

Industry Top Trends 2019

Transportation

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Key Takeaways

- **Ratings Outlook:** The sector's rating outlooks continue to be overwhelmingly (almost 80%) stable. However, in contrast with this same period a year ago, there are somewhat more positive outlooks and positive CreditWatch placements than negative ones.
- **Forecasts:** We expect continued moderate revenue growth (averaging around 5% for most subsectors) and stable EBITDA margins for 2019. Key credit measures, such as debt to EBITDA and funds from operations (FFO) to debt, should improve modestly.
- **Assumptions:** S&P Global Ratings' economists project fairly consistent global economic growth for the next few years, including real GDP growth of 3.8% in 2018 (up from 3.7% in 2017) and 3.7% each in 2019 and 2020. Our energy team currently expects oil prices to moderate from their current levels in 2019, with Brent crude averaging \$65/barrel and West Texas Intermediate (WTI) crude averaging \$60/barrel, before declining by \$5/barrel each in 2020.
- **Risks:** The main risks for transportation companies are the same ones that could derail overall economic growth--global trade wars and higher interest rates. A further escalation of the U.S.-China dispute would slow economic growth and hurt certain transportation sectors more directly (shipping is the most exposed). The other key risk to transportation companies, higher interest rates, affects economic growth, the capital markets, and--more directly--companies' interest expense. Although transportation companies use large amounts of debt, it is largely fixed-rate debt, and we believe that most are well prepared to handle rising rates as long as they do not increase sharply.
- **Industry Trends:** Transportation companies face increasing environmental regulation over the long term, though we view these regulations as a near-term risk only for selected cases, such as shipping companies.

Ratings trends and outlook

Global Transportation

Chart 1

Ratings distribution by region

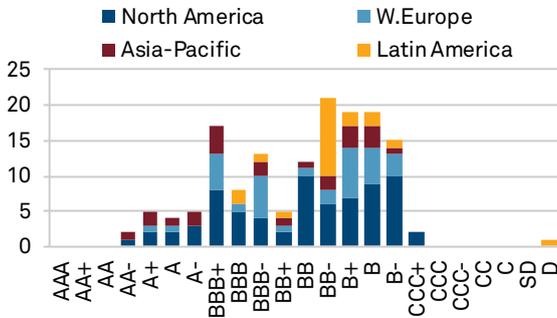


Chart 2

Ratings distribution by subsector

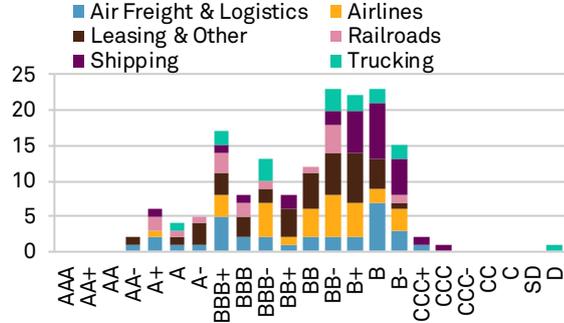


Chart 3

Ratings outlooks by region

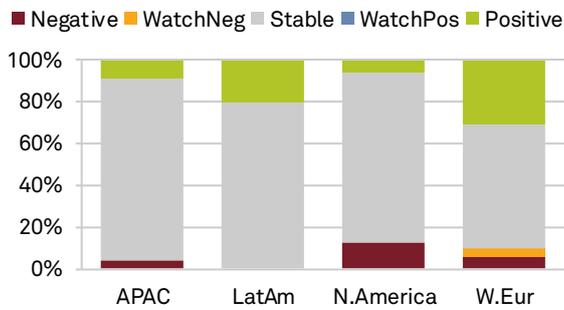


Chart 4

Ratings outlooks by subsector

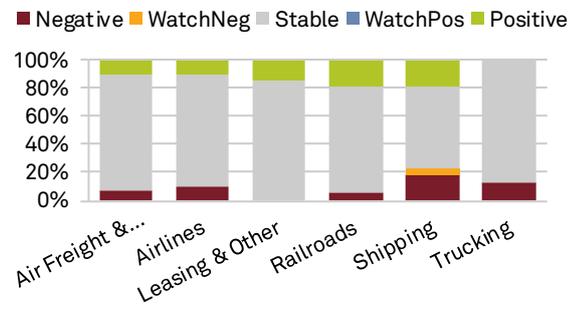


Chart 5

Ratings outlooks net bias by region

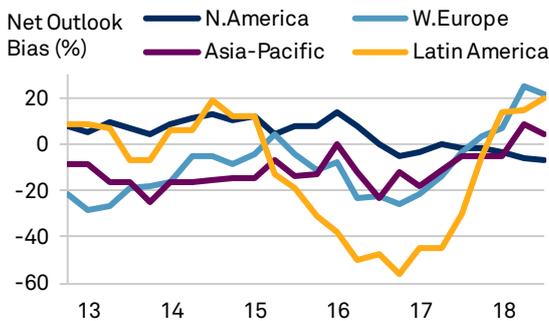


Chart 6

Ratings net outlook bias by subsector

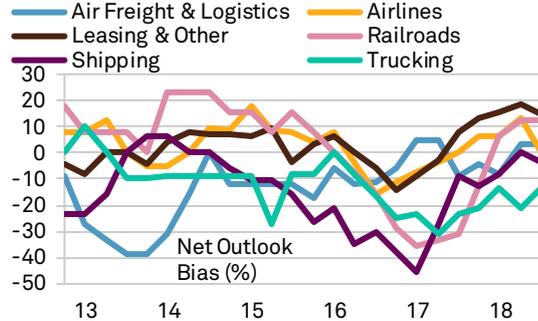


Chart 7

Ratings outlooks

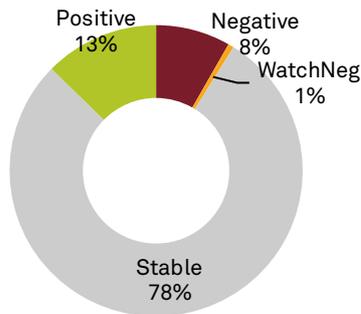
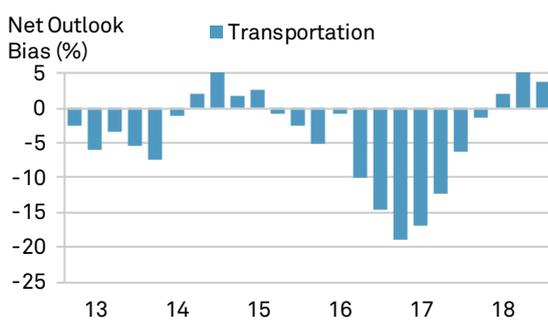


Chart 8

Ratings net outlook bias



Source: S&P Global Ratings. Ratings data measured quarterly with last shown quarter ending September 30, 2018

Industry forecasts

Global Transportation

Chart 9

Revenue growth (local currency)

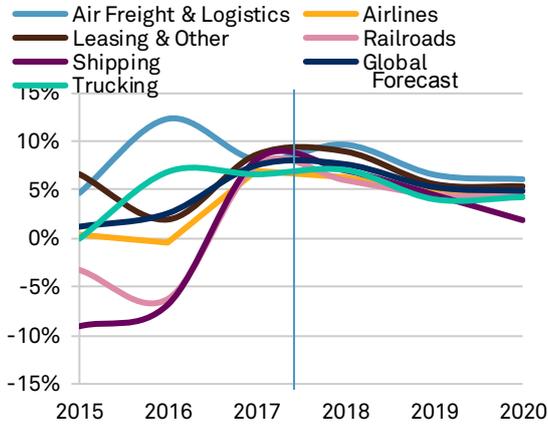


Chart 10

EBITDA margin (adjusted)

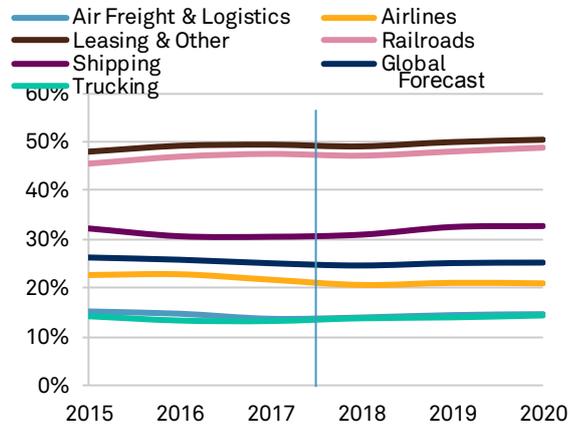


Chart 11

Debt / EBITDA (median, adjusted)

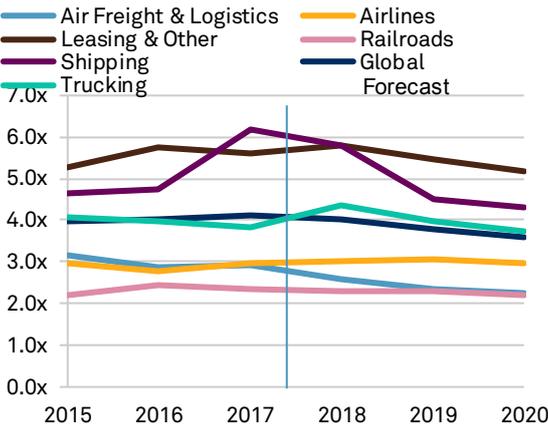
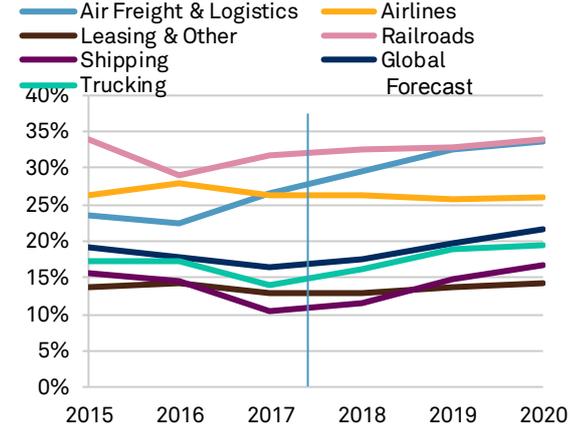


Chart 12

FFO / Debt (median, adjusted)



Source: S&P Global Ratings. Revenue growth shows local currency growth weighted by prior-year common-currency revenue-share. All other figures are converted into U.S. Dollars using historic exchange rates. Forecasts are converted at the last financial year-end spot rate. FFO--Funds from operations.

We expect continued moderate revenue growth (averaging around 5% for most subsectors) and stable EBITDA margins for 2019. Key credit measures, such as debt to EBITDA and funds from operations (FFO) to debt, should improve modestly. Absolute levels of these and other credit measures vary widely between subsectors, which reflects their different levels of profitability and divergent fundamental characteristics (e.g. equipment leasing companies are more highly leveraged than other transportation companies).

Key assumptions

Airlines

1. Global air traffic remains strong but growth is moderating

Global air traffic (revenue passenger miles or kilometers) continues to grow at rates in excess (more than 6% annually) of the forecast long-term average of around 5.0%. This solid expansion is being fueled by good overall economic conditions, the long-term growth of the global middle class--particularly in Asia--and low fares from the proliferation of low-cost airlines. In addition, load factors (the percentage of seats filled on a trip-distance-weighted basis) are at record levels of around 85%. This is good news for commercial aircraft manufacturers, aircraft leasing companies, and airlines. However, these high growth rates are gradually cooling, mostly because airlines are seeking to raise their fares and fees to recoup higher fuel prices (which have recently reached levels that are twice as expensive as they were during their low point several years ago).

2. Oil prices settle at higher levels but do not spike

As of October 2018, oil and jet fuel prices had more than doubled from their low points in early 2016, though they were still well below the highest levels they recorded earlier in the decade (not to mention the sharp spike in 2008). S&P Global Ratings' energy team currently expects oil prices to pull back moderately in 2019 (with Brent crude averaging \$65/barrel and WTI crude averaging \$60/barrel). Jet fuel prices tend to average around \$20/barrel higher than overall crude prices, though the difference (referred to as the crack spread) varies over time. The International Air Transport Association (IATA), an aviation trade group, recently estimated that rising fuel prices would cost the global airline industry \$50.6 billion in 2018 using an \$87.80/barrel average jet fuel price forecast by S&P Global Platts (a sister company of S&P Global Ratings). Airlines seek to recover these increased fuel costs through fuel surcharges (mostly on international routes) and by raising their fares and fees. They have been partly successful in doing so thus far, though their revenue gains have lagged the fuel price movements and higher prices will be harder to push through if the economy weakens. If oil prices moderate, as we expect, the airlines' revenues should mostly catch up in 2019, though this will be more challenging in countries where the currency has weakened against the U.S. dollar (crude oil is priced in dollars) because it makes the cost of fuel measured in the local currency even higher.

3. Rising interest rates squeeze airlines, but not too much

S&P Global's economists expect the U.S. Federal Reserve to continue raising short-term interest rates, which has an indirect effect on other countries and airlines worldwide because aircraft (and most aircraft-backed financings) are priced in dollars. Although many airlines carry substantial debt and lease burdens, most of their debt is fixed rate. Aircraft lessors are even more keenly attuned to interest rates, though they too rely largely on fixed-rate debt. Currently, there is ample (indeed perhaps too ample) liquidity available to finance aircraft globally and the tide of capital has driven down aircraft lease rates. Airlines, particularly the larger and relatively stronger credits (which for airlines means rated in the 'BB' category or higher), often have a choice between taking low-cost bank loans or leases or raising debt in the public capital markets. Higher interest rates will likely cool the liquidity boom somewhat over time, though we believe that financing will remain accommodative for most airlines through at least 2019.

Shipping

1. Soft new vessel deliveries pave the way for firming dry-bulk rates

We anticipate that improved charter rates for dry-bulk shipping will stabilize at their current solid and profitable levels in the next 12-18 months. Our base-case scenario assumes an average one-year time charter (T/C) rate for a large Capesize vessel of \$19,000 per day and for a smaller Panamax vessel of \$13,000/day (which correspond with the respective industry average rates year-to-date in 2018, according to Clarkson Research) and we expect these rates to persist in 2019. This is because of the fairly balanced supply and demand conditions in the industry. We expect ship operators to experience stable low-single digit percent growth in iron ore, coal, and grain ton-mile demand, among other commodities, because of the continued Chinese preference for high quality dry-bulk commodity imports. China, the single largest commodities importer in the world, will also be bringing in additional volumes from more distant places than it has previously, such as Brazil, which increases the need for ships. This restrained demand growth is balanced by modest supply growth as the orderbook of new ships is close to an all-time low, new orders are soft, and the global fleet expansion remains sluggish.

2. A cyclical upturn in tanker rates might be just around the corner

The oil shipping industry should slowly start to rebalance and support a cyclical upturn for tanker rates because we expect that the current oversupply of tankers will shrink in 2018-2019 (relative to the conditions in 2016-2017). We forecast that T/C rates for a very large crude carrier (VLCC) will rebound to \$28,000/day in 2019 (compared with an expected \$23,500/day in 2018) because robust scrapping and the diversion of some tankers to floating storage will limit supply growth while the crude oil stock overhang works off. For product tankers (which carry various refined products) MR2 and LR1, we assume average T/C rates of \$13,000/day in 2018 (similar to 2017 averages according to Clarkson Research) and \$14,500/day-\$15,000/day in 2019. This is because we expect supply growth for product tankers to slow noticeably below the rate of demand growth in 2018 and 2019, in particular for medium-range tankers. Meanwhile, overall demand should be boosted by tightening oil product inventories, leading to an uptick in charter rates.

3. Containership demand/supply conditions improve and liners must exercise discipline on rates and capacity

Industry conditions are shifting in favor of containership owners. With no incentive to place new orders, as demonstrated by the limited contracting activity since late 2015, the containership order book has reached its lowest level on record of around 11% of the total global fleet. Combined with funding constraints, these factors will help restore the supply and demand balance in the containership segment as we progress into 2019. Consequently, we expect containership charter rates to continue recovering from their historical lows in 2019. Although trade volume growth (which we expect to be at the typical multiple of 1.0x-1.5x global GDP) will likely outpace containership fleet growth, we remain cautious in our outlook for container liner freight rates in 2019. Persistent significant deliveries of ultra-large containerships scheduled in 2019 will constrain rates, in particular on the main Asia-Europe and transpacific lanes (where these mega-containerships operate), despite the likely favorable supply-and-demand balance in the industry in general. Bearing in mind the supply pressure coming from the deliveries of greater than 12,000 twenty-foot-equivalent (TEU; a measure of container-carrying capacity) containerships, freight rates will ultimately depend upon how prudent the leading ocean carriers are in their capacity management and rate-setting decisions, which are even more important given elevated bunker fuel prices.

Railroads

1. Improvements in operating performance should continue

The operating ratios of the North American railroads (revenue minus operating expenses, including depreciation, as a percentage of revenue) have declined (improved) in 2018 as the companies continue to become more efficient. Their revenue has increased due to an increase in the number of carloads (volume) and higher pricing for most commodities while their costs have declined due to various efficiency initiatives. Some of these initiatives, such as those recently instituted at Canadian Pacific and CSX, have been due to the implementation of "precision railroading," which is an approach championed by Hunter Harrison (at various times CEO of Canadian National, Canadian Pacific, and CSX, but recently deceased) that focuses on more uniform and tightly scheduled train operations to minimize required assets and operating costs. A healthy economy and consumer spending in North America have boosted intermodal traffic (containerized freight of various types) while a shortage of trucking capacity has driven up truck rates and diverted some freight onto the less-expensive railroads. Most railroads have set operating ratio improvement targets over a multi-year period, in some cases reaching below 60% (equivalent to an operating margin, after depreciation, of 40% or more). In Brazil, where railroads play an important role in moving commodities to seaports, we see companies benefiting from overall high capacity utilization and the resulting favorable pricing. The railroads have prepared for the current market conditions and have adequate funding for their expansion spending and refinancing needs.

2. Shareholder rewards at record levels

Most of the North American railroads have implemented substantial shareholder rewards, including higher dividends and large share repurchase programs. The U.S. railroads have benefited from changes in the corporate tax law that became effective in 2017. Because of their robust profitability, their effective tax rates had been fairly high despite the benefits of accelerated depreciation on their large asset bases. With a reduction in the statutory maximum federal tax rate to 21% from 35%, the U.S. railroads' actual cash taxes are dropping substantially as well. With stronger profitability and reduced levels of capital spending (there is less need for incremental equipment because their operations have become efficient and they are approaching the end of their heavy spending to meet the Positive Train Control regulatory mandate), they find themselves generating substantially increased free cash flow. Union Pacific Corp., which had previously employed one of the more conservative financial policies among U.S. railroads, switched course and announced a \$20 billion share repurchase program through 2020 that caused us to lower our issuer credit rating on the company to 'A-' from 'A'. While we expect some of the railroads to finance a portion of their enhanced shareholder rewards with incremental debt, we still expect their strong cash flows to result in relatively stable credit metrics.

3. North American railroads benefit from scarce trucking capacity

Trucking capacity in the U.S. has been tight as stronger freight demand collided with limited supply amid a driver shortage and the implementation of new regulations that limit a driver's total daily hours on the road. The result has been a fairly dramatic increase in trucking rates charged to customers shipping freight. Railroads compete with trucks for freight that they carry in containers, trailers, and automobile railcars, offering cheaper and more fuel-efficient, but slower and less precisely scheduled, service. The rate of trucking price hikes may slow as economic growth cools, though their direction will likely remain upwards. Higher fuel prices tends to favor the more fuel-efficient railroads. Over the longer term, if truckers are allowed to introduce autonomous vehicles, their operating cost disadvantage could narrow and the pendulum could swing back toward trucking. It is technically feasible, and indeed probably easier, for railroads to respond with similar

changes (perhaps by reducing the current minimum crew of two to one in locomotives); however, these companies are heavily unionized--in contrast to the mostly nonunion truckers--potentially making such changes more difficult to implement. In any case, we do not see this change unfolding on a material scale until sometime in the next decade.

Transportation Equipment Leasing

1. Access to capital should remain strong

Transportation equipment lessors continue to benefit from abundant access to capital at low rates. Aircraft and truck lessors have taken advantage of strong demand to issue unsecured debt, while other sectors have relied to a greater extent on adding secured debt. The unsecured issuance by aircraft lessors continues a multi-year systematic and public plan by many companies to shift their capital structure toward unsecured funding to achieve higher credit ratings and diversify their funding sources. In addition, aircraft lessors and marine cargo container lessors have been active in the asset-backed securities (ABS) market. Barring unforeseen external events that disrupt the capital markets, we expect these trends to continue in 2019. Even with our expectation for gradually rising interest rates, we believe that the lessors will be able to pass-through any increases in funding costs to their customers by raising their lease rates when interest rates increase. However, there could be somewhat of a lag depending on when new leases are signed.

2. Demand exceeds supply for certain sectors

Due to strong consumer and travel spending in many large economies globally, the demand for aircraft and marine cargo containers (globally) and trucks (in North America) remains healthy. Airline traffic has been growing by well above the long-term 5.0% annual trend line, which bodes well for continued passenger traffic and global aircraft fleet growth, a substantial portion of which will be supplied by aircraft lessors. The demand for marine cargo containers has exceeded supply because many marine cargo container lessors have refrained from ordering new equipment due to financial constraints or other company-specific factors. This favorable balance will likely cool somewhat as higher tariffs reduce U.S.-China trade, though the extent of the tariffs and their effect on U.S.-China trade is uncertain. Meanwhile, the major U.S. car renters appear to have finally rationalized their fleets in terms of size and models that will better retain their residual value, which should help their pricing power.

3. Active M&A continues

Mergers are attractive for leasing companies because scale is a competitive advantage in this industry and they tend to face fewer integration problems than other, more labor-intensive industries. The leasing sector continues to experience a wave of merger and acquisition (M&A) activity that began in 2017, although the pace has slowed somewhat. In August 2018, ORIX Aviation Systems announced it was acquiring a 30% stake in aircraft lessor Avolon Holdings Ltd. for \$2.2 billion. In September 2018, Goshawk acquired Sky Leasing, and in mid-October the Carlyle Group announced it was acquiring midlife aircraft lessor Apollo Aviation. In the marine cargo container sector, we expect that Seaco, whose ultimate parent is The HNA Group, will be sold in the coming months. Finally, there have been new entrants in the aircraft leasing sector that have financed their portfolios (which, in many cases, they acquired from larger aircraft lessors) with low-cost asset-backed security (ABS) funding and we expect there to be more as long as interest rates do not rise too quickly. Because of this, the overall concentration in the aircraft leasing subsector has not increased, despite continued mergers. However, most other leasing sectors, including marine cargo containers, truck leasing, and car rental, are already quite consolidated.

Key risks and opportunities

Airlines

1. Geopolitical events could cause oil prices to spike

Airlines can usually manage higher fuel costs if prices rise gradually and economic and competitive conditions remain healthy enough to support higher fares. However, a sudden price spike, potentially caused by a crisis in the Middle East or supply disruptions at other major oil producers, could overwhelm the airlines' ability to react. In addition, geopolitical events could potentially reduce air travel in some regions (e.g. to the Persian Gulf) while higher oil prices would weaken economic growth. A slowing economy should cause oil prices to decline over time but--in the meantime--airlines could quickly register heavy losses. Airlines vary significantly in their fuel price hedging policies. U.S. airlines have mostly abandoned hedging because they consider it to be too expensive and are instead relying mostly on their pricing power in the consolidated domestic market. This leaves them vulnerable to a sudden price spike, though the U.S. economy is now less oil-sensitive than it has been, which should cushion the impact of rising prices on the demand for air travel. Elsewhere, fuel hedging is more widespread, particularly because many airlines have to plan for the related risk of a strengthening dollar. Hedges can cushion the impact of higher oil prices but will generally not fully offset the effect of increased fuel costs.

2. Brexit causes a bumpy ride

The U.K.'s planned exit from the European Union starting in March 2019 raises several risks for European airlines. The U.K. will have to negotiate new bilateral aviation treaties with the European Union, the U.S., and Switzerland. Given the drastic consequences of grounding air traffic among the affected countries, our base-case assumption is that the parties will reach at least an interim arrangement to keep the planes flying while more permanent treaties are negotiated. However, the U.K.-EU negotiations are making slow progress and aviation is only one of a range of trade, travel, logistical, and other topics that require urgent attention. Therefore, we do not exclude a downside case under which we assume a very brief disruption in air travel. We currently believe that our ratings on the directly affected airlines can accommodate such a scenario. Among the rated airlines that will be affected, Ryanair and EasyJet are making arrangements to comply with the requirement that an airline with an EU operating certificate must be majority owned by EU nationals. We do not foresee this requirement becoming a major problem. As a U.K. airline, British Airways is not affected by this requirement and its parent, International Airline Group (IAG), while EU-domiciled, is not an airline and thus not subject to the ownership limit. Aside from the regulatory issues, the looming prospect of Brexit has already slowed U.K. economic growth and weakened the pound sterling (which makes outbound travel more expensive for U.K. citizens).

3. A sharp downturn in the global economy in 2019

Global aviation has enjoyed a long period of expansion since the Global Financial Crisis in 2008-2009 and is riding the tailwinds of the rising long-term demand for air travel. However, air travel remains a cyclical industry that is sensitive to economic conditions, oil price fluctuations, and capital market disruptions. A sharp global downturn would likely lead to at least a modest contraction in global air travel (even in the most recent and very severe recession, global air traffic fell by less than 5% in 2009) but--more significantly--it would also undermine the pricing power of the airlines and force them to cut their fares to fill seats. The most lucrative passengers, business travelers, would pull back on travel as corporations trimmed expenses. We believe that the most prosperous region currently, North America, would fare better than in the last downturn because of industry

consolidation and the fairly cautious growth of seat capacity since 2009. Still, the North American airlines have seen a steady and fairly sizable upturn in labor costs, which would be hard to cut quickly, particularly because they are facing long-term shortages of pilots and mechanics. Overall, we foresee a potentially sharp drop in profits, but probably not outright losses, for most rated airlines in North America. The picture in other regions varies. The airlines that are probably most at risk are those based in developing countries, whose economies would suffer from reduced trade and potential capital flight as investors seek to reduce their risk exposure. And, if the flight to quality includes a strengthening dollar, the mismatch of those airlines' dollar revenues to dollar expenses could pose a severe challenge, as Brazil's airlines experienced several years ago.

Shipping

1. An acceleration of newbuild orders

We see a risk that vessel owners, renowned in the industry for their historically poor supply discipline, could embark on an ordering spree in anticipation of better times ahead, particularly in sectors that are subject to low orderbooks and have brighter prospects (such as dry-bulk shipping). This would disrupt the encouraging supply trend and constrain charter rates. But, assuming a typical lead-time from ship ordering to delivery of 18-24 months, we expect there to be a slowdown in supply growth for at least the next few quarters regardless of ordering activity. Furthermore, the demolition of older tonnage remains a critical supply-side measure to help correct excess capacity and restore charter rates. We are mindful that the pace of demolition has slowed in recent quarters (with the exception of the crude tanker segment, which we forecast will see robust/accelerated scrapping this year), which typically happens when owners perceive possibly better times ahead. If new orders accelerate and scrapping does not reduce excess capacity, this will destabilize the industry, which is currently struggling to rebalance.

2. Failure to pass-on the cost of compliance with low sulfur fuel regulation

Ship owners and operators face an expensive set of choices to meet the upcoming regulations to cut sulfur emissions. The rules, which were drawn up by the U.N. International Maritime Organization and come into force in January 2020, will ban ships that use fuel with a sulfur content of higher than 0.5%, which compares with the current limit of 3.5%, unless they have equipment to clean up their sulfur emissions. Whether shipping companies decide to run their vessels on low-sulfur fuel, or retrofit or replace vessels to comply with these stringent regulations, they will likely face higher operating costs and increased capital expenditures. A failure to pass through the cost of compliance with the new regulations could have a significant effect on their funding needs and financial strength. Although the risk remains, we think that companies will raise their shipping rates or make deals with their customers to share the capital investments because it will be in all ship owners' interest to recover cost inflation.

3. A sharp downturn in the global economy in 2019

Shipping is very sensitive to global economic growth and trade flows. Under our base-case scenario, we expect that continued growth in the developing economies, mainly in Asia, will stimulate increased commodities trading in 2019. For example, we forecast that China's annual GDP growth will only marginally soften to 6.5% in 2018 and 6.3% in 2019 from 6.9% in 2017. However, there are evident risks in the demand outlook, most importantly from the ongoing U.S.-China trade dispute. A slowdown in imports of Chinese goods due to tariffs imposed by the U.S. (not largely counterbalanced by exports from other Asian countries) or lower commodity imports and consumption by China (by far the largest iron-ore and coal importer) would harm the container- and dry-bulk shipping

industries, which have heavily invested in new vessels for the last few years in the belief that China will make a consistently solid contribution to trade flows. In the last recession in 2008-2009, China's growth rode out the crisis largely unscathed. However, the next downturn could be triggered by trade and other problems in the developing countries, rather than a developed world banking crisis. In either case, it is hard for shipping companies to adjust their supply to reduced demand given the 20+ year economic lives of their ships and the sensitivity of shipping rates to a supply and demand imbalance. Accordingly, shipping is probably the most exposed transportation sector to a sharp downturn in the global economy.

Railroads

1. Trade tariffs could reduce rail traffic volumes

The risk to rail traffic from trade disputes has shifted from the post-North American Free Trade Agreement (NAFTA) negotiations to the escalating U.S. trade war with China. While the draft U.S. Mexico Canada Agreement (USMCA) raises potential barriers to auto trade, we believe they are not sufficient to significantly affect trade flows. And, the provisions that affect other types of trade are mostly little changed from NAFTA. The treaty still has to be ratified but we do not expect that even a revised version would likely lead to large changes. However, the rising series of retaliatory tariffs between the U.S. and China and the potentially wide-ranging U.S. tariffs on auto imports still carry risks. Specifically, the vulnerable commodities for railroads include autos, some agricultural goods, and some containerized freight. Even so, a solid majority of the overall rail traffic in North America relates to goods that remain in region. Even containerized freight, originally a shipping innovation, has spread sufficiently that half of all rail container moves are domestic.

2. Diversion of intermodal traffic from rail to trucks

With the ongoing challenges facing the trucking industry (including a shortage of capacity and drivers), the North American railroads have been the beneficiaries of the growth in intermodal traffic. However, a slowdown in consumer spending that leads to a decline in freight shipments (particularly e-commerce) could ease the truck shortage and cause trucking freight rates to soften. That, in turn, would attract some traffic back to trucking from the railroads. We do not believe that this would have a material effect on railroads overall, given their broadly diversified traffic mix and continuing efficiency gains. However, over the longer term, if the use of self-driving trucks become widespread, the railroads' current cost advantage over trucking could narrow.

3. A sharp downturn in the global economy in 2019

The North American railroads experienced reduced freight traffic during the sharp downturn in the global economy in 2008-2009. In response, they managed to reduce their operating costs by more than we would have expected for a capital-intensive industry. They also reduced their capital spending somewhat and sharply pulled back on share buybacks, which led to only modest balance sheet deterioration in most cases. The railroads' access to capital remained solid; indeed, they actually benefited from the flight to quality and even managed to continue issuing commercial paper. If this scenario were to reoccur--potentially due to different causes but with a similar sharp economic contraction--the railroads would be in better shape to meet the weaker demand because they have improved their operating efficiency and reduced their headcount and capital spending. They will have also already completed the required capital spending to comply with the positive train control mandate to improve safety. They would also continue to benefit from the lower tax rates under the 2017 tax law changes, which are bolstering their free cash flow. Even assuming a likely reduction in their earnings and operating cash flow, the railroads have the flexibility to reduce their shareholder rewards programs, which should allow them to maintain their strong financial risk profiles.

Transportation Equipment Leasing

1. Risks from weak customers

The customers of aircraft and marine cargo containers lessors--airlines and shipping lines--are often weak credits and (particularly for container lessors) can individually represent a material exposure. Both sectors have experienced bankruptcies and liquidations by their customers. However, a high percentage of their equipment on lease is usually re-possessed and re-leased, albeit at lower rates. Aircraft leases generally include security deposits and maintenance reserves in the case of weaker credits. Customers of truck and railcar lessors are generally more diversified and, in the latter case, often have stronger credit quality. Expenses related to bad debts have historically not been a significant problem for equipment leasing companies in general, although lease rates (and thus their revenue) will suffer if they are forced to re-lease the equipment in a weak market. Railcar lessors experienced this recently when the demand for tank cars that carry crude by rail plunged beginning in 2015 (though lessors' tank cars mostly carry chemicals and food products, not crude oil). When demand weakens, lessors typically enter into shorter-term leases at lower rates to maintain their high utilization in the expectation that when demand strengthens they will be able to extend their lease terms at more favorable rates.

2. Access to capital and higher interest rates

Leasing is a capital-intensive business. For several years, there has been an abundance of capital for most transportation leasing sectors from banks and secured and unsecured capital market bonds, including asset-backed security (ABS) financings, with attractive pricing. As long as interest rates don't increase sharply and quickly, we think higher borrowing costs can be passed through in the form of higher lease rates, particularly in those cases where lease rates include escalation clauses that reset if rates change between when the lease is signed and when the equipment is actually delivered (relevant mainly for new aircraft deliveries onto leases). The equipment that the transportation lessors own is generally considered good collateral and can support borrowing, albeit at lower advance rates and higher interest rates during periods of stress. At the same time, lessors have gained market share in some cases (albeit in a shrinking market) when banks and the public capital markets pulled back on directly financing transportation companies during a downturn. We think that refinancing risk has also abated somewhat because transportation equipment lessors, mindful of the problems that some faced in 2008-2009, have improved their asset/liability matching and have spread their debt maturities over a longer period.

3. A sharp downturn in the global economy in 2019

A sharp downturn in the global economy would affect demand across all transportation sectors. Global airline traffic would likely contract at least modestly, which would lead to airline failures, the grounding of some excess aircraft, and elevated pressure on lease rates and residual values. Although the large aircraft leasing companies are experienced and capable in repossessing aircraft and repositioning them with other airlines, the industry has attracted many new entrants that may not have the same expertise and track record. Therefore, a general deterioration in the supply and demand balance could be exacerbated by panicky sales or the offering of lease contracts at concessionary rates. Car rental demand would suffer along with the reduction in airline traffic, increasing pricing pressure in that sector as well. Lessors that support freight transportation would face similar dynamics, particularly if the next downturn involved significantly reduced trade flows. Marine cargo container lessors are probably the most exposed in this respect; however, they do have an advantage in that they can react quickly to a drop-off in demand by cutting their capital spending. The lead times to order new equipment are short and container lessors have generally managed to react to reduced demand fairly

quickly. This is even more true of car rental companies, which turn over their fleets every year or two. In 2008-2009, several of the large U.S. car rental companies shrank their auto fleets by 20% in only a few months.

Industry developments

Growing regulatory risks

Transportation companies face increasing environmental regulation over the long term, though we view these regulations as a near-term risk only for selected cases, such as shipping companies. Because fuel is a large cost item for most of these companies, they already have an incentive to use it more efficiently and thereby lower their emissions. The challenge is to improve their efficiency at a quicker rate than their trend growth rate such that they do not increase their overall fuel consumption and emissions. This dynamic is particularly apparent for the airlines, which are growing at a rate (global air traffic is increasing by around 5% annually over the long term) that exceeds their fuel efficiency gains, thereby adding to overall greenhouse gas emissions. And, because manufacturers have been progressively improving their engine and aircraft technology for decades, state-of-the-art aircraft are already quite fuel efficient, making further gains increasingly difficult to achieve. Global shipping, however, faces a different challenge. The industry's most widely used fuel, bunker fuel, is quite dirty and International Maritime Organization regulations will require much lower levels of sulfur emissions starting in 2020. This is technically feasible but expensive and it remains to be seen if shipping companies will be able to pass-on most or all of these higher costs given the cyclical and price-competitive nature of their industry.

“Disruption” and transportation companies

Disruption is a popular theme in analyzing an array of industries. While the transportation industry may not experience the same rate of change that technology, retailing, and some other sectors do, it has seen significant changes in its competitive dynamics and may be subject to more dramatic technological changes in the future. The rapid growth of low-cost airlines, first in the U.S. and then in Canada, Europe, and elsewhere, was an early example of disruption by new entrants employing a significantly different business model (high aircraft utilization, low labor costs, and low fares to stimulate demand). Southwest Airlines Co., WestJet Airlines Ltd., Ryanair Holdings PLC, and easyJet Airline Co. Ltd. have become major players in intra-region air travel and are all rated investment grade.

The most important potentially disruptive technology for transportation is driverless vehicles. If they are successfully developed and widely accepted, it could transform the trucking industry and potentially threaten railroads and car rental companies. In the U.S., the world's largest trucking market is currently facing a long-term driver shortage. This shortage is due to driver retirements (the average age of truck drivers is much higher than that for employees in most other industries), alternative employment opportunities in a strong economy, and more stringent federal regulations that impose tighter background checks and limit daily driving hours.

This shortage, combined with stronger demand, has sharply increased freight rates for shippers. Driverless vehicles could ease the shortage, both by replacing drivers and potentially driving much longer hours than human drivers. However, there are a whole range of significant obstacles that must be overcome for this to occur, ranging from technological capabilities to safety and popular and regulatory acceptance. Accordingly, we believe that the spread of driverless trucks will take place gradually over the next decade, with some applications being more suitable for the transition than others. For example, trucks and other vehicles that move within limited areas, such as ports, factories, and airports, would operate in a better-mapped and controlled environment.

Another potential application over the longer-term is “platooning”, a practice in which several trucks follow one another closely on long-distance highways to reduce wind resistance and save fuel. In such a platoon, the lead truck might have a human driver while the several others following it would be driverless and rely--in part--on tracking the movements of the lead truck. This would probably work best on the lightly travelled and long highways in the western U.S.

If trucking firms use driverless vehicles to lower their costs and improve safety, they could recapture some traffic that has shifted to the railroads (which are cheaper but slower). In theory, railroads are even better candidates for driverless or reduced-crew equipment than trucks because they travel along defined routes that they own and share with few other operators (such as Amtrak, the U.S. long-distance passenger railroad, in some cases). However, railroads are heavily unionized and changing labor contracts could prove difficult until the nature of the competitive threat has become obvious, by which time some market share will have already been ceded.

Another transportation segment that could be significantly affected by driverless technology is the rental car industry. This challenge could combine with the existing threat posed by Uber, Lyft, and other forms of ride sharing and significantly impact the industry. Currently, rental cars and ride sharing overlap mostly at the margin--ride sharing is most widespread in cities and for brief trips, while car rentals usually involve more driving over a longer time period. Ride sharing is a logical early adopter of driverless technology, if permitted by governments, because the vehicles mostly operate in limited areas and for many hours a day. The more available and reliable ride sharing becomes, the more its markets will likely overlap with those of car rental companies. However, car renters have skill sets and advantages of their own that may make them plausible partners for ride sharing companies or other industry participants, such as auto manufacturers. They are experienced in purchasing, maintaining, and positioning huge vehicle fleets (capabilities that asset-light businesses such as Uber and Lyft have not yet had to develop). Over the long term, it seems likely that driverless technology will significantly change the business of car renting, though it is not yet clear to what extent this trend will turn out to be a threat, opportunity, or some combination of the two.

Financial policy

Transportation companies are heavy users of debt to finance their capital expenditures, though some generate sufficient free cash flow to pay dividends and buy back shares as well. The financial policy decisions of these (mostly) stronger credits often determine their rating trajectory. The most profitable subsector of transportation is the North American freight railroads, which have a consolidated and stable business with good pricing power. We rate the seven largest North American freight railroads between 'BBB' and 'A+' and all of them pay out substantial sums in various forms to their shareholders. These companies could attain a higher rating if they chose to pursue it, and some have in the past, though the balancing of creditor and shareholder interests--along with the savings from U.S. corporate tax law changes--have led them to target ratings around their current levels. That said, they have demonstrated that they are willing and able to scale back their share buybacks sharply, as they did during the 2008-2009 recession, and we believe they continue to be well positioned to face the next downturn.

Perhaps a more surprising example of these types of financial choices is the airlines, which operate in a rather more cyclical and price-competitive industry. We upgraded the three largest U.S. airlines multiple times after they exited bankruptcy, based on their significantly improved earnings and cash flow. However, their capital allocation choices also had a strong influence on the extent of their gains, as shown by the spread of our current issuer ratings: 'BBB-' for Delta Air Lines Inc., 'BB' for United Continental Holdings Inc., and 'BB-' for American Airlines Group Inc. Outside the U.S., other large airlines that

are focusing on improving their balance sheets as a path to higher ratings include Air Canada, British Airways PLC, and Qantas Airways Ltd. The aircraft leasing subsector has also seen a partial shift as companies have moved away from relying on secured debt and have instead focused on unsecured borrowing to improve their balance sheets. The intended benefits include diversifying their funding sources, improving their debt ratings, and ensuring that they are better prepared for an eventual downturn in the aviation industry cycle.

Financial policy is also a major rating consideration for companies owned by private-equity financial sponsors. This form of ownership is less widespread for transportation companies than in some other industries, likely because ongoing capital-expenditure requirements may limit opportunities to use leverage to pay dividends. However, some, mostly smaller, trucking and logistics companies are owned by private equity companies and generally carry ratings in the 'B' category. A few transportation equipment leasing companies are owned by financial sponsors, though their financial policy choices tend to be little different from those of publicly owned companies and we have rated some in the 'BB' category.

Related Research

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- Inside Credit: How Tougher Shipping Fuel Emission Rules May Affect Shipping Company Ratings, July 12, 2018

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Cash, debt, and returns

Global Transportation

Chart 13

Cash flow and primary uses

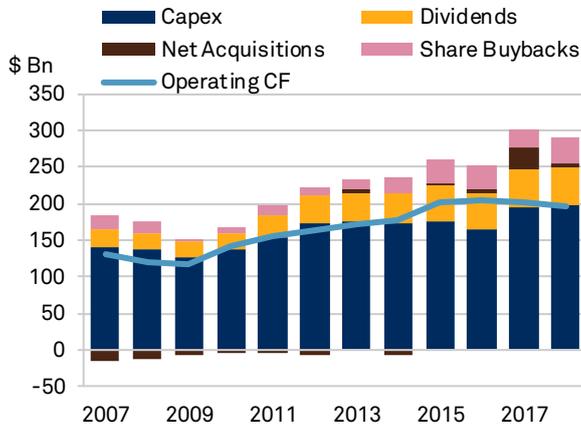


Chart 14

Return on capital employed



Chart 15

Fixed versus variable rate exposure

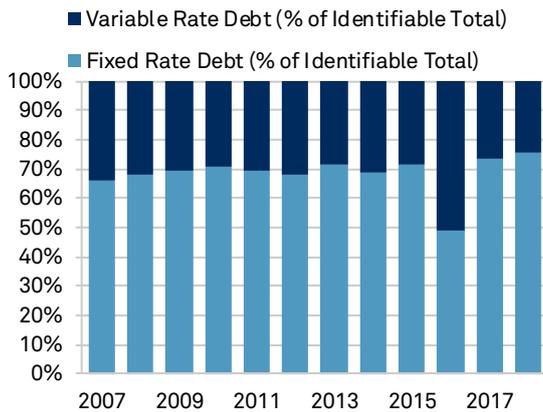


Chart 16

Long term debt term structure

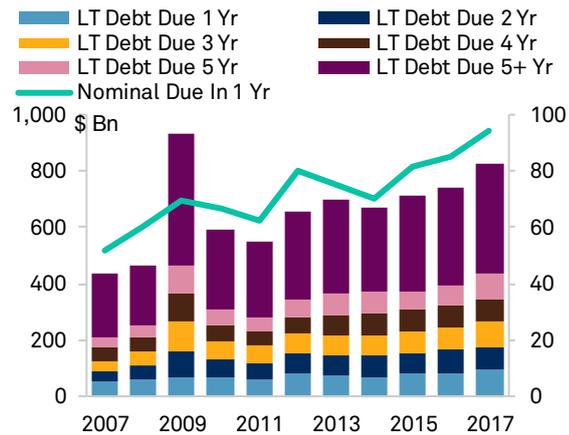


Chart 17

Cash and equivalents / Total assets

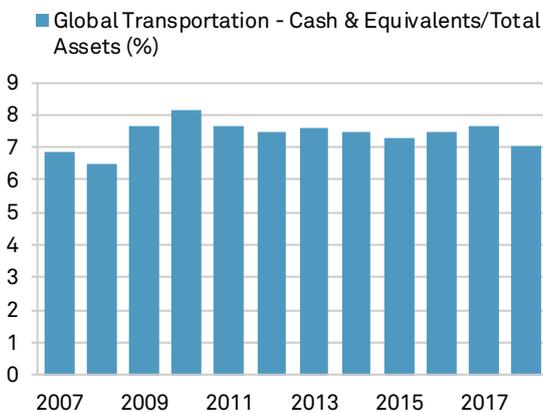


Chart 18

Total debt / Total assets



Source: S&P Global Market Intelligence, S&P Global Ratings calculations

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