Proceedings of the 3rd International Conference on Financial Technology and Business Analysis
DOI: 10.54254/2754-1169/152/2024.19445

A Financial Analysis and Risk Assessment of Airbus

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Abstract: This article qualitatively scrutinizes the financial performance of the leading European aviation designer and manufacturer, Airbus, using data from financial reports, market performance, and recent events. Distinguishing different pieces of empirical evidence and analyzing recent events, it is found that Airbus is performing relatively in a recovering manner. The post-pandemic global market for the aviation industry sees an increase in demand and supply. Airbus might use its mature technologies to compete for a higher market share. The notable increase in order intakes in 2023 relative to 2022 also supports this opportunity. Meanwhile, the changing perception of economic sectors prompted by the limitations in the pandemic and the adaptation of green technologies to reduce carbon emissions pose challenges to Airbus and the aviation industry. The progress in developing hydrogen-powered aircraft and sustainable aviation fuels might help the company offset future regulatory risks and take the lead in the industry. Also, by examining the financial data, the analysis highlights the complex relationship between sales growth and profitability, emphasizing the importance of understanding the underlying factors driving these dynamics.

Keywords: Airbus Financial Performance, Aviation Industry, Risk Assessment.

1. Introduction

The European cooperation Airbus is a critical player in the global aviation industry. Soon since its establishment and flourishing, it has been recognized for its innovative aircraft design and extensive product portfolio. The company faces a long-lasting competitive environment, primarily facing rivalry from Boeing, the American one of the two most influential aviation manufacturers in the world. Airbus established a strong market presence with a significant share in the commercial sector.

However, the aviation industry is now encountering an era of change. The COVID-19 pandemic profoundly impacted the industry, leading to unprecedented air travel demand declines that were barely witnessed. During the pandemic's peak, Airbus faced multiple significant challenges, including halted or slowed production, delayed aircraft deliveries, decreased sales, and global demand, all of which could contribute to substantial financial losses. The pandemic forced international airlines to cut back on operations and postpone orders for new aircraft, reducing profits [1].

There is a potential link between the heightened awareness of carbon emission reduction in aviation and the impacts of COVID-19. The pandemic led to a drastic reduction in air travel, resulting in a significant temporary decrease in aviation emissions. This sharp decline prompted stakeholders to reconsider the industry's environmental impact and the sustainability of pre-pandemic operational practices. The public and governments became more attuned to environmental issues during the

DOI: 10.54254/2754-1169/152/2024.19445

pandemic. The restrictions on tourism and other daily-life sectors, whether by choice or government mandate, led to a significant improvement in air quality and a 5.4% reduction in greenhouse gas emissions in 2020 [2]. Behavioral or lifestyle inertia might also exist as a higher global population turns to a greener transportation style. This shift in public perception could lead to a growing demand for sustainable practices across industries.

As the global economy recovers, the aviation industry is witnessing a resurgence in air travel demand. In 2024, the global activeness of the aviation industry recovered to the pre-pandemic level at the end of 2019, measured by Global Air Connectivity [1]. Airbus has positioned itself to capitalize on this recovery, focusing on enhancing operational efficiencies and advancing sustainability initiatives. The company is committed to developing eco-friendly technologies, the two primary ones being hydrogen-powered aircraft and sustainable aviation fuels (SAF). This reflects a proactive approach to meet evolving market demands and regulatory pressures for reducing carbon emissions from various developed and developing economies.

Airbus' financial performance and recent news demonstrate its recovery, impact, and strategic transition from the pandemic. In 2023, it saw revenue of some 65 billion euros, compared to 58 billion in 2022, and 186 billion order intakes, compared to 85 billion in 2022 [3]. This reveals the positive market expectations. Nonetheless, reported earnings per share (EPS) decreased from 5.40 euros in 2022 to 4.80 in 2023, possibly implying that Airbus has spent more proportionately on R&D expenditures related to the transition to greener operational models and technologies. Despite the several new orders this year from various regions, such as Cebu Pacific's firm order for 70 A321neo airliners, regulatory and supply incidents, such as the investigation by HMRC into its potential violations of export control, and delivery target cuts due to supply chain issues, might imply potential uncertainties for both the company and the whole industry [4, 5].

2. External Environment

The external environment shapes Airbus' financial performance and strategic direction. This includes material advantages, such as possessed technologies and patents, innovative capabilities, competitive dynamics, etc., which are the fundamental entities that constitute the company's framework. Moreover, the external environment includes possible challenges from regulatory pressures, market rivals with similar shares, and potential threats from emerging companies. The following analysis of the external environment adopts the typical SWOT framework.

2.1. Strengths

Airbus is one of the two dominant semi-monopolies in the global aerospace industry. For example, its A320neo family now holds approximately a market share of 60% of the backlog against its rival, the Boeing 737 MAX family, which guarantees it significant pricing power and influence [3]. Thus, its performance could be regarded as the "barometer" of the aviation industry. The company offers various products, including commercial liners, military defense aircraft, helicopters, and space systems, which allows it to serve different market segments and reduce dependency on any single area (while this paper mainly focuses on analyzing its performance in the commercial liner sector). Based in and supported by Europe, Airbus retains a powerfully productive global supply chain, operating in regions including Europe, North America, and Asia-Pacific [6]. This geographic diversification benefits the company by reducing its vulnerability to regional economic downturns and disruptive natural disasters. Also, Airbus maintains a robust backlog of orders of 8598 aircraft, indicating sustained demand for its products worldwide and providing visibility for short-term future revenues [3].

DOI: 10.54254/2754-1169/152/2024.19445

Leadership evolution and collaborative partnerships are also keeping Airbus active and competitive as a uniform corporation. As the company enters 2024, it recognizes the year as pivotal for its future programs, particularly regarding developing next-generation aircraft. Critical decisions will be made about the architecture of a new single-aisle aircraft and its first hydrogen-powered airliner. In this case, Airbus has made strategic changes, including Christian Scherer as the head of the Commercial Aircraft business [3]. This transition in management allows CEO Guillaume Faury to concentrate on the mentioned and broader challenges facing the company. Regarding global collaborative progress in 2023, the company established several key partnerships, including programs such as an agreement with VDL Group about an aircraft communication terminal and critical players in the hydrogen industry in both New Zealand and Germany [3]. These efforts reflect the company's commitment to innovation and strategic engagement, adding to its advantage in the industry's cutting-edge development.

2.2. Weaknesses

Though Airbus is the existing duopoly in the aviation industry, it still faces some issues in its system that could backfire on its expansion and potentially harm its credibility. Airbus has encountered notable production issues, particularly with its A320 and A350 family programs. This instability in its supply chain poses challenges to its production and the entire company's operation. Research points out that issues with the supply chain primarily lead to operational delays in the aviation industry [7]. For example, in 2022, Airbus announced it would delay those deliveries due to supply chain bottlenecks and labor shortages, which resulted in production slowdowns [3]. Also, the cyclical nature of the aviation industry is researched in academia. To elaborate, the cyclical pattern is characterized by fluctuations in demand due to various economic factors, leading to periods of growth followed by downturns [8]. Economic recessions typically reduce air travel demand, as consumers and businesses reduce travel expenditures [9]. Another risk posed by its susceptibility to the global economy is the long-term contracts vs. short-term demand. Aircraft orders generally take some years to deliver, but short-term market fluctuations can impact the contracts. If airlines anticipate a downturn, they may cancel or defer orders, leading to financial strain on manufacturers [10]. Airbus, as the top aviation manufacturer, cannot likely avoid cyclicality but could properly manage its expansion and contraction to offset or mitigate the adverse effects of the dependence.

2.3. Opportunities

Multiple positive factors could be regarded as opportunities that may contribute to the expansion of Airbus in the post-pandemic era. Airbus has been proactive in developing environmentally friendly aircraft and researching SAFs. It aims to capitalize on its current product line with advancements that enhance fuel efficiency and reduce environmental impacts. Research has shown that such commitments by the aviation industry coheres with the UN Sustainable Development Goals (SDG) and increase a company's reputation [11]. Airbus is committed to taking the lead in applying eco-friendly technologies, such as the Neo versions of its A320 and A330 families. The A330neo and A350neo models achieve approximately 25% fuel savings compared to previous generations [3]. Nonetheless, hydrogen-powered aircraft is Airbus' primary approach to cutting-edge eco-friendly technologies. It is the first manufacturer to disclose its ambition to bring such an aircraft to the market by 2035. it can be combusted in specially adapted gas-turbine engines or transformed into electricity using fuel cells, creating a hybrid electric propulsion system that operates entirely on hydrogen [12]. Regarding SAFs, Airbus has examined the 100%-SAF capabilities of aircraft, including the A320neo family, A330, A350, and A380, the main commercial types. The use of SAF was increased to 10% in 2023, with the goal of at least 30% by 2030 [3]. Such a sustainable approach reveals Airbus'

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ambition to take the lead in cutting-edge technologies for aviation, which is a potential opportunity for reputation and expansion.

A secondary opportunity for Airbus is the change in the duopolistic balance with Boeing, which originated from the "whistle-blower" incident. In 2019, two deadly crashes involving the Boeing 737 MAX triggered the grounding of the aircraft worldwide. Investigations revealed that issues related to the aircraft's Maneuvering Characteristics Augmentation System (MCAS) were a significant factor in the accidents [13]. Then, several Boeing employees came forward with allegations of safety concerns and a company culture prioritizing production speed over safety, but, astonishingly, two of them were found "suicided." It has no intention of examining the relationship between their deaths and Boeing's behavior. However, when testifying at the US Congress, the Boeing CEO did admit that the company had retaliated against whistleblowers [14]. The sequence of events undoubtedly harmed Boeing's reputation to the maximum extent possible, which, in turn, could be regarded as a very unusual opportunity for Airbus to take over what Boeing might be crowded out from in the global market.

2.4. Threats

The main threat to Airbus is the rising competition from the Commercial Aircraft Corporation of China (COMAC), whose C919 has been put into service. C919 is designed to compete directly with Airbus' A320 (and Boeing's 737 family, now under great suspicion about its safety) [15]. The Chinese government heavily supports COMAC, providing substantial financial backing and resources. This support can enable C919 to be priced competitively, making it challenging for Airbus to compete on cost. Meanwhile, C919 will likely gain strong support from Chinese airline companies, which may prefer domestically produced aircraft due to national interests and official guidance [16]. This home advantage could limit Airbus' growth potential in one of the world's largest aviation markets. China has great potential to be disclosed for aviation, with the Chinese government attaches great importance to enhancing the aviation capacity by 2035 [17]. If its regulatory institutions impose stricter limitations on foreign products or Airbus fails to compete with COMAC technologically, Airbus could not profit considerably in China's market.

3. Internal Environment

3.1. Liquidity

Table 1 below shows the current ratio of Airbus [18]. It remained below 1 for several quarters, which indicated potential vulnerabilities. The current ratio below 1 suggests that the company might not have enough current assets to cover its short-term liabilities, raising concerns about its management. The low ratios signal the need for vigilance in managing capital, especially in a capital-intensive industry like aerospace.

Table 1: Current ratios of Airbus.

Date	Current Assets ($billion)	Current Liabilities ($billion)	Current Ratio
2023-12-31	69.21	58.09	1.19
2023-09-30	71.35	61.68	1.16
2023-06-30	71.31	59.37	1.20
2023-03-31	69.55	59.01	1.18
2022-12-31	66.38	55.41	1.20
2022-09-30	65.70	60.80	1.08

DOI: 10.54254/2754-1169/152/2024.19445

Table 1: (continued).

2022-06-30	64.68	58.80	1.10
2022-03-31	66.37	56.59	1.17
2021-12-31	66.02	56.56	1.17
2021-09-30	68.36	59.55	1.15
2021-06-30	69.21	59.43	1.17
2021-03-31	73.21	64.43	1.14
2020-12-31	66.71	56.85	1.17
2020-09-30	72.94	67.03	1.09
2020-06-30	72.94	65.40	1.03
2020-03-31	63.48	71.01	0.89
2019-12-31	63.53	69.86	0.91
2019-09-30	61.55	62.36	0.99
2019-06-30	62.08	63.15	0.98
2019-03-31	67.91	70.26	0.97

The onset of COVID-19 severely disrupted the global aviation sector, leading to a drastic reduction in air travel and a halt in new aircraft orders. Thus, Airbus' liquidity was put to the test. The current ratio fell to 0.89 in Q1 2020 (see Table 1), underscoring Airbus's challenges: increasing liabilities due to deferred payments, operational costs, and dwindling revenue streams.

As the aviation industry began its recovery, the factors mentioned in Section 2 contributed to the increase in the current ratio [19]. It rebounded significantly, stabilizing around 1.19 by the end of 2023. The shift from a precarious position before the pandemic to a robust recovery demonstrates the company's ability to adapt and respond effectively to market demands and incidental opportunities [20]. Along with the incident of its primary global rivalry, Boeing, the company might encounter better-developing environments, which is reflected in its healthy liquidity position [21].

3.2. Solvency

Table 2: D/E Ratios of Airbus.

Date	Long-term Debt ($billion)	Shareholder's Equity ($billion)	D/E Ratio
2023-12-31	109.47	19.19	5.71
2023-09-30	115.15	16.65	6.92
2023-06-30	113.33	16.53	6.92
2023-03-31	111.09	15.64	7.10
2022-12-31	108.48	13.68	7.93
2022-09-30	115.78	6.44	17.99
2022-06-30	111.68	9.27	12.05
2022-03-31	111.39	12.23	9.11
2021-12-31	115.42	11.22	10.29
2021-09-30	117.20	10.38	11.29
2021-06-30	118.26	11.18	10.58
2021-03-31	125.60	8.52	14.75
2020-12-31	118.39	7.38	16.05
2020-09-30	130.21	2.25	57.89

DOI: 10.54254/2754-1169/152/2024.19445

Table 2: (continued).

2020-06-30	122.82	1.47	83.80
2020-03-31	121.88	3.89	31.31
2019-12-31	121.43	6.71	18.10
2019-09-30	121.83	5.27	23.12
2019-06-30	118.05	8.35	14.13
2019-03-31	123.30	10.12	12.18

Table 2 shows Airbus's D/E (Long-term Debt to Equity) ratio from 2019 to the end of 2023 [18]. The ratios ranged from 8.32 to 18.10, indicating a moderate reliance on debt. While the levels were concerning, they reflected a relatively stable capital structure and operational performance, allowing Airbus to manage its financial obligations effectively [22]. However, they did suggest careful monitoring to ensure sustainability.

The pandemic drastically impacted Airbus, with D/E ratios soaring to unprecedented levels, peaking at 83.80 in Q2 2020. This surge was primarily due to a sharp decline in shareholder equity as the company faced significant losses and incurred additional debt to sustain operations during the pandemic. Such extreme leverage raised severe concerns about Airbus' financial stability. It reflected that a crisis-stricken industry like aviation might struggle to meet its obligations during a shock [23].

After COVID-19, the D/E ratio decreased significantly, falling to 5.71 by December 2023, showing progressive stability. This improvement indicates successful efforts to manage debt levels and restore equity, reflecting a recovery in operational performance [24]. While the company still operates with high leverage, the downward trend demonstrates progress in enhancing financial health and managing capital more effectively. It also reflects positive market expectations.

3.3. Profitability

Table 3: Net Profit Margin of Airbus.

Date	TTM Revenue ($billion)	TTM Net Income ($billion)	Net Margin
2023-12-31	70.83	4.10	5.79%
2023-09-30	67.59	4.24	6.28%
2023-06-30	64.78	4.04	6.23%
2023-03-31	61.07	3.61	5.91%
2022-12-31	61.91	4.48	7.23%
2022-09-30	60.11	4.59	7.63%
2022-06-30	59.10	4.39	7.43%
2022-03-31	62.55	5.92	9.46%
2021-12-31	61.70	4.98	8.08%
2021-09-30	65.12	4.88	7.49%
2021-06-30	65.82	3.51	5.33%
2021-03-31	57.90	-0.33	-0.57%
2020-12-31	57.02	-1.30	-2.27%
2020-09-30	61.07	-6.98	-11.43%
2020-06-30	64.98	-4.99	-7.67%
2020-03-31	76.41	-2.10	-2.75%
2019-12-31	78.94	4.34	-1.93%

DOI: 10.54254/2754-1169/152/2024.19445

Table 3: (continued).

2019-09-30	78.98	4.34	5.49%
2019-06-30	79.93	4.35	5.44%
2019-03-31	77.05	3.30	4.29%

Table 3 shows the profit margins of TTM (Trailing Twelve Months) [18]. In the years leading up to the pandemic, Airbus demonstrated a generally positive net margin, ranging from 2.98% to 5.49%. This reflected a stable operational performance, with net income showing steady growth. By the end of 2019, the margin reached a high of 5.49%, indicating solid profitability. However, the margins were not exceptionally high, suggesting that while Airbus was profitable, there was still room for improvement in efficiency, cost control, and appeal to the market.

The pandemic severely impacted the company's profitability, with net margins plummeting into negative territory [25]. In Q2 2020, the margin dropped to -11.43%, reflecting significant losses driven by halted operations and declining revenue due to travel restrictions. Throughout 2020, Airbus recorded continuous negative margins, culminating in -2.27% by the end of the year. This drastic decline highlighted its financial strain as it navigated unprecedented challenges, even as the duopoly, showing the industry's vulnerability against global shocks.

Airbus' profit margins gradually improved as the industry began to recover in 2021. By December 2022, it had rebounded to 7.23%. This recovery reflects a combination of rising revenues and improved cost management strategies as demand for air travel returned. By the end of 2023, the margin was at 5.69%. As the revenue continued to increase, the profit margin seemed not to have improved notably simultaneously. This illustrates a challenging trajectory shaped by external circumstances. Post-pandemic performance especially highlights the importance of resilience and adaptability in the face of market disruptions and underscores the ongoing need to improve operational efficiency and cost management.

4. Risks

4.1. ESG Risks

Airbus faces significant environmental risks associated with its transition to low-emission technologies [3]. The emergence of disruptive technologies from competitors threatens Airbus's market position if it cannot keep pace with advancements in sustainable aviation solutions. Additionally, the company's reliance on renewable and low-carbon energy sources creates risks related to supply availability, which could hinder progress in reducing emissions [26]. Failure to adapt to these environmental pressures could affect regulatory compliance, public perception, and market demand.

The transition to cleaner technologies and the associated investments in infrastructure can have broader social implications. Airbus's commitment to developing sustainable aircraft aligns with increasing consumer expectations for environmentally friendly practices. However, if the company fails to establish a supportive ecosystem for new products, it risks alienating customers and stakeholders prioritizing sustainability [27]. Furthermore, the need for collaboration with governments and other industry players to build the necessary infrastructure for hydrogen and sustainable fuels highlights the importance of stakeholder engagement. Failing to secure this cooperation could lead to social backlash and reputational damage.

Airbus's governance must prioritize strategic foresight in navigating the evolving regulatory landscape around emissions and sustainability. The company must ensure that its board and management are aligned on sustainability goals and the investment strategies required to achieve

DOI: 10.54254/2754-1169/152/2024.19445

them. The risk of falling behind competitors in technology development necessitates robust governance practices to monitor market trends and technological advancements. Furthermore, the mention of CO2 pricing indicates that governance structures must be adaptable to changing market conditions and regulatory frameworks to safeguard against potential financial impacts.

4.2. Other Risks

The Company anticipates increased costs related to environmental, human rights, health, and safety challenges due to stricter regulations and potential reputational and litigation risks [3]. The Company faces stringent compliance requirements in various jurisdictions, leading to significant operating and capital expenditures, particularly in environmental protection and occupational health and safety. Introducing new laws or stricter enforcement could further elevate these costs, negatively impacting business operations and financial results.

Health and safety investments are crucial for mitigating risks associated with work activities, including potential injuries and mental health issues. Reputational risks from incidents could necessitate additional expenditure to manage claims and compliance. Environmental expenditures involve costs related to emission control, waste management, and product compliance with regulations, with growing regulatory pressure on industries to reduce their environmental footprint.

Failure to comply with these regulations could result in severe penalties, necessitating investigations and possibly leading to operational interruptions. Liability under environmental and safety laws may be imposed retroactively, and not all potential liabilities are covered by insurance. Additionally, the Company's products must meet evolving health, safety, and environmental standards, which may require costly adaptations or redesigns.

Public perception of the Company's environmental and societal impacts can significantly affect product demand. As the Company cannot predict all potential impacts from these challenges, it remains vulnerable to adverse effects that may arise unexpectedly.

5. Conclusion

Airbus is a duopoly player in global aviation, recognized for its innovative aircraft designs and significant market share. However, it operates in a highly competitive environment, primarily contending with Boeing. The COVID-19 pandemic severely disrupted air travel, leading to production delays and reduced sales, which posed substantial financial challenges for the company. This crisis, however, also prompted a renewed focus on environmental issues as stakeholders began to reevaluate the aviation industry's carbon footprint, resulting in a temporary decrease in emissions.

Airbus is strategically positioning itself to capitalize on this resurgence as the aviation market begins to recover by investing in sustainable technologies, including hydrogen-powered aircraft and sustainable aviation fuels (SAF). While the company has seen an increase in revenue, the rise in research and development expenditure to enhance its eco-friendly initiatives has impacted earnings per share.

Airbus faces many opportunities and challenges, including competition from China's COMAC and navigating complex regulatory frameworks. Internally, the company has improved its liquidity and profit margins since the pandemic, yet it continues to manage high levels of debt and the cyclical nature of the aviation industry.

Furthermore, Airbus must address environmental, social, and governance (ESG) risks, particularly compliance with stringent regulations and maintaining a positive public perception. Failure to adapt to these evolving challenges could jeopardize its market position and financial health, underscoring the necessity for robust governance and strategic foresight in achieving long-term sustainability and competitiveness.

DOI: 10.54254/2754-1169/152/2024.19445

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