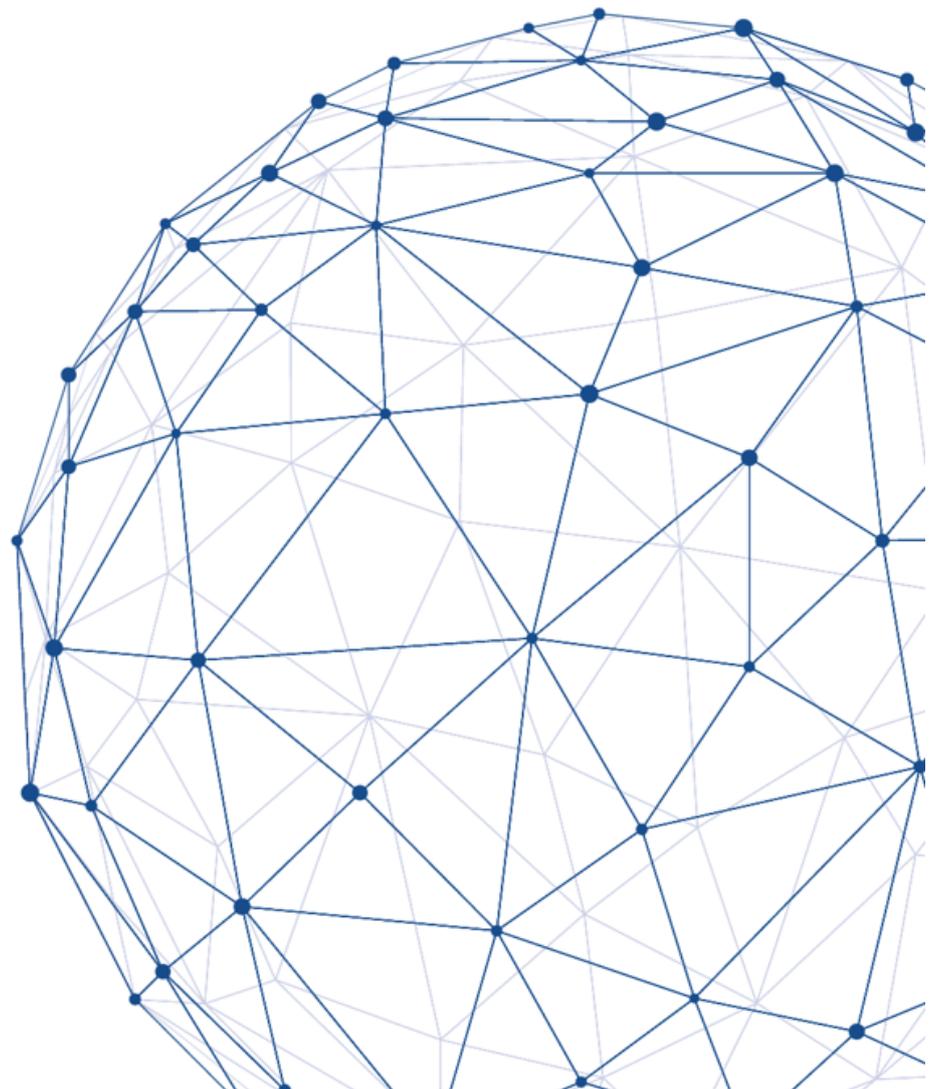


ESG considerations for the credit ratings of airlines

Airlines face stiff challenges in reducing its broad carbon footprint, making the industry vulnerable to heavier environmental regulations and taxes, in the context of growing sustainability concerns of stakeholders including investors, passengers and airports. Social issues are important too for the safety-focused and highly cyclical sector. This document explains Scope's view on which factors are looked at when considering credit-relevant ESG factors in credit ratings.

Scope Ratings GmbH, 08 August 2022



1. General ESG framework at Scope

Our ESG framework evaluates the extent to which ESG factors are credit-relevant for different industries. We also provide an overview of how ESG factors are integrated into our credit analysis. Our evaluations are not mutually exclusive or collectively exhaustive as these factors overlap and evolve. Reporting standards for these non-financial key performance indicators are undergoing major changes, shedding ever more light on stakeholders' understanding and expectations of ESG. We therefore aim to update the framework on a regular basis.

Our corporate credit rating analysis remains focused on credit quality and credit assessment drivers. We only consider an ESG factor relevant to our credit rating process if it has a ubiquitously discernible and material impact on the rated entity's cash flow profile and, by extension, its overall credit quality. Contrary to ESG ratings, which are largely based on quantitative scores for different rating dimensions, credit-relevant ESG drivers are mostly of a qualitative nature. Hence, identified ESG rating factors are based on an opinion in a relative context.

The importance/relevance of certain ESG factors is specific to each rated entity, industry and region, except for the dimension of governance, which is universally applicable across all industries. For example, the risk of pollution and environmental damage is important in the utilities, chemicals and natural resources industries but less relevant to the retail sector, where governance and social factors are more relevant. The same applies to an assessment of ESG-related factors that might have a significant impact on a company located in western Europe but no effect on an eastern Europe corporate with a similar business model. A good example is the impact of regulatory risks, which may be significantly greater in some jurisdictions.

Governance is an indication of how well a corporation is controlled and directed and the extent to which the interests of different stakeholders are safeguarded, including the payment of all due amounts on time and in full. Governance is thus relevant to all rated entities. In contrast, environmental and social variables capture risks and opportunities that are often specific to the activities of a company and the industry in which it operates. All such factors may have a direct or indirect impact on a rated entity's market position and its financial performance.

ESG-related factors can directly or indirectly affect all the rating elements which make up our assessment of an issuer's business risk profile, financial risk profile and supplementary rating drivers. We provide a list of ESG factors that we normally consider for a given industry, although only some of the factors listed are likely to apply and be relevant to any given company.

ESG rating drivers are part of the rating framework that is outlined in our [general rating approach](#).

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2. Important ESG themes in the airlines industry

Airlines face stiff challenges in reducing their large carbon footprint, making the industry vulnerable to heavier environmental regulations and taxes in the context of the growing sustainability concerns of stakeholders including investors, passengers and governments. Social issues are important for such a safety-focused and cyclical sector.

As pressure from investors and other stakeholders has grown for airlines to place more emphasis on sustainable growth, airlines have increasingly tried to address environmental, social and governance (ESG) issues to comply with more restrictive regulations – from CO₂ emissions to labour legislation – and differentiate themselves from competitors by making their brands more attractive to sustainability-conscious passengers. Lenders and aircraft lessors are also likely to offer more attractive rates to airlines with superior ESG credentials.

Government support has also proven more closely linked to ESG factors. State aid to European airlines during the pandemic was expressly linked to sustainability as a key policy objective. French government support for Air France was conditional on the airline cutting CO₂ emissions and reducing domestic flights. Similarly, the Dutch government's support package for Air France partner airline KLM required management to reduce night flights and lower CO₂ emissions. To the extent that airlines are relying on European capital markets, the EU's taxonomy defining what constitutes a sustainable business could push up airlines' cost of capital if they do not qualify for sustainability funds.

Our materiality assessment for credit risk related ESG factors identifies three challenges related to the environmental, governance and social impacts and risks for the airline industry:

- CO₂ emissions
- Labour management
- Indirect sustainability challenges

2.1. Theme I: CO₂ emissions

The airline industry's overwhelming environmental challenge is reducing reliance on kerosene for jet fuel which is responsible for most of the CO₂ footprint of commercial aircraft and freighters. Consequently, carriers face intensifying regulatory and taxation risk since there is no short- to medium-term prospect of significantly reducing their dependence on carbon-based fuel. No replacement fuel of sufficient quantity or quality to keep today's fleets of commercial aircraft in the air is likely to be available for many years, if not decades, short of an unexpected technological breakthrough. Airlines are heavily dependent on others – energy companies, aircraft makers and engine manufacturers – to provide the necessary technology to reduce emissions.

The aviation sector accounts for 2.4% of global carbon emissions and is growing fast. According to IATA¹, to serve the needs of the 10 billion people expected to fly in 2050, at least 1.8 gigatons of carbon must be abated in that year. Moreover, the net zero commitment implies that a cumulative total of 21.2 gigatons of carbon should be abated between now and 2050.

Many airlines have adopted a net-zero policy by 2050 and interim targets that seek substantial reductions in CO₂ emissions, but aviation remains one of the most difficult industries to decarbonise because most of the industry's emissions are tied to jet fuel combustion and aircraft age – also known as scope-1 or direct emissions -- and the sourcing of kerosene, so called scope-3 or indirect, upstream emissions.

The most common benchmark to assess emissions is CO₂ per seat or freight tonne kilometre, though absolute emissions are also important as passenger numbers are set to increase over time. Airlines with load factors above 90% such as some low-cost carriers claim to be not as pollutant as rival carriers with lower average load factors.

Fleet renewal

In the absence of technologically and economically feasible low-carbon alternatives, the aviation sector will have to achieve lower emissions by investing in more fuel-efficient aircraft, switching to sustainable aviation fuels as and when they become available, thereby making incremental reductions in the carbon footprint. We do not expect that aircraft technology will support zero or low emission flying until well into the next decade.

Most of the industry's efforts are therefore focused on upgrading fleets to the most fuel-efficient new technology aircraft, making fleet age the most important lever for reducing carbon emissions. In view of the importance of fuel

¹ IATA (International Air Transport Association) represents some 290 airlines comprising 83% of global air traffic.

costs for the industry, aircraft and engine manufacturers have already achieved substantial improvements in fuel efficiency over recent years. Airbus says it has reduced CO₂ emissions per passenger kilometre in its aircraft by around 50% since 1990 through optimised aerodynamics, more advanced materials in building planes and using more efficient engines.

Sustainable Aviation Fuel

Airlines are heavily relying on sustainable aviation fuel (SAF)² in the absence of ready technology to decarbonise aviation for the next decade, but the impact of SAF on the industry's emissions will be marginal in the near to medium term even as regulatory pressure mounts on the industry in Europe to shift to sustainable fuels. Suppliers of aviation fuel in the EU will have to ensure 2% is from sustainable sources from 2025.

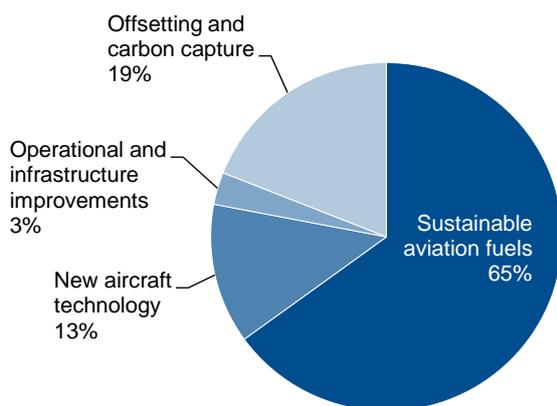
IATA estimates that SAF could contribute around 65% of the reduction in emissions needed by aviation to reach net-zero in 2050. However, this will require an exponential increase in production to annual capacity of 449 billion litres to meet demand. For now, investments are in place to expand annual SAF production to just 5 billion by 2025 from the current 125 million litres. With effective government incentives, production might reach 30 billion litres by 2030, which would be a tipping point for more efficient SAF production and wider-spread use by the industry. SAF is at least compatible with existing aircraft engines and easy to transport and store but it is expensive. SAF typically costs more than twice normal jet fuel which already constitutes the biggest share of airline operating expenses alongside staff costs. Higher kerosene prices – most recently triggered by the repercussions of Russia's war in Ukraine -- could encourage airlines to buy newer aircraft and/or accelerate the switch to sustainable aviation fuel. However, the airline industry's thin profit margins and exposure to the economic cycle leave little room for manoeuvre in terms of incurring higher fuel bills and heavy investment in new planes.

Carbon offsets

Looking at IATA's net zero plan, offsetting carbon emission looks like an easier achievable target. If it proves impossible to eliminate emissions at source, the industry is committed to mitigating the remaining emissions using offsetting mechanisms, including out-of-sector options such as carbon capture technologies and storage and credible carbon offsets.

Meeting net zero targets will require the collective efforts of all stakeholders including governments in proving a supportive policy framework for the industry. As things stand, the airline industry is facing more stringent regulations through the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA), which will become mandatory globally in 2027. CORSIA aims to stabilise international civil aviation net CO₂ emissions at 2019 levels using offsetting³ programs.

Figure 1: IATA net zero plan



Source: IATA, Scope

² SAF is a liquid fuel currently used in commercial aviation which reduces CO₂ emissions by up to 80%. It can be produced from several sources (feedstock) including waste oil and fats, green and municipal waste and non-food crops. It can also be produced synthetically via a process that captures carbon directly from the air.

³ Offsetting is an action by a company or individual to compensate for their emissions by financing a reduction in emissions elsewhere.

Operational improvements

Airlines are making use of more practical ways which include fleet renewal and incremental improvements to flight operations with the help of other parties such as air traffic control and airports. According to American airlines, more than 90% of the total carbon footprint comes from jet fuel, so fleet renewal programs and the work to run flight operations more efficiently could contribute significantly to reducing emissions.

Advanced technologies

Using hydrogen- and electrically powered aircraft are part of airlines' plan to achieve net zero emissions by 2050, though the technologies – yet to be proven at an industrial scale – are likely to be limited to short-haul routes and not available before at least 2040. Around 80% of the aviation CO₂ emissions are emitted from flights of over 1,500 kilometres for which there is no practical alternative mode of transport without significantly longer travel times.

Relevance to our rating approach:

Climate transition risk is the most acute ESG factor for the airline sector, one which will be costly and take time to mitigate. Faced with rising demand for air travel, airlines have limited means to abate emissions in the short to medium term. The industry remains dependent on the development of new, more sustainable fuels which for now are costly and in limited supply. A slow transition toward net zero puts the industry at elevated risk of further regulation and taxation, which could reduce traffic volumes and profit margins, while putting upward pressure on the cost of capital, operating costs and capital expenditure if carriers are forced to accelerate investment in more fuel-efficient aircraft.

2.2. Theme II: Labour management

Staff shortages in Europe and the US this year have hampered airlines from ramping up their activities to meet the surge in demand for air travel as governments have lifted pandemic-related travel restrictions in an illustration of how sensitive the sector is to labour disruptions but also the workplace constraints that airlines face. Safety is the priority in a sector where accidents can be fatal for passengers and corporate reputations, hence the importance of properly trained pilots and aircrew to match intensive aircraft certification and safety regulations and procedures.

Employee-manager relations are also drawing the attention of sustainable investors who are urging companies to be more transparent on labour issues: recruitment, diversity, pay and conditions.

Another reason why labour relations are so important for airlines is that it is a service-intensive sector with a high ratio of labour costs to total costs. There is also a high level of union representation in the industry, leading to back-and-forth struggles between management and unions over the decades. Airline employees have significant bargaining power, ensuring there is pressure on management to maintain constructive relations with unions.

However, the no-frills business models pioneered by SouthWest Airlines in the US and Ryanair PLC in Europe, helped by deregulation, have seen shifts in the balance of power between management and staff as have the ups and downs the industry has gone through in the past 20 or so years, from the aftermath of the 9/11 terrorist attacks on the US to the global financial crisis and the Covid-19 pandemic.

One of the challenges for European airline executives, certainly by comparison with North America, for example, is the multiplicity of unions in the region. This, together with the fragmented nature of labour law, can make negotiations complex for airlines with operations in more than one country. However, it also provides opportunities for management to tap pools of labour where costs are lowest and working practices more flexible. A lack of pilots globally has increased their negotiating power in Europe, visible in Ryanair's recognition of pilots' unions. Investors have challenged Hungary-based budget airline Wizz Air over labour rights and recognising unions.

The industry is currently facing a shortage of employees especially after the retirement and furlough programs implemented during the pandemic when airlines had to ground most or all aircraft. The time required to recruit, train, complete security and other background checks, and perform other necessary processes before staff are "job-ready" is presenting a long-lasting challenge for the industry. In some cases, employment delays have reduced airlines' ability to meet passenger demand.

Relevance to our rating approach:

Labour is the second highest operational cost item for airlines after jet fuel. Airline staff are often unionised. Strikes are far from uncommon which can be costly for the companies. Other industrial action, from go slows, widespread sick leave, picketing at airports can also squeeze revenues. Airlines with difficult labour relations may struggle to maintain reputations for service quality and passenger loyalty.

Airlines also face a long-term shortage of pilots and mechanics. The airline industry's growth and the lengthy and costly training required in many countries to become a pilot has led to a supply/demand imbalance, interrupted only temporarily by the pandemic. Over time, this will likely result in airlines offering higher wages and benefits to attract and keep staff.

2.3. Theme III: Indirect sustainability challenges

Airlines need to confront indirect sustainability challenges as their most important stakeholders – passengers, investors, airport operators, regulators and governments – grapple with long-running issues from the energy transition to changes in travel behaviour and technological developments outside the sector itself. Adaptation to what are often long-term trends is vital considering that airlines are the least profitable segment in the aviation value chain.

Passengers

- Leisure travel: Changing expectations – from seeking a more seamless, enjoyable travel experience through better use of digital technology, from check-in to in-flight entertainment, to those shunning air travel for environmental reasons – may weigh increasingly heavily on the industry.
- Business travel: the pandemic showed that virtual meetings can replace many if not all in-person meetings, with technology evolving fast to meet that need, exposing airlines to the risk of significantly less high-margin business-class revenues in the future.

Investors

- Regulatory pressure on investors, such as the EU's Sustainable Finance Disclosure Regulation, to favour sustainability-focused investment strategies may have a disproportionately heavy impact on airlines given the challenges they face in reducing their carbon footprint.

Airport operators

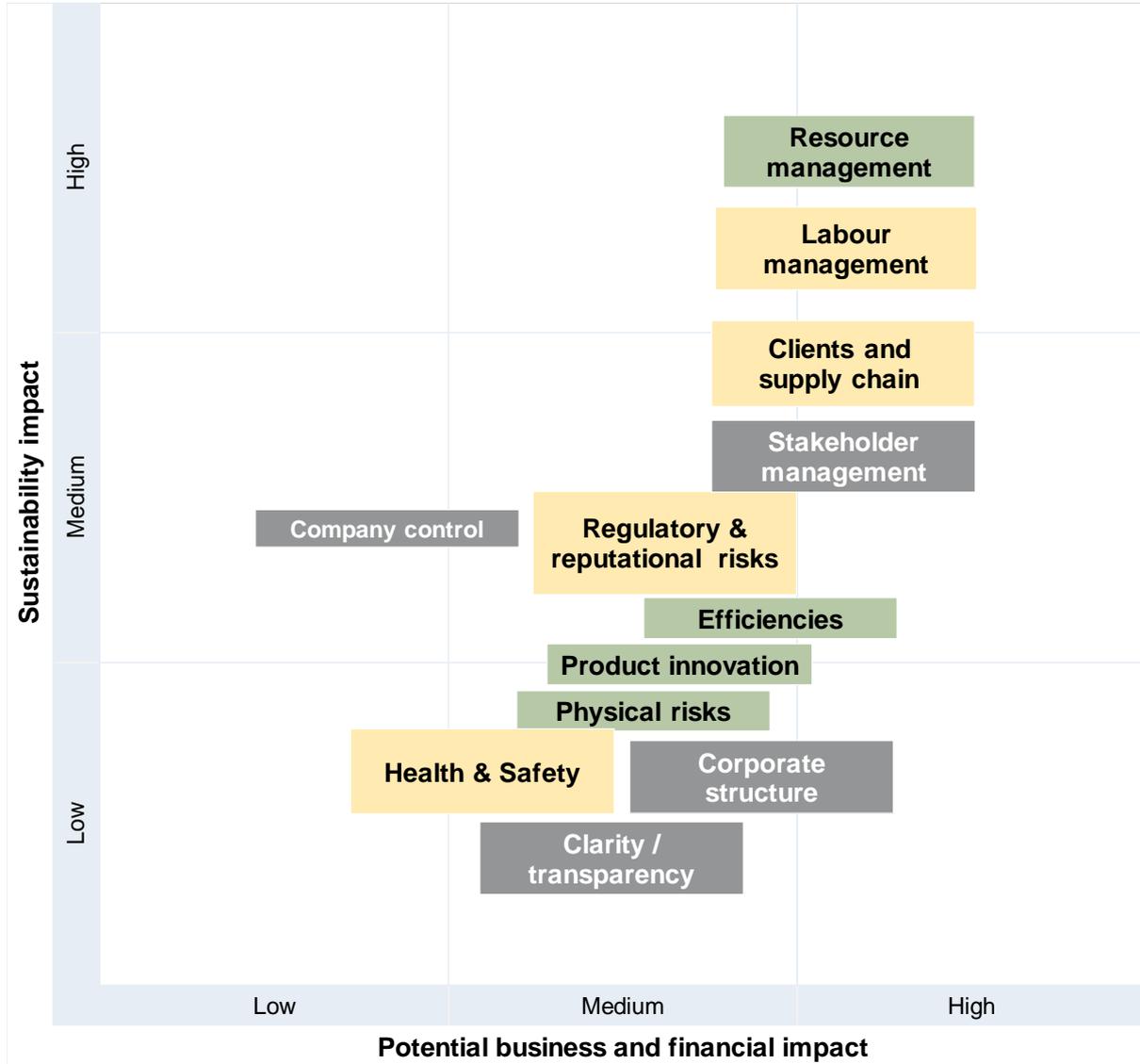
- Airports faced their own challenges in dealing with the energy transition, noise and air pollution which may lead to upward pressure on airlines' costs as fees rise and landing slots are more tightly managed.

Relevance to our rating approach:

The airlines industry is highly cyclical thus vulnerable to event risks – such as the Covid-19 pandemic – and longer running trends which threaten to reduce revenues and push up costs. Airlines face indirect sustainability challenges as their most important stakeholders – passengers, investors, airport operators, regulators and governments – grapple themselves with long-running issues such the energy transition, changes in travel behaviour and technological developments.

3. Materiality of the ESG factors on the airlines industry

Our ESG framework includes various broader categories related to environmental, social and governance factors. We differentiate between the impact these factors have on sustainability and on a company's credit profile (business and financial risk). Not all ESG factors influence an issuer's creditworthiness to the same extent.



4. Typical ESG factors in the airlines industry

Governance is generic and applies to all industries. How it is measured is therefore particularly important. The environmental and social factors listed here provide a realistic reflection of the risks and opportunities that an airline company might face. The list below is non-exhaustive and expected to evolve over time.

Environment			
	Sub-Indicator	Measurement/Indicator	Credit impact
Resource management	CO ₂ emission	<ul style="list-style-type: none"> CO₂ emissions per passenger kilometre CO₂ emissions per freight tonne kilometre freight Carbon reduction targets Proportion of SAF out of total fuel consumed Average aircraft age 	<ul style="list-style-type: none"> Measuring and disclosing emissions levels can demonstrate leadership in combating climate change, thereby attracting investors and appeasing regulators. Rising costs and capital expenditure to comply with CO₂ emission may oblige airlines to pass on those costs to customers which will affect ticket affordability and consequently sales
	Fuel efficiency	<ul style="list-style-type: none"> Fuel burn per ASK Number of fuel-efficient aircraft out of the total fleet Weight reduction 	<ul style="list-style-type: none"> Reducing exposure to the cost of growing carbon regulation and diversifying fuel supply
	Circular economy	<ul style="list-style-type: none"> Total onboard waste (thousand tonnes) Use of recycled materials Waste: how much waste recycled; amount/treatment of hazardous waste Proportion of water that is reused/recycled Waste per passenger Process of phasing out of old aircrafts 	<ul style="list-style-type: none"> Reduction of waste contributes directly to lower costs for materials, processing and disposal Recycling help saving on some materials costs
Efficiencies	Operational efficiencies	<ul style="list-style-type: none"> Number of delays Flights cancellations Resiliency planning for more frequent and severe weather events Flight punctuality Lost luggage rates Use of artificial Intelligence to improve efficiency of aircraft operation 	<ul style="list-style-type: none"> Unit cost reductions and subsequently higher operating margins In an intensely competitive industry that has also been focusing on cost-cutting initiatives, finding operational efficiencies in particular remains a challenge
Product innovation	Use of new technologies	<ul style="list-style-type: none"> Investment in modern aircraft and engine technologies Digitalisation of operations 	<ul style="list-style-type: none"> Higher revenue and potential premium effect due to a distinctive feature leading to higher market positioning Higher capex leading to a lower net cash flow
Physical risk	Climate related and Force majeure risks	<ul style="list-style-type: none"> The impact of extreme heat on aircraft or of sea level rise at major hubs Routes that can be negatively affected by extreme weather/natural disasters such as storms, wildfires, flooding, and earthquakes 	<ul style="list-style-type: none"> A high exposure to regions that suffer from extreme weather events or natural disasters leads to higher insurance premiums, a greater likelihood of casualties or flight disturbance and increased capex.

Social			
	Sub-Indicator	Measurement/Indicator	Credit impact
Labour management	Workforce metrics	<ul style="list-style-type: none"> Labour management policies Employee satisfaction, employee retention and turnover Staff costs/Revenue Gender diversity Gender pay ratio Labour relations Percentage of active workforce covered under collective bargaining agreements Number of work stoppages total days idle 	<ul style="list-style-type: none"> The greater employee satisfaction, the more an employer's ability to attract and retain skilled staff, reduce turnover, control staff costs, and enhance productivity (less downtime, lower restructuring and litigation costs). Staff-diversity reporting beyond the mandatory minimum can limit the risk of future penalties. Increasing transparency over gender pay ratios can satisfy legislative scrutiny and mandatory reporting covering pay differences, such as those being rolled out across the EU
	Health and safety (including flight safety and team member health and safety)	<ul style="list-style-type: none"> Number of governmental enforcement actions of aviation safety regulations Number of aviation accidents Customer injuries rate On-the-job injuries rate Aircraft ground damage increasing severity of weather events 	<ul style="list-style-type: none"> Well-maintained aircraft minimise the risk of incidents, lowering insurance premiums Attention to health and safety measures should result in fewer occupational injuries and lost days, lowering absenteeism Limits on a license to operate
Health & safety	Privacy and data security	<ul style="list-style-type: none"> Compliance with client data protection laws such as GDPR 	<ul style="list-style-type: none"> Potential fines reducing cash flow
	Value chain	<ul style="list-style-type: none"> Improving customer experience projects Investment in ecosystem collaboration Collaborations projects with airports and suppliers Percent of aircraft certified as meeting noise limits A single standardised and exchangeable data set Investment in automation 	<ul style="list-style-type: none"> Improving the value chain will insure higher operating margin and subsequently higher cash generation.
Clients and supply chain	Regulation	<ul style="list-style-type: none"> Track record of compliance with laws and regulations Total amount of monetary losses as a result of legal proceedings associated with anticompetitive behaviour regulations 	<ul style="list-style-type: none"> Compliance failures may result in financial penalties or ultimately the loss of the license to operate and confiscation of assets Regulatory policies may have negative financial implications
	Reputation	<ul style="list-style-type: none"> Press sentiment Shifts in customer preferences Increased stakeholder concern Stakeholders survey Subsidiaries operating in tax heavens classified countries 	<ul style="list-style-type: none"> Adverse publicity around a company may cause it to be shunned by important stakeholders, including customers, suppliers, investors, and financiers
Regulatory & reputational risk			

Governance			
	Sub-Indicator	Measurement/Indicator	Credit impact
Company control	Board structure and effectiveness	<ul style="list-style-type: none"> Board independence Competence and diversity of board members Effectiveness of oversight, risk management and internal control mechanisms Sustainability targets at board and executive management levels 	<ul style="list-style-type: none"> Ineffective board or lack of controls can result in poor decision-making and failure to achieve strategic goals. Tight controls are vital to minimise fraud, theft and the misuse of company resources.
	Risk management	<ul style="list-style-type: none"> Risk management framework and culture Risk-adjusted return/performance measures 	<ul style="list-style-type: none"> Risk awareness at all levels of an organisation is crucial for effective strategic, operational and financial risk mitigation.
	Bribery and corruption	<ul style="list-style-type: none"> Frequency and magnitude of bribery and corruption incidents. 	<ul style="list-style-type: none"> Adverse reputational consequences can lead to regulatory reprimands, fines, the loss of assets and/or the loss of operating licences.
Clarity/transparency	Financial disclosure	<ul style="list-style-type: none"> Timeliness and quality (GAAP) of disclosures. Comprehensiveness of disclosures (e.g., on terms of loan agreements, contingent liabilities, related-party transactions, ownership structure) Consistency in reporting formats 	<ul style="list-style-type: none"> Rapid and comprehensive financial reporting instils confidence and signals strong and effective internal controls. Conversely: slow and incomplete reporting may signal weak controls, incompetence or attempts at concealment ('creative accounting').
	Transparency of communication	<ul style="list-style-type: none"> Earnings calls and investor presentations that help stakeholders understand the company's performance drivers and strategic direction Risk factor (including ESG-related risks) and sensitivity analysis 	<ul style="list-style-type: none"> Transparency is often associated with strong governance. Understanding and openness about risk factors allows a company to hedge against risks and prepare mitigation strategies.
Corporate structure	Complexity	<ul style="list-style-type: none"> Complex and transparent ownership structure (nominee holdings hiding true owners) Complex group structure Complex debt structure Significant related-party transactions Aggressive tax optimisation strategies History of frequent legal or regulatory infractions 	<ul style="list-style-type: none"> Opaque company ownership, cross holdings, and significant minority interests may hide conflicts of interest. Complex debt structures can result in unexpected events of default and cross-acceleration. Related-party transactions can disguise inappropriate diversion of company assets. Aggressive tax strategies can backfire and result in unexpected tax penalties, negative publicity, and reputational damage.
Stakeholder management	Stakeholder relations	<ul style="list-style-type: none"> Respect and balance of interests of all stakeholders 	<ul style="list-style-type: none"> Stakeholder disputes may have negative reputational and financial consequences.
	Shareholder distributions	<ul style="list-style-type: none"> Financial policy clarity, consistency, credibility and track record Board level endorsement of financial policy 	<ul style="list-style-type: none"> A clear and credible financial policy helps management meet strategic targets and manage stakeholder expectations.



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