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The Financial Impact of COVID-19 on Airline corporations: The case of Qantas Airline

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ABSTRACT

This research is aimed at demonstrating the financial effects of COVID-19 pandemic on Qantas Airlines, an aviation company. The financial situation of Qantas is analyzed based on liquidity, solvability, profitability, and activity ratios from 2018 till 2021. These financial ratios showed how the pandemic affected one of the largest companies in the aviation sector (Qantas). The analysis revealed that the outbreak had a significant impact on the corporation, resulting in crucial losses.
Keywords: Aviation, COVID-19, Liquidity, Solvency, Profitability, Activity.

1. Introduction

December 31, 2019, marks the novel corona outbreak that first began in the fish market in Wuhan China. The World Health Organization has declared the virus a global health emergency. It led to the death of thousands of people all around the world as well as the hospitalization of others.

Several governments, such as Australia, imposed strict lockdowns, business closures, and travel restrictions to control as well as diminish the spread of this infectious disease. Accordingly, the borders were closed, and the Australian government banned international flights. Such closures shuddered the Australian economy and directly affected airlines, travel, and the hospitality industry.

Qantas airway, the largest domestic and international airline in Australia has faced a huge wave of cancellations and a considerable decline in demand because of strict Australian governmental instructions to implement social distancing and restrictions on unnecessary travel.

Founded in 1920, QANTAS has owned a big reputation in the aviation business across the world and it is considered one of the most trustworthy organizations in the world of aviation, having served the sector for almost 100 years. Qantas's main business is passenger transportation. It flies to 81 locations in 40 countries across the world and operates large domestic services in Australia and New Zealand with a high level of safety, professionalism, customer service, and maintenance.

Being a member of the one world global airline alliance, Qantas is the largest stakeholder with an 18 percent interest. It holds more than 65% share of the Australian market and around 30.000 employees.

In this case, we are going to study the impact of COVID-19 on Qantas airways limited and it will be divided into two sections:

First section: in this section, we are going to talk about the impact of the pandemic on the world economy and the aviation industry.

Second section: in this section, we are going to talk about Covid-19's impact on Qantas airways limited and its financial performance.

2. Literature Review

2.1. The drastic impact of covid-19 on the world economy

According to the Organization for Economic Co-operation and Development (OECD), COVID 19 was the highest threat to the global economy since the latest financial crisis of 2007-2008. This fatal disease reached almost every country in the world with more than 471 million infected people throughout the world and almost 6.08 million deaths. Hence, to protect people's lives and stop the spread of this virus, many governments had to act immediately by imposing total lockdowns and strict regulations which directly affected the worldwide economy. Day after day, month after month, the economy was getting worse: the majority of people are in total lockdown, they had to stay in their homes, working remotely, buying their needs online. Big and small companies, such as educational institutions, restaurants, hotels, and travel organizations had to close their doors.

In the following chart, as we can see, the World Gross Domestic Product (GDP) was almost stable for more than 10 years (2008 Q3 to 2019). However, in 2020, the world GDP brutally declined to reach- 5 % in China, -7% in US, -10 in Japan and -15 % in Euro area. This confirms that corona pandemic had caused the widest economic shock the world has ever seen.

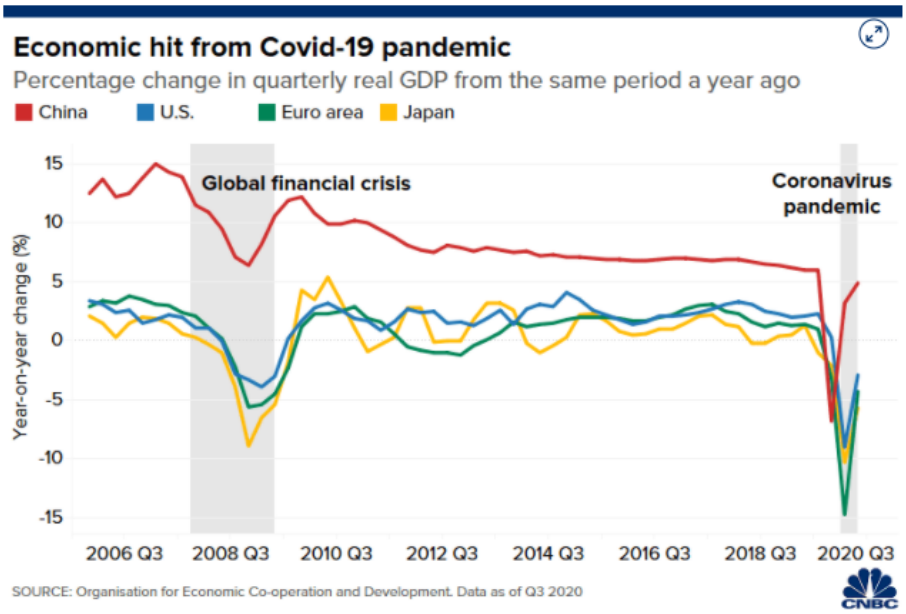


Figure 1: Economic hit from Covid-19 pandemic

These graphs clearly show the impact of COVID 19 on different types of companies such as healthcare services, business services, Air and travel, and other industries. During the first months of the crisis

(March 2020) all industries suffered from an extraordinary decline due to the high risk of COVID 19. After one year (Feb 2021), almost half of the sectors had largely recovered their losses, such as Pharmaceuticals and biotechnology. However, the recovery of aerospace, aviation, and travel sectors is still well below their pre-pandemic high.

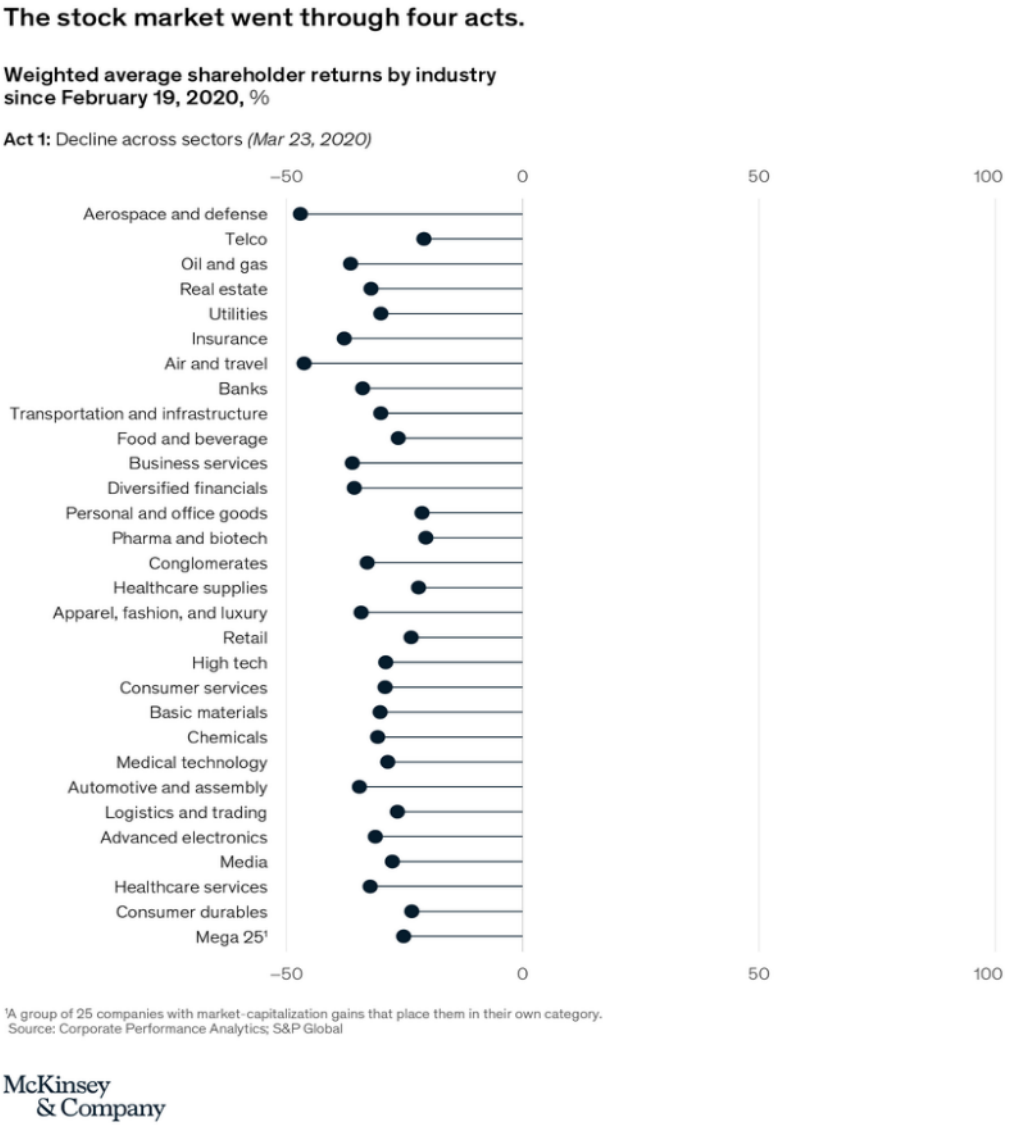


Figure 2:Impact of COVID 19 on different types of companies

2.2.Impact of covid-19 on aviation.

2020 marks a devastating turning point in the aviation sector due to the strict regulations imposed by governments to control the fast spread of COVID19. The borders were closed, flights were suspended, and strict lockdowns took place. Such closures shuddered airlines, travel, and the hospitality industry. Accordingly, this year was the worst year in history for air travel demand; the consequences of this pandemic are far greater and more severe than after the financial crisis in 2008 or September 11 in 2001. The aviation industry revenues declined 65.9% compared to 2019 with losses exceeding $150 Billion. *(as seen in the figure 1 below, source: IATA*). In Particular, the Australian aviation sector had also suffered from a crucial economic satiation due to the closure of Australian borders and taught lockdown measures. The number of departing flights had decrease from more than 400 flights to less

than 70 flights during March 2020 in Sydney Kingsford airport. *(As seen in the figure 2 below, source- Flight radar 24))*

IATA declared that the recovery of this sector is related directly to the effectiveness of pandemic management and vaccination rollout across the world. Even in its most optimistic scenario, the IATA expects that air travel demand would only reach 50% of 2019 levels in 2021.

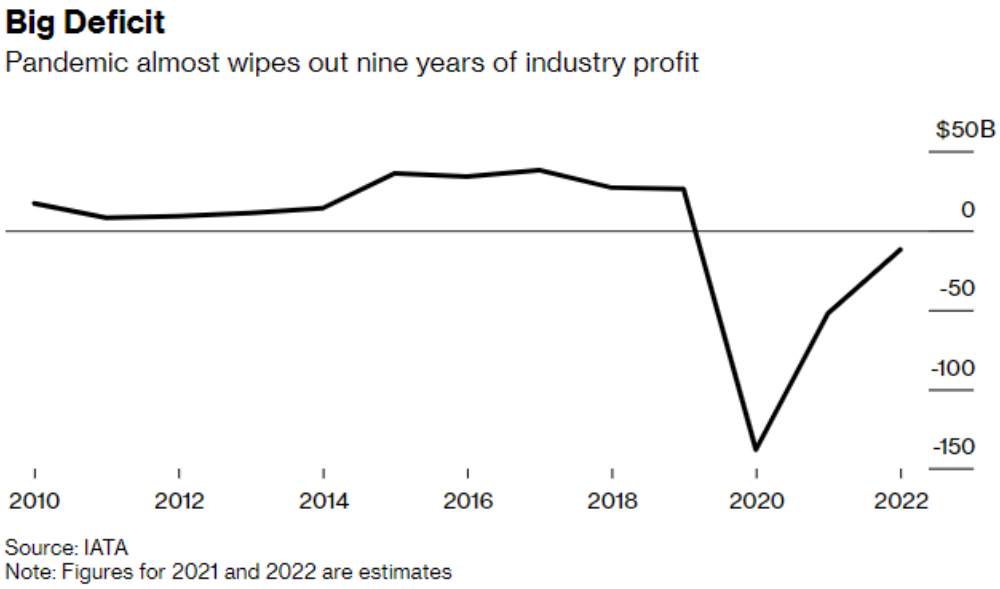


Figure 3: Impact of COVID 19 on aviation industry's profit.

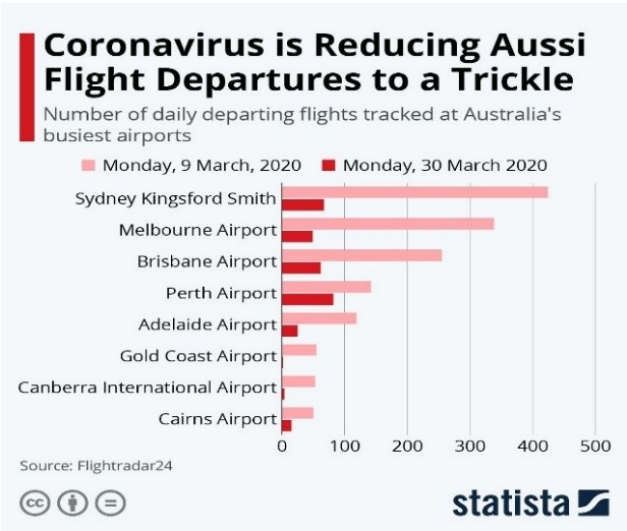


Figure 4: Number of departures tracked at Australia's busiest airports

Impact of covid-19 on airports digital transformation.

To accelerate the recovery of airlines sectors, airports had to impose new safety measures to limit the spread of COVID; Passengers had to wear masks, check their temperature, show negative PCR results, and their immunity passports to get on board. To ease such procedures, airports tried to integrate new technologies and digital transformations to deliver a better passengers experience in order to restore their trust and confidence. One of the important questions being asked these days is what airports would look like after the pandemic?

Let us dive straight to the point; airports are trying to implement new technologies and services to enhance the travelling experience and passengers' safety:

- Before entering airports, Passengers can remotely prebook covid19 tests, check their results, get QR code, and book their flights directly from their phone devices.
- Inside airports, WIFI is fully accessible by passengers: They can freely use WIFI to search info's or pass their time. They also can pre-buy their needed items, foods, and beverage by scanning QR code without taking risk to be in crowded and in contact with infected surfaces.

According to a new poll by Air Transport IT Insights, the majority of global airlines are currently looking to develop their robotic involvement and facilitate passenger flow.

For example, cleaning robots have been used in Heathrow airport to clean spaces and areas ensuring a safe and secure environment for travelers. Finally, we should expect to see more robotic assistance at airports in the becoming years, along with a growing interest in the robotics market by the aviation industry. Robotic-led terminals could be the future of aviation, with benefits such as faster check-ins, increased security, and a more personalized experience for passengers.

Safety is our First Priority: The operational safety of aircraft, the health and safety of staff, and the well-being of customers are Qantas's first priority. Qantas considers commitment to safety is the key of success. An Air Operator's Certificate is a mandatory for commercial purposes (AOC) so Qantas is meeting all regulatory requirements.

Right Aircraft, Right Routes: With a fleet of 260 aircrafts, Qantas services around 200 destinations in over 40 countries. Long-term improvements in passenger comfort, range capabilities, operational costs, fuel efficiency, and noise emissions will result from investments in next-generation aircraft. The main goal of route network and fleet planning is to make sure the correct aircraft are flying on the proper routes.

Customer Experience Excellence: Qantas is striving to be the best premium airlines brand. This Australian firm believes that customer experience is directly related to employee's behavior and services. Qantas takes care of each customer with outstanding service, and contemporary Australian style. It also provides innovative technology, Market leading aircraft and airport facilities to excel in every step of the customers journey from booking to baggage collection.

2.3.Qantas's organizational structure

The organizational structure of Qantas is a mixed centralized and decentralized structure of organization and it is directly related to it strategies, goals and objectives. The entire Qantas Airlines structure of management is under the supervision of the Board of directors. A 10-member board committee (all independent, non-executive directors & multiple sub-committees) leads the Qantas management structure and ensures that Qantas' Business Integrity Program is successfully achieved. They bring independence, accountability and judgement to the Board's deliberations to ensure maximum benefit to shareholders, customers, suppliers and employees.

Figure 5:Management structure of Qantas Limited.

Qantas has 5 main divisions: Qantas International, Qantas Domestic, Qantas Freight, JetStar Group and Qantas Loyalty. With more than 30,000 employees, the company is structured to have CEO's & CFOs of each of the company's division.

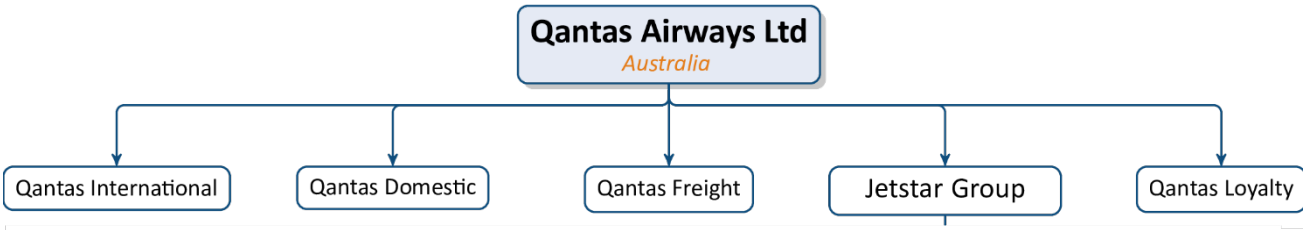


Figure 6: Qantas five main divisions.

Qantas have implemented a matrix-style organizational system. Their senior management is in charge of establishing practices and policies that must be followed by lower-level employees.

Administrative management, business administration, project management, and functional unit are all departments under the top leadership.

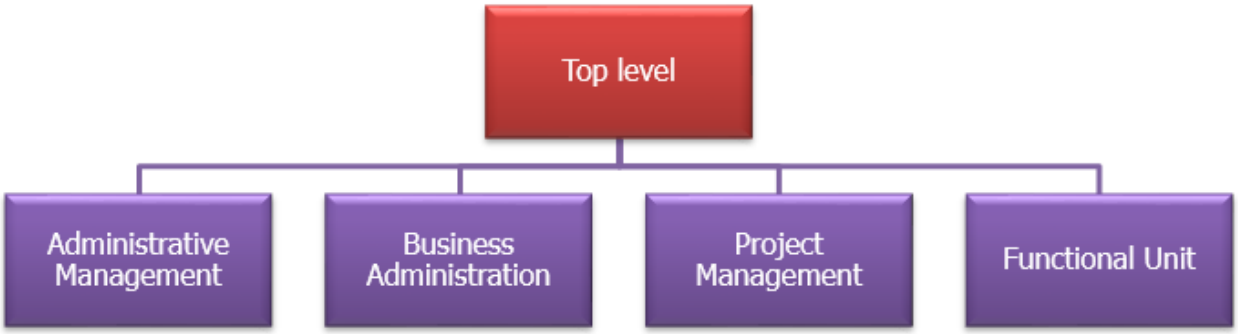


Figure 7: Qantas levels of administration

Each department has its own set of managers and collaborate with other departments to ensure that organizational objectives are completed on time. The matrix organizational structure aids in the stability of work processes. This will assist the corporation in dealing with current and future business difficulties.

2.4.Qantas customers Behavior

The below chart, we can clearly see how the Total number of passengers carried by Qantas is affected by Covid 19. Before 2019, the number of passengers was almost stable as average 53 million passenger per year. This number had decreased from 55.81 million to 40.48 million in just one year and complete decreasing to 15.87 in 2021 due to Covid.

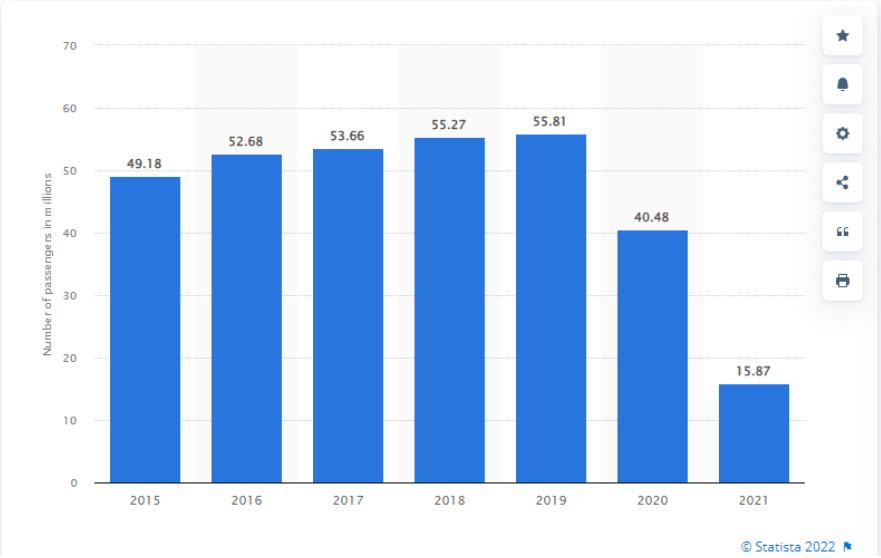


Figure 8: The representation of how customers have been affected during Covid.

The bellow chart shows how the monthly domestic capacity had changed after corona: On march-20, the monthly domestic capacity was 0%. This capacity had increased progressively to attend 92 % on jun-21. Due to Omicron outbreak, this capacity had decreased to 29% in Sep-21. When Omicron started to fade, on Dec-21, the domestic capacity had increased again to 66%. This capacity increased to 90 and 100 percent (through June 30, 2022), and expected to be rising over 100 percent (three months through 30-Sept-2022).

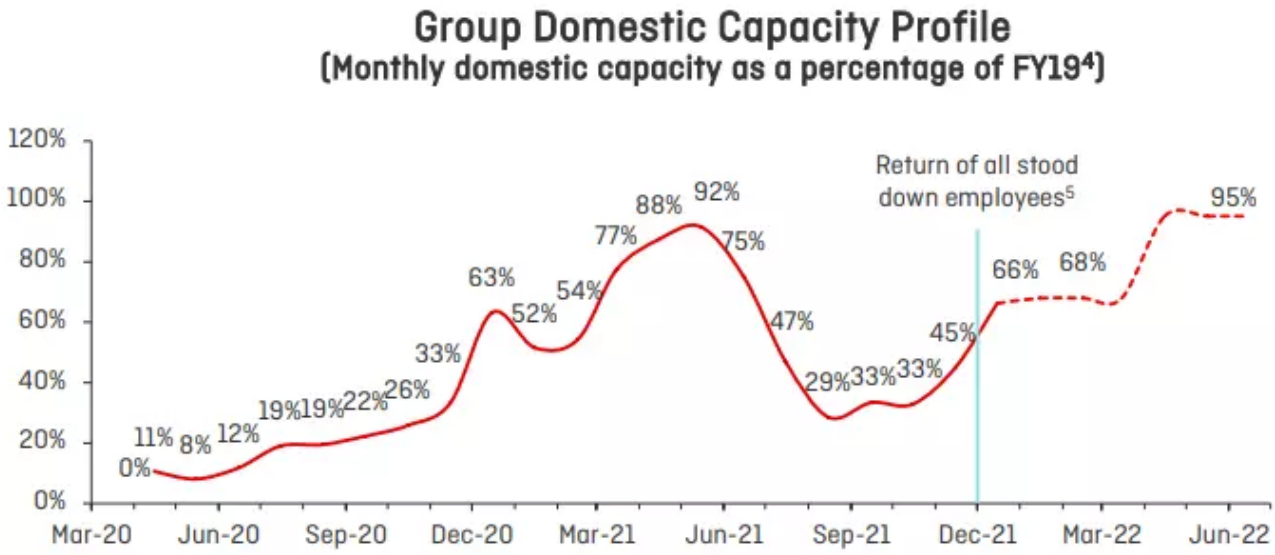


Figure 9: The distribution of monthly domestic capacity during the last three years.

3. Financial analysis of Qantas

Table 1. Ratios and its formulas

Ratios	Formulas	
Liquidity	Current Ratio	Current Assets / Current Liabilities
	Quick Ratio	(Current Assets – inventories) / Current Liabilities
	Cash Ratio	Cash & Equivalents / Current Liabilities
Solvability	Operating cash flow to debt	CFO / Total Debt
	Debt-to-assets ratio	Total Debt / Total Assets
	Long Term Debt to Total Assets	Long Term Debt / Total Assets
	Debt to Equity Ratio	Total Liabilities / Total Shareholders' Equity
Profitability	Profit margin	Net Income / Total Revenue
	Operating Profit Margin	Operating Profit* / Total Revenue *Operating Profit = Revenues – Cost of goods sold – Operating expenses
	ROE	Net Income / Total Shareholders' Equity
	ROA	Net Income / Total Assets
Activity	Total Asset Turnover	Total Revenue / Total Assets
	Accounts Receivable Turnover	Net Credit Sales* / Average Accounts Receivable *Credit sales = cash received - initial accounts receivable + ending accounts receivable
	Inventory Turnover	Cost of Goods Sold / Average Inventory

3.1.Liquidity Ratios

Liquidity ratios are financial ratios that assess a company's ability to pay back both short- and long-term debt.

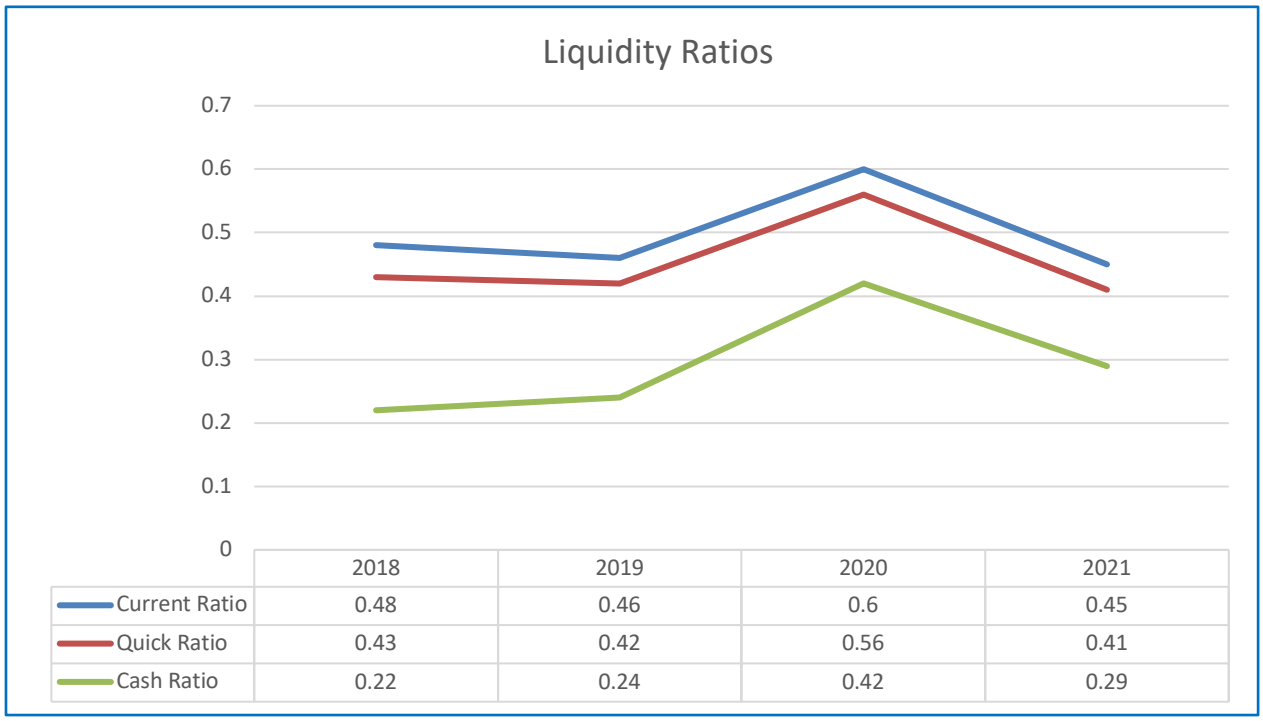


Chart 1. Liquidity Ratios Representation

Current Ratio: One of the most widely used liquidity ratios is the current ratio. It assesses a company's ability to cover short-term obligations (debts due within a year) with current assets. The current ratio compares a company's current total assets to its current total liabilities to determine its ability to do so. A 2:1 current ratio is typically considered acceptable, and 1:1 is also acceptable. Prior to the COVID-19 pandemic, the current ratio decreased from 0.48 to 0.46 between 2018 and 2019, peaking at 0.6 in 2020 but then falling to 0.45 in 2021, implying that Qantas may have difficulty paying its current liabilities (debts).

Quick Asset Ratio: used to assess a company's capacity to meet short-term obligations with its most liquid assets In other words, the quick ratio tells you whether a corporation has adequate resources to meet its obligations that are due within a year. The current ratio is a liquidity indicator that is quite similar to the quick ratio.

A quick asset ratio of 1:1 is considered good. From 2018 to 2019, Qantas' quick asset ratio fell from 0.43 to 0.42, peaked at 0.56 in 2020, and then fell to 0.41 in 2021 during COVID. A quick asset ratio of 0.41:1 shows that Qantas is struggling to generate profits and pay off current debts.

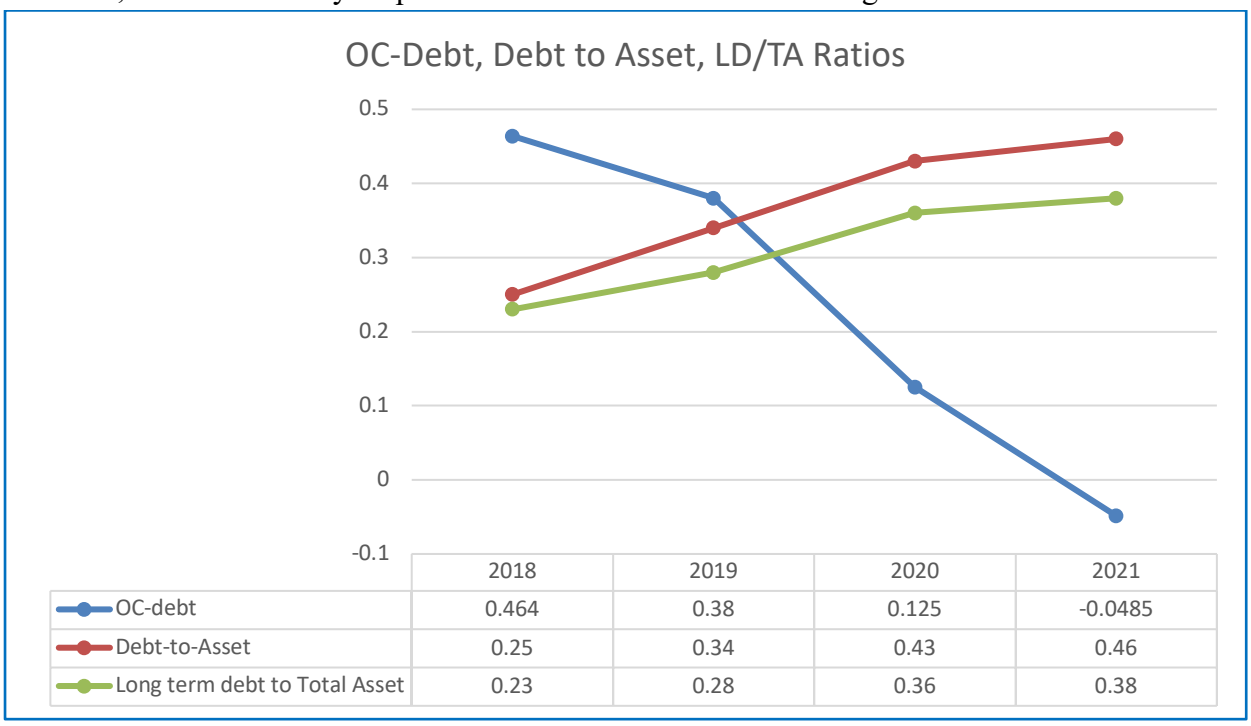
Cash Ratio: The cash ratio, which evaluates a company's ability to repay debts and liabilities using cash or other liquid assets, is one of the most well-known liquidity ratios.

A cash ratio of 1:1, or 100 percent coverage, is considered a reliable measure of immediate liquidity. Prior to COVID, the cash ratio increased from 0.22 in 2018 to 0.24 in 2019, and then steadily increased to 0.42 in 2020, which is considered better than the previous two years but still indicates that Qantas requires other short-term assets to fully pay its current debt. Accordingly, the cash ratio

in 2021 is much worse, having fallen to 29 percent (which indicates that Qantas does not have enough cash reserves in hand to pay its short-term debts).

3.2.Solvability Ratios

"Solvency" or "leverage" refers to a company's ability to meet or exceed its entire debt obligations. Leverage ratios, according to Berman (2008: 157), focus on the company's underlying capital structure, which ultimately helps to assess the firm's financial strength in the future.



	2018	2019	2020	2021
OC-debt	0.464	0.38	0.125	-0.0485
Debt-to-Asset	0.25	0.34	0.43	0.46
Long term debt to Total Asset	0.23	0.28	0.36	0.38

Chart 2. Solvability Ratios

Operating cash flow to debt ratio: The cash flow to debt ratio is a coverage ratio that measures how well a firm can cover its total debt using cash inflow from operations. The greater the ratio, the more likely the company is to be able to cover its debts with cash flow generated by its operations. The OC-Debt ratio is declining (from 0.464 in 2018 to 0.125 in 2020), and it continued to decline during the pendamic, reaching -0.0485 in 2021, indicating that the company lacks the ability to produce cash from operations to meet its short-term obligations.

Debt-to-Asset Ratio: The debt-to-asset ratio assesses a company's ability to meet its long-term financial obligations. The higher a company's debt ratio is, the riskier its financial structure is. The company is more stable and economically conservative if the ratio is near to zero percent. In general, a debt ratio of 0.4 or less is considered desirable. A ratio of more than 0.6 is generally considered to be poor, as it indicates that the company may not be generating enough cash flow to cover its debt.

The Debt-to-asset ratio was increasing (from 0.25 in 2018 to 0.34 in 2019), this ratio contiued increasing in the last two years (from 0.43 in 2020 to 0.46 in 2021), Qantas is considered good in meeting its long-term obligations.

Long Term Debt to Total Assets Ratio: It represents the percentage of a company's assets that are financed by loans and other long-term financial obligations. Because this ratio is measured yearly, a decrease in the ratio indicates that the company is doing well and is less reliant on debt to meet its business demands.

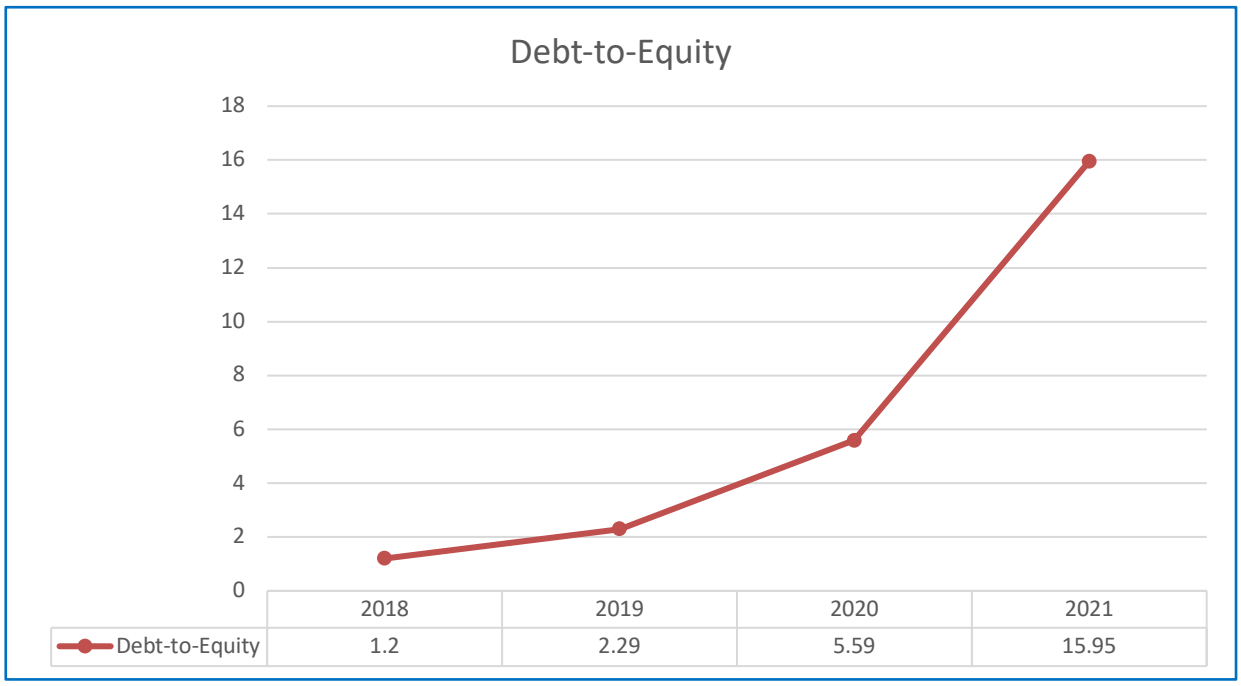


Chart 3. Debt-To-Equity

Debt-to-Equity Ratio: The D/E ratio determines the percentage of a company's capital structure that is allocated to debt or equity financing. When the debt-to-equity ratio is 1, it indicates that a company's assets are financed equally by creditors and investors.

Any value greater than 1 implies a higher level of possible financial risk, while "1" is proposed as the optimal value of D/E, due of the aviation industry's enormous indebtedness, "a number greater than 2" is encouraged (Morrell, 2012: 61). In general, the smaller a company's debt to equity ratio is, the more financially secure it is, because the majority of its activities are financed by investor equity rather than debt.

As shown in the above calculations, D/E is increasing (from 1.2 percent in 2018 to 5.59 percent in 2020) and keep rising to reach (15.95 percent in 2021), indicating that Qanats' activities are generally financed by debt rather than equity in the last two years because of the harmful impact of COVID.

3.3. Profitability Ratios

Profitability ratios are used to assess a company's ability to create profits (profit) in relation to its available resources.

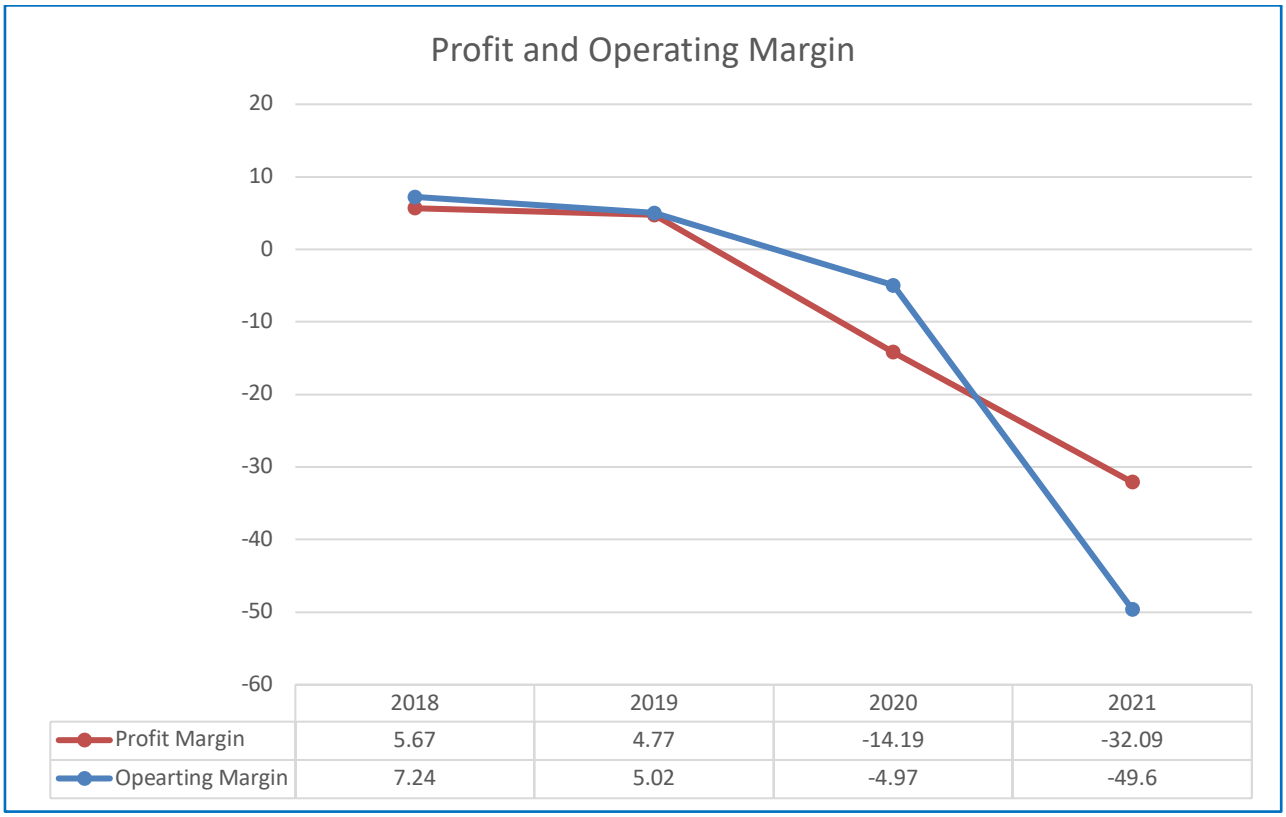


Chart 4. Profit and Operating Margins

Net profit margin: The net profit margin specifies a company's financial bottom line by taking into account all aspects of its financial structure, including taxes, interest, and other nonoperational expenses. Because it displays how much net income is created for every dollar of revenue, the profit margin allows million-dollar companies to be compared to billion-dollar companies.

Qantas' profit margin has worsened (from 5.67 percent in 2018 to -32.09 percent in 2021), indicating

that the firm has lost control of its costs in the last two years as a result of COVID's negative effects on the aviations' industry in general.

Operating Profit Margin: Managers can use the Operating Profit Margin to figure out how much operating income is created for every dollar of revenue generated through regular business operations. The operating profit margin ratio should likely to stay more consistent over time if special factors such as interest expense and taxes are excluded from the income statement.
From the preceding data, we can see that Qantas did quite well in generating operational income between 2018 and 2019, but that these incomes declined in 2020 and 2021, implying that Qantas is financially suffering.

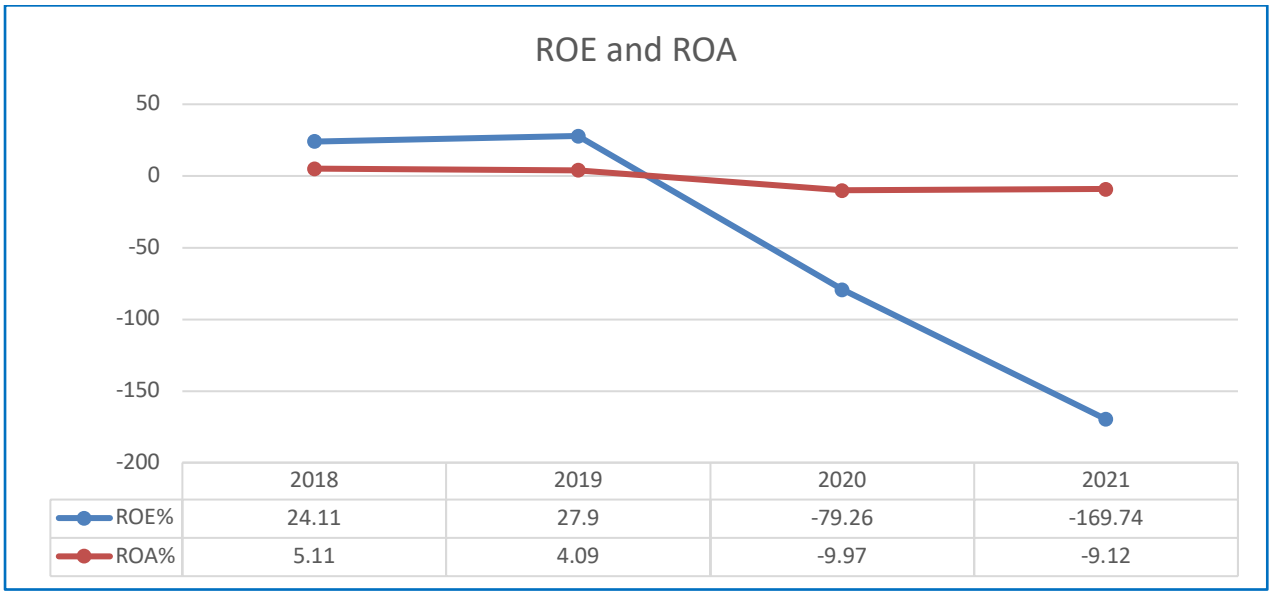


Chart 5. Return on equity and Assets

ROE: The ability of a corporation to create profit with the money that shareholders have contributed is highlighted by its return on equity (ROE). Return on equity (ROE) is sometimes known as "return on net worth" (RONW). The return on investment (ROE) should be as high as possible. The higher a company's ROE, the more stable and profitable its position in the market.
Qantas' return on equity increased (from 24.11 percent in 2018 to 27.9 percent in 2019), which is positive, but due to the pendamic, this ratio declined dramatically (from 27.9 percent in 2019 to -79.26 percent in 2020 and continued to fall to -169.74 percent in 2021).
ROA: Because a corporation invests in assets to raise profits, the ROA rate reveals how well assets are utilised to create earnings.
Qantas' return on asset has fallen in the last three years (from 5.11 percent in 2018 to -9.97 percent in 2020), then increased but remained negative (-9.12 percent in 2021), indicating that Qantas may better utilize its assets in order to create earnings in the next coming years.

3.4. Activity Ratios

The efficiency of a company's working capital management is determined by activity ratios (Berman, 2008: 164). Because airlines are a service sector, these ratios are important indicators of areas in which they may improve efficiency and production.

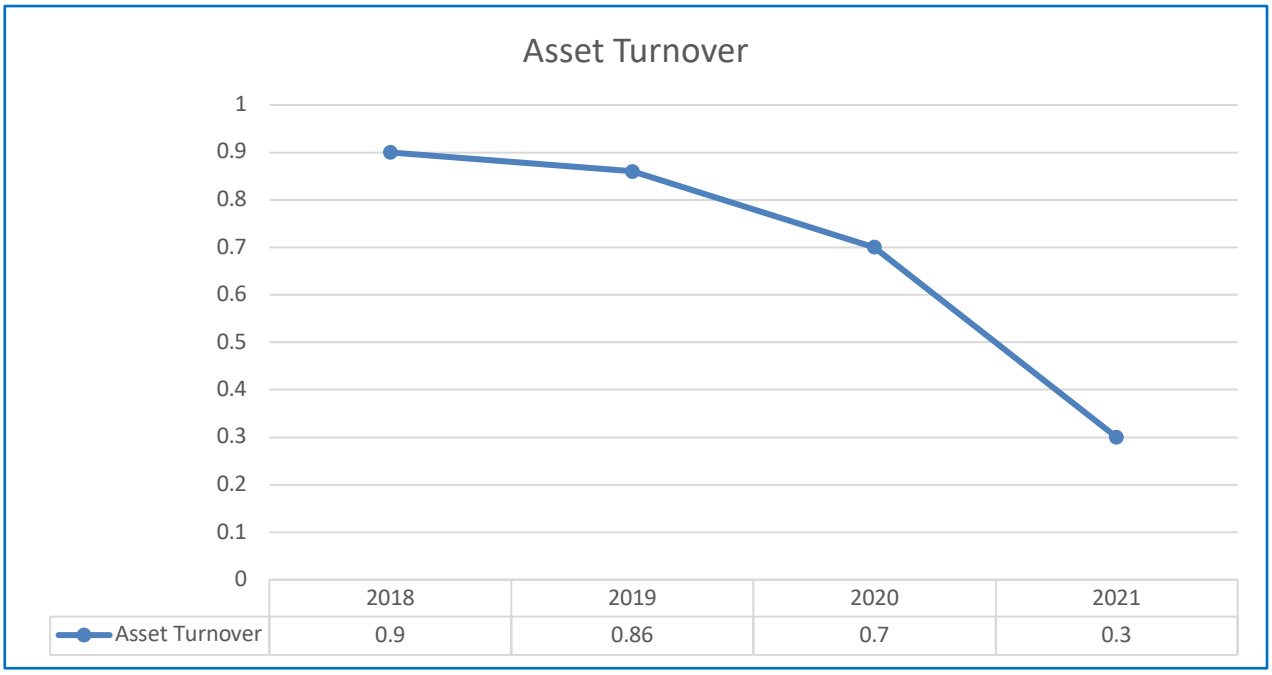


Chart 6. Asset Turnover

Total Assets Turnover Rate: Total revenue divided by total assets is the total asset turnover ratio. Likewise, the return on assets ratio, indicates how successfully the company can produce revenue with the assets currently on its balance sheet

Prior COVID, Qantas Asset turnover ratio between 2018 and 2020 indicates that the firm is utilizing its assets/resources in the most efficient manner to generate money. However, as a result of the pandemic, the asset turnover ratio fell to 0.3, since we all know, the aviation industry's income/sales are seriously affected.

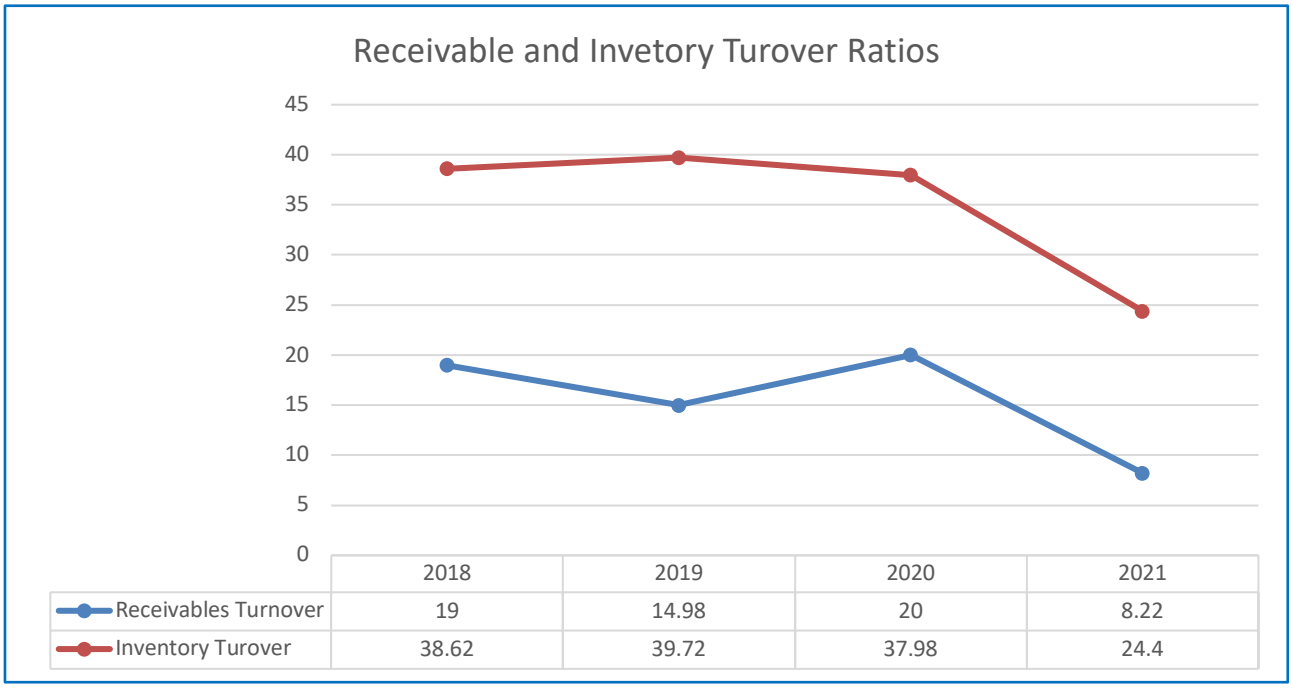


Chart 7. Receivable and Inventory Turnover

Account Receivable Turnover: The ability of a company to recover the money from its clients is determined by the accounts receivable turnover ratio. A low ratio indicates a problem with the collection process. The greater the ratio, the better the company's ability to recover receivables is.
In the chart above, we would see that the receivable turnover changes during 2018:19 times (x), 14.98x in 2019 and 20x in 2020, but then falling to 8.22x in 2021. This indicates that Qantas's ability to collect its average accounts receivables declined from 20x in 2020 to 8.22x in 2021.
Inventory Turover: This rate is significant for all businesses because it provides a quick and easy approach to see which goods are selling quicker than others, but it is especially important for manufacturing businesses since it helps them decide how much and when to purchase extra materials or products.
The inventory of an airline is made up of the seats available on each flight. If a consumer does not fly on the aircraft for which he or she has made a reservation, the seat remains unused and, unlike in other industries, cannot be returned to inventory for future use.
In 2018, 2019, and 2020, Qantas' inventory turnover ratio was generally constant between 37 and 39, but in 2021, it drops to 24.4. During 2018, 2019, and 2020, Qantas sold its inventory approximately 38 times every year, which implies it took 10 days for this airline company to sell the complete of its typical quantity of inventory, which is quite good compared to 24.4 times in 2021 (15 days).

3.5. Airline-Specific Ratios

Table 2. Specific Ratios in Assessing the Aviation industry

Ratios	**Calculation**
Available Seat Kilometers (ASK)	ASK = Number of Seats per Aircraft × Flight Distance in Kilometers
Revenue Passenger Kilometers (RPK)	RPK = Number of Revenue Passengers per Aircraft × Flight Distance in Kilometers
Load Factor (LF)	Load Factor = RPK / ASK

(ASK) They are the most fundamental measure of an airline's output since they indicate the number of kilometers flown by the airline with its available seats regardless of whether the seat is occupied by a passenger.
(RPK) stands for revenue passenger kilometers Unlike ASK, which does not distinguish whether a seat is occupied or not, RPK only considers seats occupied by revenue passengers.
(LF) is simply the percentage of revenue passengers whom fill an airline's seats. In other words, load factor is a metric for determining how much capacity is being used.

Table 3. Calculations of ASK, RPK, and LF

Ratios	Years			
	2018	2019	2020	2021
Available Seat Kilometers (ASK) **$M**	152,428	151,430	111,870	29,374
Revenue Passenger Kilometers (RPK) **$M**	126,814	127,492	92,027	18,557
Load Factor (LF) **%**	83.2	84.2	82.3	63.2

Group capacity (ASK) fell by 81% compared to 2018/19 pre-COVID, due to international airline companies being entirely grounded and the gradual recovery of domestic capacity to 51% of pre-COVID levels for the fiscal year. Revenue Passenger Kilometers declined by 85% compared to 2018/19 pre-COVID, while the Group's Revenue Seat Factor fell to 63%.

4. Conclusion

4.1. General Impact of Covid

The COVID-19 pandemic's health and economic consequences are widely recognized. Approximately 100 million people have contracted the virus worldwide as of today, with over 2.2 million deaths. The global economy shrank by 3.5 percent, according to the International Monetary Fund. This is the most severe worldwide downturn since the Second World War. Due to the strict regulations imposed by governments to control the fast spread of COVID19, the aviation sector has been directly affected as well. The borders were closed, flights were suspended, and strict lockdowns took place. Such closures shuddered airlines, travel, and the hospitality industry.

4.2. Analysis

According to the analysis, the pandemic had a substantial impact on Qantas' liquidity. At the same time, we notice that the company's liquidity ratios in 2021 are remarkably similar to the pre-Covid liquidity ratios, despite the fact that Qantas was dealing with similar liquidity issues. Furthermore, based on the Long-term Debt Ratio, Qantas' financial strength "solvability" suggests that the airline corporation is still unable to satisfy its long-term obligations (debts). We can deduce that Qantas' demands during Covid were heavily reliant on Long-term Debts. We can determine that Qantas' key activities are often financed by Debtors rather than Creditors based on the Debt-to-Equity ratio; this is how Covid impacted Qantas' solvency. According to Operating Profit Margin, Qantas' ability to generate profits from its operations remained negative in 2020 and 2021, indicating that the firm was struggling financially. Also We can notice that Qantas' Return On Equity and Return On Assets are both negative, showing that the company was not able to properly use the money generated by its shareholders and the assets to generate assets or earning. Covid has a significant impact on the company's Asset Turnover, implying that Qantas was not efficiently utilizing its resources to create profit. Furthermore, Qantas has a significant trouble collecting receivables based on the Accounts Receivable Turnover Ratio. Due to the lockdowns and limits, the company's capacity to sell its inventory was limited, according to the Inventory Turnover.

5. Recommendations

In order to increase its profitability, Qantas should focus on the health measures to gain passengers confidence and trust. In addition, Qantas should introduce new technologies and systems in order to remotely communicate with its clients and customers and listen to their needs. The communication should be contactless by using online apps and platforms. Add to that, the best way to increase Qantas revenues is to create a flexible and dynamic pricing system meeting passengers needs and adapt to changing market conditions. This will encourage passengers to choose Qantas due to its pricing flexibility instead of choosing its competitors. Therefore, Qantas should improve it routes in order to decrease the trip duration and fuel usage especially that the prices of fuel are now increasing fast and

the cost of flights is also increasing. Finally, the airline sector may have incurred significant losses. Innovation and creativity remain the key drivers for this industry's revival and profitability. Moving forward from traditional approaches to recovery and investing in the proper technologies, solutions, and strategies will help the aviation industry accelerate profitability.

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