Hedging Strategy and Financial Analysis of Singapore Airlines

Zhixuan Bao*

Department of Economics, University College London, London, UK

*Corresponding author: zctpzba@ucl.ac.uk

Abstract. Due to the disturbances in the tourism industry, the Covid-19 pandemic precipitated a wave of economic recession around the world. Consequently, many airlines change their operation portfolio to control costs and maintain market competitiveness. This paper examines the changes in SIA's fuel hedging strategy during this disaster and the gains and losses it generated to the group. The group's background, financial state and share price serve as the foundation for analysis. Furthermore, the paper further examines the possible future changes in SIA's fuel hedging strategy based on the group's recovery from the disaster and adjustments to the group's business strategy.

Keywords: Corporate Background, Financial Analysis, Fuel Hedge.

1. Introduction

Due to the growth in global tourism and cargo demand, the aviation industry has played a significant role in both social and economic development. However, the industry is vulnerable. Sadi and Henderson reveal that a number of historical occurrences had elucidated the vulnerability of the global aviation industry to numerous catastrophes, such as the Asian financial crisis [1]. The Covid-19 pandemic's effects on the aviation sector could linger much beyond the duration of the emergency. In the wake of the pandemic outbreak, many airlines and aviation-related services suffered a significant revenue loss, raising concerns about their financial stability and capacity to resume operations. Abate, M., Christidis, P., & Purwanto, A. J. shows that in order to mitigate the impact of the calamity, some nations provided financially support to their national carriers to ensure essential connectivity throughout the pandemic and to safeguard the millions of job positions supported by the industry and the travel-sensitive industries, such as tourism. Assistance to these sectors of the economy would hasten the rebound in the post-Covid-19 recovery phase [2].

Aircraft fuel, an indispensable expense in airline systems, significantly affects the profitability of airlines. Companies often use financial derivatives to hedge their exposure to oil market volatility, which implies that they agree to purchase oil in the future at a predetermined, earlier price. However, hedging can sometimes result in losses for the company. Especially in the wake of the Covid-19 outbreak, airlines may have experienced changes in strategies in cost control and business operations. In past studies, many have analyzed this from the perspective of the aviation sector as a whole. Amankwah-Amoah, J. sets out to investigate how airlines' have handled to Covid-19 and aspects that influence, promote, or restrict their reactions [3]. Cui, S., & Li, Z. uses Emirates as the main subject of analysis and SIA and the other two airlines as comparators to determine whether airlines are adequately prepared to face the challenges posed by the Covid-19 and handle the air transactions of passengers and cargo properly to maintain competitive in the market [4]. Additionally, since persistently high fuel prices over the past few years have eroded already low margins, many airlines have attempted to offset this tendency by financial and operational hedging. Yet, based on the findings of Berghöfer, B., & Lucey, B., financial hedging appears to be far less effective than operational hedging[5].

This paper explores the rationale behind the group's hedging in terms of SIA's share price and the group's financial position. This is also used as a basis for further analysis of potential future adjustments to SIA's fuel hedging strategy, taking into account the changes in the group's hedging before and after the pandemic. Financially, SIA's liquidity has become higher due to the reduced demand for airline flights as a result of the disaster and the company's losses have steadily improved as the economy recovers. This has made the company look financially healthier. SIA mainly uses swaps, options, and collar contracts to hedge against Brutal Crude and MOPS. SIA's fuel hedging as

a percentage of overall fuel requirements had gradually increased pre-Covid-19 and has decreased post-Covid-19. This paper predicts that SIA to increase its fuel hedging need in the future as the airline industry grows more prosperous. The paper is structured with part two presenting SIA's financials, and share price, part three presenting SIA's fuel hedging strategy, and part four concluding.

2. Company Profile

2.1 Background Information

Singapore Airlines Ltd (SIA) is a national carrier of Singapore and one of the largest airlines in the region in terms of revenue and carrying capacity. Singapore Airlines Group comprises more than 20 subsidiaries, many of which are airline related.

As the end of March 2022, the total asset of the Singapore Airlines Group is about 48,671million, with more than 186 aircraft in ongoing operation fleet and 93 passenger destinations served, offering services to roundly 3.89 million passengers annually.

2.2 Business Area

The Singapore Airlines Group's hub is Changi Airport, offering domestic and cross-continental passenger and cargo services with destinations in or through Singapore. In addition, SIA provides technical ground handling services, line maintenance, and airframe maintenance, and overhaul services. The group also refurbishes airplane galleys and produces aircraft cabin equipment.

2.3 Share Price Analysis

SIA’s share price has been fluctuating between US$13 and US$17 and is on a general downward trend after SIA was hit by the spike in fuel prices in 2011. In terms of the company’s positioning and business strategy, there is suspicion that SIA’s portfolio strategy to tap into demand for both full-service and low-cost carriers may have the unintended effect of hollowing out its own economy class while limiting the flexibility model to respond to new opportunities and demand. Additionally, SIA is under a great deal of pressure from new competitors stealing market share and rising fuel prices that are squeezing profit margins.

The company’s share price was fatally shocked by the Covid-19 Crisis in 2020. From February 2020 to mid-2020, the share price fell to an all-time low of US$4.80. Afterward, with the easing of national departure policies and the successful development of vaccines, the share price recovered and then oscillated around US$7.58. At the heart of it all, it appears that SIA’s share price was devastatingly influenced by the pandemic and has not fully recovered to date.

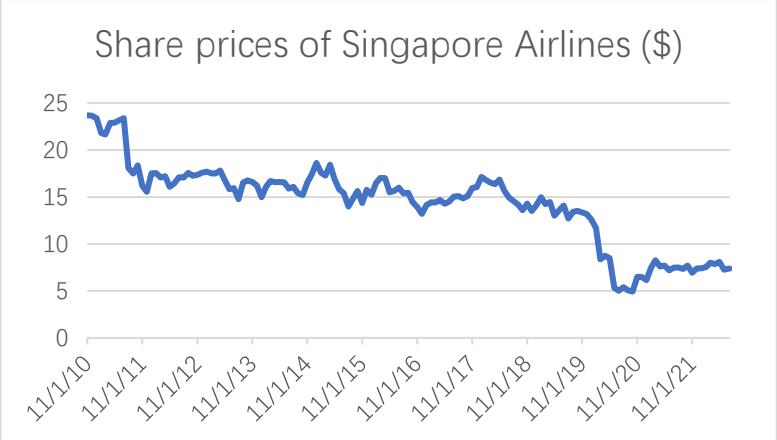

Figure1. share prices of Singapore Airlines between 2010 and 2021

2.4 The Financial Analysis

According to the analysis of annual reports of the group, it can be seen an unprecedented disruption in the business caused by Covid-19 and how the group recover from the pandemic from 2020 up to now. As the year went on, what was once a straightforward travel experience became complicated by stringent regulatory procedures. The prospects for the company looked bleak, as the passenger network severely scaled back, and group revenue had bottomed in the first quarter of 2021. At the height of the pandemic, a net loss for the financial year ended 31 March 2021 was $4,271million and passenger traffic was down nearly 97.7%. The importance of diverse investing was underlined by the strong cargo business to bolster the group's revenue stream.

With borders between countries gradually easing, the considerable pent-up demand for international travel is eventually unlocked. The turning point in the battle against the pandemic for the SIA group was Singapore's introduction of the Vaccinated Travel Lane (VTL) provision, which permitted vaccinated travelers to enter the country without having to go through quarantine. As a result, a net profit of $85million has been reported in the third quarter of FY2021/22, which is the first time that it was in the black since the Covid-19 epidemic first emerged. The entire financial year's net loss also decreased by about 78% to $962 million, representing that the group responds quickly to the air travel recovery.

2.4.1. Current Ratio

A company can optimize the current assets on the balance sheet by using the current ratio. The table below reveals the increasing ratio for Singapore Airlines Group, which ranged from 0.5 up to 2.4. Theoretically, the greater current ratio indicates that the firm is more likely to meet its obligations. Yet, the group had a high ratio in FY2021/22 (close to 3) implying that it could cover its current liabilities 2.4 times, which may be a sign that it did not effectively employ its current assets or manage its working capital well.

2.4.2. Quick Ratio

A quick ratio evaluates a company's ability to fulfill its short-term debt. The SIA Group is in a situation where it grows to have more adequate liquidity to cover current liabilities, as evidenced by the value's decline from 0.4 to 2.4 in table1. However, the rising quick ratio largely depends on the Covid-19 pandemic. The reduced passenger traffic to a trickle by the strict travel regulations thwarted the current liabilities to increase and encouraged the current assets to grow. It is questionable how long these trends in the ratio will continue after the world gradually has adjusted to the new normal.

2.4.3. Asset-liability Ratio

The asset-liability ratio examines how much of a company's assets are made up of liabilities. Due to the specification of the aviation business, the average leverage ratio of the industry is about 73%. For the SIA Group which experiences a far-reaching impact with the pandemic shock, the company faces declining total assets and liabilities. The group in signs of dropping leverage ratios would not be regarded as in a less risky situation. The lower ratio means the group did not converse their capital and resources properly.

Table1. Main Corporate Financial Indicators of Singapore Airlines Group in 2019-2022

Financial Indicators		FY19/20	FY20/21	FY21/22
Key Indicators	Operating Income ($million)	816.4	-2298.2	-736.6
	Net Profit ($million)	193.8	-11.2	67.7
Profitability Ratio	Gross Profit Margin (%)	24.3	-27.6	10.9
	Return on Capital Employed (%)	0.0	-28.9	-3.1
	Operating Profit Margin (%)	5.1	-60.2	-9.7
Financial Risk	Current Ratio	0.5	1.9	2.4
	The Liabilities to Assets Ratio (%)	71.1	56.7	53.2
	Quick Ratio	0.4	1.8	2.4
A Share Index	Basic Earnings per share(cents)	-11.2	-102.6	-16.2
	(After adjustment) (cents)	-11.2	-144	-32.4
	Ordinary Dividend per share(cents)	8	0	0

Source: *The data is from Singapore Airlines Annual Report, 2021/2022*

3. Fuel hedging strategy

3.1 Risks in the fuel hedging field

Airlines are promoted to find solutions to reduce fuel use and mitigate price fluctuations since jet fuel is a major operating expenditure and price volatility makes companies difficult to maintain cost stability while competing for profits with other airlines. In order to safeguard the group from abrupt and severe rises in jet fuel prices, Singapore Airlines has implemented hedging plans for controlling fuel price risk. The program for managing fuel risks enables the cautious use of authorized instruments, such as swaps and options, with approved counterparties and within approved credit limits to hedge approved ranges of projected jet fuel purchases over a predetermined time period. By deploying jet fuel swap, option, collar contracts, ICE Brent swap contracts, and Brent-MOPS crack swap contracts, the group manages the risk associated with fuel price fluctuations. As of March 31, 2021and 2022, the actual delivery of the business generated approximately 311.1-million-dollar losses and about 196.3-million-dollar gains respectively.

3.2 Fuel hedging strategy

The airlines' fuel costs are sensitive to changes in international jet fuel prices and SIA Group, like most airlines, uses derivatives to hedge its exposure to the impact of oil price on swinging its financial performance. The use of hedging can mitigate some of the effects of large spikes in oil prices and can also lessen the uncertainty of the company's liquidity by locking costs into a certain range. However, hedging pushes up volatility in the scenario of oil price falling. When the economy contracts, oil demand drops. Fuel prices decrease as a result. The ups and downs in oil demand are inadequately matched by the rise or fall in production. When changes in world GDP are positively correlated to oil prices, hedging increases airline operating losses since traveling is less profitable. When oil price movements are driven by demand rather than supply, as they were in the case of SIA during the Covid-19 crisis, the profitability is harmed by hedging [6].

For the whole 2017–18 financial year, the SIA Group hedged 20.0 percent in Brent and 20.6 percent of its fuel requirements in MOPS at weighted average prices of US$53 and US$66 per barrel, respectively. Longer-dated Brent hedges with maturities extending to 2022 cover between 40% and 45% of the group's expected annual fuel purchases at average prices ranging from USD53 to USD59 per barrel. As of March 31, 2021, the group had taken in longer-term Brent hedges with maturities extending to FY2024/25 at average prices ranging from USD57 to USD62 per barrel, covering up to 55.6 % of the firm's anticipated annual fuel usage. In view of average oil prices decreasing by 37.5% during 2020, SIA Group tended to take fuel hedging as a significant proportion of fuel consumption.

However, losses on fuel hedging of more than $300 million put considerable pressure on the group's financial performance.

Following the recovery of the Covid-19 crisis, inflationary pressure, in particular on fuel prices, remain a concern. As of early May 2022, spot prices had increased by more than 50% and were close to US$150 per barrel, compared to the average jet fuel price of US$90.31 per barrel (before hedging) for FY2021/22. Usually, airlines tend to rise their hedging efforts in reaction to higher fuel price levels and greater levels of vulnerability to oil price fluctuations [7]. However, since the increase in fuel prices follows the recovery of the aviation industry is predictable, managers may be aware that a change in the oil price mechanism has occurred, and therefore managers should be conscious that expanding fuel hedges is not a prudent option. After taking the uncertainty that remains in the fuel price profiles and riskiness of financial derivatives into account, the group took actions in FY2021/22 to rebalance its fuel hedge status closer to a neutral posture, including deploying sell swaps to close out some of the prior hedge positions. As of 31 March 2022, the group had taken into Brent hedges with maturity continuing up to the first quarter of FY2023/24, covering up to approximately 40% of the group's anticipated annual fuel purchases, at an average price of USD60 per barrel. Hedge positions beyond the first quarter of FY2023/24 have been closed out.

Moreover, compared to previously scheduled flight plans, the group's capacity and consequently fuel use were significantly lessened. Hedge accounting has been relinquished under circumstances where the expected purchases of jet fuel are no longer highly probable. For discontinued hedges, the cumulative effect of the gains and losses has been reported in the income account as "Fuel hedging ineffectiveness" when the projected jet fuel consumptions are no longer predicted to occur. Ineffective fuel hedges for previous years are recorded in the table2 below.

Generally, the SIA has hedged a large amount of fuel and crude oil demand, although it has been in the red for a long time. One possible reason for the high hedging amount is that jet fuel consumption growth from 2010 to 2021 is in line with the group's expansion of services and aircraft fleet [8]. As the Covid-19 virus is being dealt with globally, the gains from fuel hedging have climbed. SIA's forecasted passenger demand will grow gradually between 2021 and 2025, with a sharp increase only occurring from 2023 onwards [9]. The prediction has been supported that group had an operating loss of $609.7 million in FY2021/22. This is a reversal of $1902.8 million from the operating loss of $2512.5 million reported the previous year. The increase in group revenue of $3,799 million (+99.6%) year-on-year to $7,615 million is largely attributable to the six-fold increase in passenger traffic from a year before due to the loosening international air travel restrictions. These indicate that SIA started to expand its capacity and restructure its passenger network, resulting in a demanding requirement for fuel. In terms of financial position, SIA currently has high liquidity and a low leverage ratio. According to the hypothesis that firms with higher current ratios and quick ratios are less financially constrained and expected to hedge more than firms with lower ratios, the SIA would promote hedging to cover fuel consumption [10]. Furthermore, Russell, W. S. states that low-cost airlines are more vulnerable to the impact of fuel as a percentage of all costs than full-service airlines [11]. SIA has met the demand for low-cost carriers by establishing independently managed airlines Cool Air and Tiger Airways Holdings Ltd. resulting in a more price inelastic demand for fuel and greater reliance on fuel hedging for the SIA group.

Table2. The breakdown of fuel costs of Singapore Airlines Group in 2019-2022

	FY2019/20	FY 2020/21	FY2021/22
	$million	$million	$million
Fuel costs (before hedging)	3714.8	655.5	2236.1
Realized hedging loss/(profit)	105	311.1	-196.3
Total fuel costs	3819.8	966.6	2039.8
Fuel hedging ineffectiveness	587.5	135.3	-60.9

Source: *The data is from Singapore Airlines Annual Report, 2021/2022*

4. Conclusion

With the strong support of vaccine releases, the global aviation industry has entered a resurgence. Despite numerous companies in this industry exiting the market, SIA has been able to generate non-flying revenue growth and retain strong brand resonance with the public by pivoting to support diverse businesses. In terms of SIA's financial position, the group's earnings have become better, and business has gradually increased as the market has steadily rebounded. Greater demand for fuel hedging seems to have become the new trend. Starting from the financial performances and stock price status, this paper analyzed the relationship between financial health and Singapore Airlines Group's fuel hedging strategies and put forward relevant suggestions for improvement.

In this paper, we have many deficiencies in the hedging strategy analysis of Singapore Airlines. First of all, other types of risk management within the group are not taken into accounts, such as foreign exchange risk and credit risk. Second, there is a lot of uncertainty regarding future travel demands due to the reappearance of Covid-19 infections in various regions of the world. Finally, the paper draws conclusions without incorporating changes in the hedging strategies of other airlines over the same period. In view of the above concerns, the next research plans can be implemented as follows: based on the financial data, identify other operational risks in the group, analyze the reasonableness of SIA's hedging strategy in comparison to that of other counterparties in the industry and provide corresponding future plans and suggestions.

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