences operational efficiency. New, large machines and well-maintained plants can be more efficient (but high leverage may be required initially to finance such new plants) and have lower energy costs and require less staff per production unit. Production plants located close to customers tend to have low logistical costs, but this needs to be balanced with labor costs, labor flexibility, energy costs, and other key materials costs (wood, metals, resins, etc.).

64. Given that most building materials companies have extensive sales and distribution assets, SG&A costs can be significant. The ability to control these costs in periods of rapid growth and to quickly reduce them in periods of contraction can have a meaningful effect on profitability.

65. Vertical integration, although more capital-intensive, enables a company the benefit of sourcing its own component parts and, less commonly, raw materials (sand, gravel, extruded vinyl, aluminum castings, etc.) rather than paying a supplier for production, logistics, and the applicable margin. Also, efficient and/or owned distribution of finished products, such as HVAC, roofing materials, and flooring products, is also usually a positive factor because the shorter the distribution chain, the higher and more stable margins usually are.

66. The building materials and products industry is moderately capital-intensive (high in some subsectors like cement), and ongoing investment in efficient production is often necessary to maintain a company's cost position.

67. A building materials company with a "strong" or "strong/adequate" operating efficiency assessment is typically characterized by a combination of:

- Low-cost production and distribution assets relative to its peers';
- Stable SG&A expense margins over a cycle;
- Vertical integration in manufacturing operations that provides a cost advantage;
- Ability to quickly reduce costs in periods of falling demand; and
- Greater-than-industry-average gross profit and EBITDA margins.

68. A building materials company with a "weak" or "adequate/weak" operating efficiency assessment typically is characterized by a combination of:

- High-cost production assets relative to its peers';
- Higher average SG&A expense margins than those of similarly sized peers;
- Limited ability to raise prices to pass on raw material and energy cost increases; and
- Lower-than-industry-average gross profit and EBITDA margins.

69. **Profitability.** Our profitability assessment can confirm or modify our preliminary competitive position assessment. The profitability assessment consists of two components: level of profitability and volatility of profitability. The two components are combined into the final profitability assessment using a matrix (see "Corporate Methodology").

70. **(A) Level of profitability.** We determine the level of profitability using a three-point scale: "above average," "average," and "below average." We generally use EBITDA margin as the primary indicator of a building materials company's level of profitability (see table for measures for various subsectors). We use different guidelines for certain subsectors such as cement manufacturers and building products distributors, which have materially different cost structures and

profitability profiles from those of general providers.

Building Materials And Products Company EBITDA Margins

	--Average EBITDA margin over the cycle (%)--		
	Below average	**Average**	**Above average**
General building materials and products providers*	Below 9	9 to 18	Above 18
Building materials and products distributors	Below 5	5 to 9	Above 9
Cement manufacturers	Below 15	15 to 25	Above 25
Window and door manufacturers	Below 5	5 to 10	Above 10
Aggregates providers	Below 10	10 to 20	Above 20

*Includes manufacturers/producers of roofing materials; heating and ventilation equipment; hand, garden, and power tools; wallboard; construction laminates; plumbing and bath fixtures; glass and fiberglass building products; cabinetry; and steel building components.

71. Although we consider the general ranges in the table when determining a company's level of profitability, we place greater emphasis on profitability measures among comparable companies in a subsector, i.e., cement manufacturers to other cement manufacturers. We also recognize that even companies with similar product mixes could have significant variations in margins depending on where the companies operate, such as in mature or emerging markets, and the point in the local industry cycle. For example, during the up cycle, certain cement manufactures can earn in excess of 40% EBITDA margins in some emerging markets, while EBITDA margins might be closer to 20% in mature markets. Aggregates producers, even at the trough of a cycle, can often earn in excess of 20% EBITDA margins because of limited local competition, while a window manufacturer's margin could well be negative at the trough. Therefore, we consider peers when determining the level of profitability among comparable companies.

72. We also consider product mix and vertical integration. For example, ready-mix concrete is typically a low- or sometimes negative-margin business, but it can increase the market penetration of a vertically integrated company's higher-margin cement sales. Similarly, a building products manufacturer with low-margin distribution operations will have group-level margins that would appear depressed relative to its peers'. We would, therefore, typically not penalize a company that has lower overall margins compared with those of a similar peer that is not vertically integrated.

73. **(B) Volatility of profitability.** We determine the volatility of profitability using a six-point scale, from '1' (least volatile) to '6' (most volatile). In accordance with our corporate criteria, we use primarily EBITDA to calculate the standard error of regression (SER) for building materials and products companies if we have at least seven years of historical annual data to ensure meaningful results. This measure is particularly suitable for more commodity-like building materials companies, in which EBITDA margins become distorted because of volatile product costs and pricing (costs and pricing may increase by similar amounts, resulting in relatively stable absolute EBITDA levels but shrinking EBITDA margins).

74. However, in many cases, such as producers of finished goods that are not subject to wide price swings, we use EBITDA margin to calculate the SER, given the sometimes substantial swings in revenue driven by incremental demand swings caused by homebuilding cycles and, to a lesser extent, nonresidential building cycles.

75. In accordance with our corporate criteria, we may adjust the SER assessment by up to two categories worse (more volatile) or better (less volatile), subject to certain conditions. If we do not have sufficient historical information to calculate the SER, we follow our global corporate criteria

guidelines to assess a company's volatility of profitability.

Part II--Financial Risk Analysis

Accounting and analytical adjustments

76. In assessing the accounting characteristics of building materials and products companies, we use the same methodology that we use for other corporate issuers (see "Corporate Methodology"). 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 those of its peers and the universe of corporate entities. To allow for globally consistent and comparable financial analyses, we 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 and allow for 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."

Cash flow/leverage analysis

77. In assessing a building materials company's cash flow adequacy, we use the same methodology that we use for other corporate issuers (see "Corporate Methodology"). We assess cash flow/leverage using 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, that complement each other by focusing on the different levels of a company's cash flow in relation to its obligations.

Core ratios

78. For each company, we calculate two core debt payback ratios, debt to EBITDA, and funds from operations (FFO) to debt (see "Corporate Methodology: Ratios And Adjustments").

Supplemental ratios

79. We also consider the following supplemental ratios to develop a fuller understanding of a company's credit risk profile and to refine our cash flow analysis:

- Cash flow from operations (CFO) to debt--For most building materials and products manufacturers and distributors, we consider this the most relevant supplemental ratio because of the large sources and uses of cash resulting from intra-year and multi-year working capital swings.
- Free operating cash flow (FOCF) to debt--This ratio provides insight into excess cash flow available to meet capital expenditure requirements and other discretionary and nondiscretionary obligations. We may use this ratio in certain cases, for example for heavy material or other asset-intensive building materials companies that can demonstrate sustained curtailment in capital expenditures during periods of low capacity utilization.
- EBITDA to interest--We may use this ratio as the most relevant supplementary ratio when our preliminary cash flow/leverage assessment derived from the core ratio is "significant" or weaker (for instance, for financial-sponsor-owned companies).

Part III--Rating Modifiers

Diversification/Portfolio effect

80. In assessing a building materials company's diversification/portfolio effect, we use the same methodology that we use for other corporate issuers (see "Corporate Methodology"). Only a small number of companies, generally large conglomerates, operate business lines outside of the building materials and products industry.

Capital structure

81. In assessing a building materials company's capital structure, we use the same methodology that we use for other corporate issuers (see "Corporate Methodology").

Liquidity

82. In assessing a building materials company's liquidity, we use the same methodology that we use for other corporate issuers (see "Corporate Methodology").

Financial policy

83. In assessing a building materials company's financial policy, we use the same methodology that we use for other corporate issuers (see "Corporate Methodology").

Management and governance

84. In assessing a building materials company's management and governance, we use the same methodology that we use for other corporate issuers (see "Corporate Methodology").

Comparable ratings analysis

85. In assessing a building materials company's comparable ratings analysis, we use the same methodology that we use for other corporate issuers (see "Corporate Methodology").

REVISIONS AND UPDATES

This article was originally published on Dec. 19, 2013. These criteria became effective on Dec. 19, 2013.

Changes introduced after original publication:

- Following our periodic review completed on Nov. 20, 2015, we updated the contact information, updated criteria references, and deleted outdated sections that appeared in paragraphs 2, 7, and 8, which were related to the initial publication of our criteria and no longer relevant.
- Following our periodic review completed on Nov. 18, 2016, we updated the contact information.
- Following our periodic review completed on Nov. 17, 2017, we made no changes.

- On Dec. 18, 2018, we republished this criteria article to make nonmaterial changes to the contact information.
- On July 25, 2019, we republished this criteria article to make nonmaterial changes to criteria references.

RELATED CRITERIA AND RESEARCH

Superseded Criteria

- Key Credit Factors: Business And Financial Risks In The Global Building Products And Materials Industry, Nov. 19, 2008

Related Criteria

- Methodology And Assumptions: Liquidity Descriptors For Global Corporate Issuers, Dec. 16, 2014
- 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
- 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.