

ARCHIVE | Criteria | Corporates | Industrials:

# Key Credit Factors For The Transportation Cyclical Industry

February 12, 2014

*(Editor's Note: This article is no longer current.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 presents S&P Global Ratings' methodology and assumptions for rating cyclical transportation companies, including airline, shipping, and trucking companies on a global basis. The article aims to help market participants better understand our approach to reviewing key credit factors in the transportation cyclical industry. These criteria are related to our global corporate criteria (see "Corporate Methodology") and "Principles Of Credit Ratings."
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## SCOPE OF THE CRITERIA

3. These criteria cover airlines (including heavy air freight), shipping companies, trucking companies, and certain miscellaneous other transportation companies, such as bus companies.
4. These criteria do not cover freight railroads, package express, or logistics companies, which are less cyclical and are covered under our criteria for the railroad and package express industry (see "Key Credit Factors For The Railroad And Package Express Industry"). Nor do they cover passenger railroads or state-owned freight railroads, which we analyze under our transportation infrastructure criteria (see "Key Credit Factors For The Transportation Infrastructure Industry").

## SUMMARY OF THE CRITERIA

5. S&P Global Ratings is publishing its global criteria for analyzing cyclical transportation companies, applying S&P Global Ratings' global corporate criteria. We view the cyclical transportation industry as a "high risk" (category 5) industry under our criteria, given its "high risk" (category 5) cyclicity and "moderately high risk" (category 4) degree of competitive risk and growth.
6. In assessing the competitive position of a cyclical transportation company, we put particular emphasis on operating efficiency, using measures that vary from one industry segment to another. We also focus on the extent to which a company's scale or control of transportation infrastructure may establish barriers to entry in its markets.
7. Given the capital intensity of most cyclical transportation companies, their use of operating leases

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(which we capitalize under our ratios and adjustment criteria) and ability to finance equipment are key considerations in our assessment of financial risk. We generally use free operating cash flow to debt as a supplemental cash flow and leverage ratio to capture the high capital intensity of the sector, and, given the industry's "high risk," our weighting of cash flow and leverage ratios emphasizes our forecasts for the current and subsequent year.

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## METHODOLOGY

### Part I--Business Risk Analysis

#### Industry risk

10. Within the framework of S&P Global Ratings' general corporate criteria for assessing industry risk, we view transportation cyclical as a "high risk" (category 5) industry. Our assessment reflects our view of the sector's "high risk" (category 5) cyclicality, based on observed cyclicality in revenue and profit margins, and of its "moderately high risk" (category 4) competitive risk and growth.
11. Key drivers of revenue and profit cyclicality include economic growth (as measured by gross domestic product); fuel prices; the balance of supply and demand for each industry segment; and the proportion of fixed costs, which is often high in the industry. For companies with high fixed costs, declines in EBITDA margin are typically much steeper than revenue declines in an economic downturn.
12. Price competition can be intense, driven by the commodity nature of many of the services provided by these companies, and a tendency to periodic oversupply of equipment within an industry segment. Pricing pressures may be less pronounced where companies can establish partial barriers to entry through control of infrastructure (e.g., airport gates or airline international routes), favorable regulation (such as that relating to U.S. domestic shipping), or building substantial market share in markets where this confers competitive advantage (such as a substantial share of flights at a major airport). Peak-to-trough price declines vary significantly by industry segment, but can be very pronounced (as much as 90%) in some, such as ocean shipping of crude oil and dry bulk commodities.

#### Cyclicality

13. We assess the transportation cyclical industry as having "high risk" (category 5) cyclicality. The industry has demonstrated high cyclicality--relative to other industries--in both revenue and profitability, which are two key measures we use to derive an industry's cyclicality assessment (see "Methodology: Industry Risk," published Nov. 19, 2013). Based on our analysis of global Compustat data, transportation cyclical companies experienced an average peak-to-trough (PTT) decline in revenues and profitability of approximately 11% and 59%, respectively, during recessionary periods since 1989. The steepest decline in revenues was about 17% during the 2008-2009 economic downturn, and the steepest decline in profitability was about 93% during the 2000-2002 downturn. Based on average PTT declines, the cyclicality assessment calibrates to "high risk" (category 5).

## Competitive risk and growth

14. We view transportation cyclical companies as warranting a "moderately high risk" (category 4) competitive risk and growth assessment, based on these four subfactors:
  - 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.
15. Although we assess those factors for the industry overall, there are differences across industry subsectors. We capture those in our assessment of competitive position.

## Effectiveness of barriers to entry--High Risk

16. Barriers to entry are overall relatively low, particularly for shipping and trucking; those industry segments are mostly fragmented, with low market shares for even the largest operators. In the case of intra-U.S. domestic shipping, we consider this factor as being somewhat more favorable than for the overall industry because intra-U.S. domestic shipping is protected from foreign competition by the Jones Act (which requires that shipments between U.S. ports be carried on U.S.-built vessels that are flagged in the U.S., have crews that are predominantly U.S. citizens, and are operated by companies that are at least 75% owned by U.S. citizens). For airlines, we also consider this factor as being somewhat more favorable than the overall assessment, because of a somewhat more consolidated industry and the availability of partial barriers to entry in some markets.
17. Access to capital is relatively easy, because most transportation equipment is considered good collateral by lenders and leasing companies, and can be repossessed and sold or shifted to a new user. This means that access to capital is not as much of a barrier to entry as for some other capital-intensive industries.

## Level and trend of industry profit margins--High Risk

18. Profit margins vary significantly over the cycle and from one company to another, but are on average low, particularly when measured after depreciation expense. This reflects both demand that is subject to a high degree of cyclical (based on gross domestic production, consumer sentiment, discretionary spending levels, and demand for goods that need to be transported), price competition, and the high fixed cost nature of the industry.
19. The overall trend of profit margins varies from sector to sector and by region. The trend of airline profit margins is modestly positive, as consolidation in mature markets (North America, Europe) and continued expansion in higher-growth developing markets (Asia and Latin America) boost profits, albeit from meager levels (or from losses). Shipping profit margins vary substantially based on the supply and demand of ships in each subsegment. Trucking profit margins in the United States, which has by far the most rated companies, are modestly positive, but these companies face long-term challenges such as rising operating costs, specifically labor and fuel.
20. Increases in the cost of fuel can have a pronounced effect on margins if competitive conditions or weak demand make it difficult to pass through higher prices; however, some contracts between companies and their customers provide for fuel surcharges that change automatically with

changes in fuel prices, mitigating exposure of the transportation companies.

21. Labor is another significant expense category for most cyclical transportation companies, and differences in pay, benefits, and work rules can be a significant cost differentiator in some industry segments, such as airlines and trucking, whose employees are often unionized labor.
22. Oversupply of transportation equipment in a particular industry segment or market is a chronic risk, because the high costs and often long useful lives of the equipment encourage their operators to use them so long as revenues covers marginal cash costs of operation.
23. Working capital is not a large investment need, and can even be negative at times for airlines, whose customers pay for their tickets before the flight.

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

24. The risk of substitution varies by industry segment but is low overall.
25. Airlines face some potential substitution on shorter routes from trains and automobiles, but no real risk on intercontinental flights. Heavy air cargo airlines face some substitution risk from ocean shipping, which is much slower but also much cheaper, a difference that high fuel prices widens.
26. Shipping faces little substitution risk on global routes (only from air cargo for relatively light and high-value freight) and some substitution risk from railroads or pipelines on river and coastal routes.
27. Trucking faces medium risk of substitution from railroads, mostly on longer trips, and many trucking companies in North America are increasingly using rail service (carrying trailers or cargo containers on railroad flatcars) for long-distance moves, while handling the pickup and delivery with their own trucks. Still, trucks carry by far the largest proportion of total freight, measured by dollar value, inside North America.
28. The risk of substitution from alternate modes of transportation typically is governed by a tradeoff between speed, reliability, and cost. For freight movements, air cargo is the fastest and most time-certain, but also most costly; trucks are somewhat slower and less costly; railroads are still slower and less costly; and shipping is the cheapest but slowest. Intermodal movements of freight containers (i.e., moves that involve more than one transportation mode) are increasingly common to take advantage of each mode's relative advantages at different stages of a freight move.
29. Technological risk relates mostly to fuel consumption of particular types of transportation equipment, but the cost of reequipping a fleet with newer (and often costlier) versions means that this risk unfolds over many years. Despite the high-tech features of some transportation equipment (most notably airplanes), technological change tends to be evolutionary rather than revolutionary. However, secular changes in fuel prices can favor one mode of transportation over another at the margin (e.g., railroads are carrying more freight at the expense of less-fuel-efficient trucks). Also, increasingly stringent environmental regulation can compel companies to choose more expensive new engine technologies when they acquire new equipment.

### **Risk in growth trends--Medium Risk**

30. While highly cyclical, demand and revenues have trended up over the long term, a trend that we expect to continue.
31. Globalization and rising income, particularly in developing economies, support air traffic and

global shipping growth in excess of overall global economic growth. The leading manufacturers of commercial aircraft forecast long-term passenger traffic growth of around 5% a year.

32. Trucking and domestic U.S. shipping are more mature industries, with growth that tends to track that of gross domestic product.

## **Country risk**

33. 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 cyclical transportation company, our analysis uses the same methodology as with other corporate issuers (see our global corporate criteria). 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.
34. Our primary measures to determine exposure to country risk for transportation cyclical companies are revenues or transportation volumes (e.g. ton-miles). For those companies, we believe revenues or transportation volumes provide a more consistent measure of participation in a market than earnings or cash flow, which will vary depending on a company's profit margins. The distribution of assets is not useful because transportation assets are by nature movable and may not remain consistently within one country or region. Also, data on the distribution of assets are less consistently available than are revenue and volume data.

## **Competitive position (including profitability)**

35. Under our global 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, we review an individual company's
  - Competitive advantage;
  - Scale, scope, and diversity;
  - Operating efficiency; and
  - Profitability.
36. 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 of profitability and the volatility of profitability.
37. Our assessment of the competitive positions of companies in this industry varies somewhat by subsector.
  - Our universe of rated airlines include large airlines with global route networks, and our assessments of the components of competitive position for many of these companies often ranges between "strong" and "adequate" based on significant shares in the markets where they compete, barriers to entry in selected airports due to scarcity of airport space or takeoff and landing "slots," and good geographic diversity.
  - The shipping industry is mostly very fragmented, particularly for international bulk shipping (oil, coal, iron ore, etc.), but some of the companies are fairly large and, in some cases, diversified. Our assessment of the components of competitive positions range mostly between "adequate" and "weak."

- Trucking is also fragmented; however, this subsector includes some fairly large and diversified companies. Our assessment of the components of competitive position mostly range between "adequate" and "weak."
  - Our assessments for other cyclical transportation companies vary. For example, although the bus industry is very fragmented, our universe of rated bus companies includes large operators with significant market share, and demand for bus transportation tends to be more stable than for other transportation cyclical companies. Our assessment of the components of competitive position for these bus companies mostly range between "strong" and "adequate."
38. 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 most cyclical transportation companies is "capital or asset focus," as they require sizeable capital investments and asset outlays to sustain market position. "Capital or asset focus" components are weighted as follow: Competitive advantage (30%); Scale, scope, and diversity (30%); Operating efficiency (40%).
39. We may assign the "services and product focus" CPGP where control of key infrastructure and/or a well-established brand and service reputation support material revenue generating advantages. "Services and product focus" components are weighted as follow: Competitive advantage (45%); Scale, scope, and diversity (30%); Operating efficiency (25%).

## Competitive advantage

40. Cyclical transportation companies with sizable market shares in segments and markets that have good revenue potential may garner some pricing advantage and maintain better sales performance amid adverse market environments. In order to evaluate competitive advantage, we focus on factors that vary somewhat from subsector to subsector.
41. For airlines, our assessment includes:
- Overall route network characteristics (access to major markets; national and global coverage, including alliances; and position of hubs to serve connecting traffic flows and degree of competition from other airlines' hubs);
  - Attractiveness of markets served (growth prospects; proportion of business traffic, which is usually more profitable; degree of competition within market; effect of regulation on revenue and profit potential);
  - Strength of position within markets served (share of local traffic at major airports served; share of traffic on the airline's own largest routes; barriers to entry in core markets and airports served); and
  - Service standards and reputation; particularly important for attracting business travelers and other passengers in first and business class cabins, especially on intercontinental flights; less important for leisure travelers.
42. For shipping companies, our assessment includes:
- Participation in a shipping industry segment whose characteristics may be more or less favorable than those of other shipping segments. For example, we consider a dry bulk sector to be far more risky than the liquefied natural gas and liquefied petroleum gas tanker segments that operate under very long-term take-or-pay contracts with reputable counterparties.
  - Size of fleet, measured by owned and chartered-in vessels, and by commercial pooling

arrangements and the extent to which it provides scale and enhance vessel utilization. Customers are attracted to commercial pools for access to a wider range of vessels while still dealing with just one operator.

- Overall attractiveness of fleet, as measured by age and technical characteristics of vessels. A modern fleet can enhance market position because customers such as major oil companies and multinational conglomerates may be averse to environmental disaster headline risk.
- Breadth of the route network and the extent it can improve a shipping line's market position and make it more attractive to global customers. Our assessment takes into account the trade lanes in which the shipper operates. We generally view international operators with a global route network more favorably than regional players. Even so, international shipping is highly fragmented, with the largest operators having low-single-digit percentage share of the market. An exception is for shippers that operate domestically within the boundaries of just one country and may be protected by cabotage laws (that exclude outside competitors).

43. For trucking companies, our assessment includes:

- Participation in particular trucking segments that may be more or less fragmented and competitive. For example, a specialist in delivering gasoline carries a commodity whose volumes transported are more stable than construction materials that a flat-bed trucking company carries.
- Attractiveness of services provided/product mix (growth prospects; mix of contractual versus spot revenues generated; degree of competition within market; effect of supply and demand on revenue and margin potential);
- Market position or geographic footprint within key markets (e.g., depth of service or level of penetration in a specific lane or corridor between cities; share of tonnage in key lanes);
- Fleet size, as customers increasingly choose to rationalize their truck transportation arrangements to focus on fewer "key suppliers";
- Service standards and reputation; particularly important for contractual business, and for intermodal moves and transportation of hazardous materials such as chemicals and fuel; and
- New products and complementary offerings, which are often driven by technological capabilities and can be used to deepen customer relationships by meeting specific customer needs, resulting in lower costs, improved service, and increased efficiency, thus raising barriers to switching.

44. A cyclical transportation company with a "strong" or "strong/adequate" competitive advantage assessment is characterized by several or all of the following:

- A leading or very substantial market share in the markets where the company competes;
- Participation in markets whose size, growth prospects, and competitive dynamics afford an opportunity to generate above-average revenues, or participation in markets where demand and pricing are significantly more stable than for most cyclical transportation companies;
- An ability to translate market leadership into a revenue premium and/or superior operating profitability to its competitors;
- Control of scarce infrastructure or long-term contracts that can establish barriers to entry and thereby generate superior pricing and/or stable revenues; and
- In some cases, participation in an industry subsegment whose industry characteristics are more favorable than those for most cyclical transportation companies, such as certain

European bus markets, which are highly concentrated and tend to be fairly stable.

45. A cyclical transportation company with a "weak" or "adequate/weak" assessment of its competitive advantage typically is characterized by some or all of:
- A lagging or modest market share relative to peers;
  - Participation in smaller, low-growth, or very competitive markets, leading to below-average revenue generation;
  - Lack of control over scarce infrastructure, long-term contracts, or clearly differentiated service, leaving the company to compete mostly on price; and
  - In some cases, participation in an industry segment whose industry characteristics are less favorable than those for most cyclical transportation companies, such as international bulk commodity (oil, coal, iron ore, etc.) shipping, which is highly fragmented and very price competitive.

### **Scale, scope, and diversity**

46. Cyclical transportation companies tend to have high operating leverage because of their substantial investment in fixed assets. They also mostly operate transportation networks, where coverage of various regional markets is an advantage in attracting customers. At the same time, their volatility of revenues and profits can be mitigated somewhat through diversity of regions and customers served. Accordingly, scale, scope, and diversity are significant factors in judging their overall competitive position.
47. We use factors and statistics that vary from subsector to subsector to judge scale, scope, and diversity of cyclical transportation companies.
48. For airlines, our assessment includes:
- Scale, as measured by traffic (revenue passenger miles or kilometers) and number of flights and passengers. This is useful particularly for judging advantage at individual airports, where there are economies of scale and competitive advantage in offering the most flights.
  - Geographic coverage of route network. A diversity of markets, both globally and within a country, provides greater revenue stability.
  - Mix of business and leisure travelers. Although business travelers are on average more profitable, overreliance on either can expose an airline to greater potential revenue volatility.
  - Diversification from non-passenger businesses, such as air cargo and sale of frequent flyer miles. Air cargo demand tends to be more volatile than passenger demand but has good long-term growth prospects, while sale of frequent flyer miles is a high margin and relatively low risk product.
  - For heavy air freight airlines, which tend to be smaller and less diversified, we would focus on scale as measured by revenue ton miles (or kilometers), regional or global coverage, diversity of products transported, and diversity of customers.
49. For shipping companies, our assessment includes:
- Scale of vessel fleet, which can improve end market and customer diversity. Operators with multiple classes of vessels (tankers, containerships, and bulk commodity ships) and of various sizes, or those that participate in commercial pools, can carry a broad range of commodities and meet widely different capacity needs of customers.

- A diverse customer base of reputable charterers limits counterparty risk and adds stability to revenues.
- Geographic coverage of route network. Having a route network with broad geographic coverage can serve as a natural hedge against weak demand and help an operator ride out cyclical downturns.

50. For trucking companies, our assessment includes:

- Geographic coverage. A diversity of end markets, within a country, provides greater revenue stability.
- Sector/end-market exposure. Some sectors are more volatile than others (e.g. retail vs. fuel) and the demand characteristics can expose a trucking company to greater potential revenue volatility.
- Volume, as indicated by tonnage (per day) and number of shipments (per day); useful particularly for situations where there are economies of scale and competitive advantage in providing extensive service on high volume traffic lanes.
- Degree of customer concentration, as reliance on a key customer exposes companies to some risks; however, the key customer may be a long-term relationship with good long-term growth prospects.

51. A "strong" or "strong/adequate" assessment of scale, scope and diversity typically is characterized by a combination of:

- A sizeable equipment fleet and broad service offerings, which can support above average revenue generation and profit potential due to better utilization, economies of scale, or a wide range of services that is attractive to customers.
- Participation in a variety of markets with favorable supply/demand fundamentals, with demand in those markets not closely correlated.
- Diversity of customers, so that the loss of any single account does not have a material adverse effect on revenues and profits.

52. A "weak" or "adequate/weak" assessment of scale, scope and diversity typically is characterized by a combination of:

- Modest scale that leaves the company vulnerable to larger competitors and may force it to compete mainly on price.
- Participation in only a few markets, particularly if those markets have unfavorable growth prospects or are intensely competitive.
- High customer concentration or heavy reliance on a single or few customers.
- Quality of customer relationships as indicated by contractual relationships that we believe limit switching to another provider.

## **Operating efficiency**

53. A cyclical transportation company with a high degree of operating efficiency should generate relatively better profit margins during all market conditions. We focus on cost structure, measures of asset utilization and efficiency (revenue or cost per unit of capacity), and operating profit margins. Because cost structure tends to be a more consistent differentiating factor than revenue

generation, which varies with market conditions, we place greater emphasis on operating costs.

54. To assess operating efficiency of airlines we generally use:

- Measures of revenue generated per unit of capacity, such as passenger revenue per available seat mile, passenger revenue per available seat kilometer, or revenue per available ton kilometer; airlines tend to report different measures in various countries and regions, or report on a per ton kilometer basis because they generate a significant proportion of their revenues from carrying freight. We may also look at the individual components that make up the statistics—yield (a measure of pricing) and load factor (a measure of utilization), which, when multiplied together, equal the overall revenue statistic.
- Measures of operating cost per unit of capacity, such as operating cost per available seat mile, operating cost per available seat kilometer, or operating cost per available ton kilometer. We may also look at components of operating cost on a per unit basis, particularly labor cost, which tends to be a major differentiator among airline cost structures.
- These operating statistics are most usefully compared among direct competitors, because market characteristics can vary significantly by country or region.
- Because both revenues and costs do not increase proportionately with the distance of a flight (for example, those associated with passenger booking and airport operation are the same regardless of flight length), we may adjust the per-unit-of-capacity operating statistics for average flight length or average trip length (trip length differs from flight length where the passenger connects from one flight to another to reach a final destination). A formula used by some airlines that we find useful when available is to choose a common assumed flight or trip length (e.g., 1,000 miles) and estimate what an airline's per-unit revenue or cost would be if its flights or trips averaged that common distance, as follows (using operating cost per available seat mile, "CASM", and flight length as an example):

Reported CASM x #(reported flight length / common flight length) = common length CASM

- The resulting operating statistic estimated on an assumed common flight or trip length is then compared with similarly adjusted statistics for competitor airlines. Flight length is the better measure of length but not always available; trip length is more widely available because it can be calculated by dividing revenue passenger miles (or kilometers) by the number of passengers carried.
- For airlines, we also consider the age and fuel efficiency of the aircraft fleet, with younger and more fuel efficient planes preferred. Newer planes will also be compliant with the current environmental regulations, which have tended to become more stringent over time. However, these considerations of fleet quality are secondary to overall operating costs and revenues.
- Airlines that hedge part of their fuel consumption will tend to have, on average, higher operating costs than those that do not, but they also can guard against sharp increases in fuel prices that could cause losses. Accordingly, we will discount somewhat an airline's cost advantage if it is achieved by not hedging fuel costs.

55. To assess operating efficiency of shipping companies we generally use:

- Proportion of vessel revenue days (ship operating days less days vessels are not available for employment due to repairs, dry-docking) committed to long-term charter agreements, versus the spot market. We view companies with a large proportion of long-term fixed rate contracts less risky than spot market operators.
- Length of charter agreements gives one indication of the pricing and utilization risks as contracts come up for renewal.

- Vessel utilization in comparison with peers; this can be influenced by proportion of ships under long-term charters or in pooling arrangements.
  - Physical condition of the fleet, as measured by age, hull structure (e.g., single versus double hull for tankers), and fuel efficiency. Younger ships have generally lower operating costs.
  - The degree to which the shipping company bears the risk of bunker fuel (used to power ships) prices. Operators with vessels on time charter generally pass fuel costs to their customers while spot market operators bear the risk of fuel price volatility.
  - Daily operating break-even costs compared with peers and industry averages. Operating costs typically include vessel costs (crew, technical and management fees) and voyage expenses (fuel costs, port and canal tolls).
  - Operating flexibility, measured by proportion of tonnage chartered-in versus owned. Operators with chartered-in ships can return ships whose charters are expiring, particularly during cyclical downturns.
  - For U.S. domestic shipping companies, some of which are unionized, we evaluate labor relations, labor costs, and assess whether the union(s) could disrupt operations as a result of a contract dispute.
56. To assess operating efficiency of trucking companies we generally use:
- Measures of operating efficiency, such as operating ratio (operating expenses, including depreciation, as a percent of operating revenues) and operating margin before and after depreciation.
  - Measures of asset utilization, such as proportion of empty miles (those where no freight is being carried) and deadhead percentage (trips for truckload companies with no cargo needed to reposition the trucks for another assignment).
  - Measures related to pricing, such as revenue per hundredweight (for less-than-truckload companies) or revenue per loaded mile (for truckload companies).
57. A "strong" or "strong/adequate" operating efficiency assessment is characterized by several or all of the following:
- Sustainable operating cost advantage, caused by economies of scale, lower labor costs, more fuel-efficient equipment, and/or process efficiencies, and measured by operating statistics that vary between segments.
  - Sustainable revenue advantage, caused by superior asset utilization or product differentiation (although in general we believe that cost advantages are likely to be in a company's control to a greater extent than revenue outperformance), as measured by operating statistics relevant for the subsector.
  - Transportation equipment whose age, fuel efficiency, and suitability for services provided is superior to those of competitors.
  - Relatively stable and positive labor relations, particularly for passenger transportation companies, where morale can affect service and reputation, and the effect of labor contract provisions on the company's ability to operate efficiently.
  - Regulations, if any, that do not materially hurt operating efficiency, relative to competitors. Examples of regulations and other government policies that can be supportive of an airline industry include government investment in airports and air traffic control, competition policy that does not block mergers of airlines that otherwise might fail, and environmental regulations

that do not place airlines at a disadvantage to competitors in other countries or regions.

58. A "weak" or "adequate/weak" operating efficiency assessment is characterized by several or all of:
- Operating costs that are higher than those of competitors, and which are not offset by sustainable superior revenue generation, resulting in below-average operating profitability.
  - Below-average revenue generation (see above comment) that is not offset by consistently lower costs, resulting in subpar operating profitability.
  - Operating profitability that, while adequate on average, is very volatile, including potential risks from stronger competitors or other changes in their markets.
  - An aircraft fleet whose aircraft are, on average, less fuel efficient than those of its competitors.

### Profitability

59. The profitability assessment can confirm or modify the preliminary competitive position assessment. The profitability assessment consists of the level and volatility of profitability. These two components are combined into the final profitability assessment using a matrix (see our global corporate criteria).

### Level of profitability

60. The level of profitability is assessed as "above average," "average," or "below average."
61. For cyclical transportation companies, we use return on capital as the primary measure of profitability, because the different levels of capital intensity across subsectors means that depreciation expense, and thus also EBITDA margin, cannot usefully be compared across the whole industry:

Table 1

#### Return on capital (%)

|                         | Below average | Average | Above average |
|-------------------------|---------------|---------|---------------|
| Cyclical Transportation | <4            | 4-10    | >10           |

62. We may compare EBITDA margins within a subsector (e.g., among airlines) to help us assess level of profitability in cases where we believe that return on capital is not representative (e.g., because substantial changes in a company's capital structure overstate or understate capital), or where our assessment on the basis of return on capital is a borderline case. In those cases we use the following guidelines:

Table 2

#### EBITDA margin (%)

|          | Below average | Average | Above average |
|----------|---------------|---------|---------------|
| Shipping | <10           | 10-30   | >30           |
| Trucking | <8            | 8-15    | >15           |
| Airlines | <8            | 8-15    | >15           |

63. The ranges for return on capital and EBITDA margin are based on the performance of rated companies in this industry during 2008-2012. We may update the ranges based on changing industry conditions.

### **Volatility of profitability**

64. The volatility of profitability is determined on a six-point scale, from '1' (lowest volatility) to '6' (highest volatility).
65. In accordance with our global corporate criteria, we generally determine the volatility of profitability using the standard error of regression (SER), subject to having at least seven years of historical annual data. We use return on capital as our primary measure of the volatility of profitability. However, if significant changes in a company's capital structure distort its permanent capital (e.g., large share buyback that eliminates most book equity without substituting a like amount of debt), we may also consider volatility of EBITDA margins compared with all cyclical transportation companies. In accordance with the global corporate criteria, we may--subject to certain conditions being met--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**

66. 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."
67. This paragraph has been deleted.

### **Adjustment procedures**

68. In general, the adjustment procedures we apply to these transactions are similar to those we apply to leases as discussed in "Corporate Methodology: Ratios And Adjustments." In terms of the committed payments that we include in our calculations, we attempt to include only those noncancelable commitments for the use of the physical asset and exclude payments for non-ownership costs, such as services to be performed or consumables (e.g., fuel), subject to materiality and transparency considerations.

### **Cash flow/leverage**

69. In assessing the cash flow adequacy of a cyclical transportation issuer, our analysis uses the

same methodology as with other corporate issuers (see our global corporate criteria). Cash flow/leverage is assessed on a scale of (1) minimal, (2) modest, (3) intermediate, (4) significant, (5) aggressive, and (6) highly leveraged, by aggregating the assessments of a range of credit ratios, predominantly cash flow based.

### Core ratios

70. We calculate--in accordance with our ratios and adjustments criteria--two core credit ratios: funds from operations (FFO) to debt, and debt to EBITDA.

### Supplemental ratios

71. 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. We most often consider as supplemental ratios:
- Coverage ratios:  $(\text{FFO} + \text{Interest}) / \text{Cash Interest}$ , and  $\text{EBITDA} / \text{Interest}$ , particularly if the preliminary cash flow leverage assessment indicated by the core ratios is significant or weaker.
  - Free operating cash flow to debt (this captures the capital intensity of cyclical transportation companies).

### Time horizon and ratio calculations

72. Cyclical transportation is classified as "prospectively volatile" under our corporate methodology (paragraph 117 in "Corporate Methodology"), because it is a "high risk" (category 5) industry. Accordingly, the weights applied to our ratios will generally be 50% for the current year and 50% for the first subsequent forecast year.

## Part III--Rating Modifiers

### Diversification/portfolio effect

73. In assessing diversification/portfolio effect for a transportation cyclical company, our analysis uses the same methodology as for other corporate issuers (see our global corporate criteria).

### Capital structure

74. In assessing capital structure for a transportation cyclical company, we use the same methodology as with other corporate issuers (see our global corporate criteria).

### Liquidity

75. In assessing the liquidity of a cyclical transportation company, our analysis uses the same general methodology as with other corporate issuers (see our global corporate criteria).
76. This paragraph has been deleted.
77. This paragraph has been deleted.

## Financial policy

78. In assessing financial policy for a cyclical transportation company, our analysis uses the same methodology as with other corporate issuers (see our global corporate criteria).

## Management and governance

79. In assessing management and governance for a cyclical transportation company, our analysis uses the same methodology as with other corporate issuers (see our global corporate criteria). We evaluate hedging policy as part of our analysis of management and governance.

## Comparable ratings analysis

80. In assessing the comparable ratings analysis for a cyclical transportation company, our analysis uses the same methodology as with other corporate issuers (see our global corporate criteria).

## REVISIONS AND UPDATES

This article was originally published on Feb. 12, 2014. These criteria became effective on Feb. 12, 2014.

Changes introduced after original publication:

- Following our periodic review completed on Jan. 29, 2016, we updated the contact list, updated criteria references, and deleted paragraphs 2, 8, and 9, which were related to the initial publication of the criteria and no longer relevant.
- Following our periodic review completed on Jan. 25, 2017, we updated the contact list.
- On March 6, 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 removed paragraph 67 because it was superseded by "Corporate Methodology: Ratios And Adjustments," published on April 1, 2019. The sector-specific accounting and analytical adjustments previously included in those paragraphs are now included in the Guidance supporting the Ratios and Adjustments criteria.
- On July 31, 2019, we republished this criteria article to make nonmaterial changes. We updated several references to other criteria articles throughout the body of this article by removing the dates of publication. These dates are provided in the "Related Criteria" section.
- On Dec. 4, 2019, we republished this criteria article to make nonmaterial changes. We deleted paragraphs 76 and 77 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 27, 2020, we republished this criteria article to make nonmaterial changes to improve clarity in paragraphs 65 and 66.

## RELATED PUBLICATIONS

### Superseded Criteria

- Key Credit Factors: Criteria For Rating The Airline Industry, Oct. 22, 2010

### Related Criteria

- Corporate Methodology: Ratios And Adjustments, April 1, 2019
- Methodology And Assumptions: Liquidity Descriptors For Global Corporate Issuers, Dec. 16, 2014
- Key Credit Factors For The Railroad And Package Express Industry, Aug. 12, 2014
- Corporate Methodology, Nov. 19, 2013
- Country Risk Assessment Methodology And Assumptions, Nov. 19, 2013
- Key Credit Factors For The Transportation Infrastructure Industry, 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

### Related Guidance

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

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