China Aviation Oil (Singapore) Corp Ltd

Skyline Inc.

BUY CAO:SP

Stock Price: S$ 1.38

Target Price: S$ 2.22

Sector: Oil & Gas

52-week Range: S$1.36 -1.79

Market Cap: 1.15B

P/E (TTM): 12.52

EPS (TTM): 0.11

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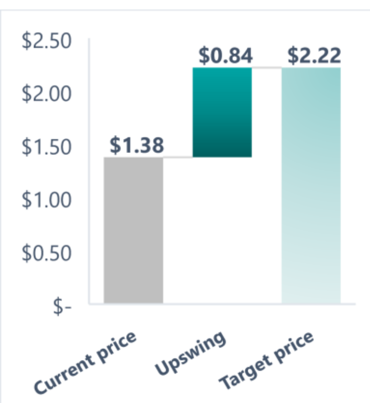
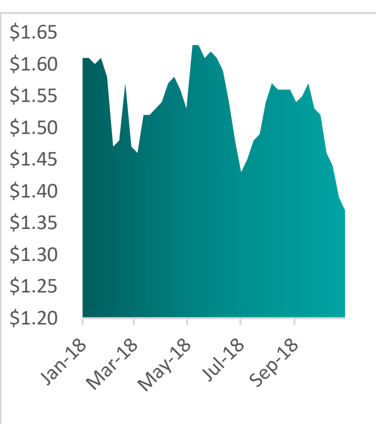




Given China Aviation Oil (Singapore) Corporation Limited's (CAO) unique position as the only supplier of imported jet fuel for the rapidly growing Chinese aviation industry, growing revenue and profit margins and near-future expansion plans makes it a lucrative stock to invest in.

CAO has significant potential to grow due to the following reasons:

Strong grip over the market

- **Holds key monopoly -** Sole licensed importer and supplier of jet fuel to China civil aviation industry
- CAO's third quarter report of 2018 shows a significant climb in revenue by 21.24% to US$6.33 billion compared to the previous year's quarter
- FY17 cash: USD 300m vs FY17 debt: USD 100m

Effective cost-plus pricing model that ensures profit margin stability regardless of fluctuations and uncertainty in global oil prices

- Resilient business model resistant to fluctuations in oil prices
- Total gross profit was US$11.08 million for 3Q 2018, an increase of US$6.75 million (155.66%) compared to US$4.33 million for 3Q 2017 mainly due to **higher jet fuel volume** supplied to China and **higher profits from trading and optimization activities**

Continued Expansion Plans beyond Chinese shores

- FY10 (80% Rev from China) to FY17 (47.4% Rev from China)
- Expanded to 40 airports in EMEA, North America & Europe
- acquisition of Navires Aviation for US$8 million and a pipeline of key supply chain contracts throughout Europe

Strong management team

- Stringent selection process for the leadership positions guarantees stability, transparency, and continuous innovation
- Forward-looking management with its "2020 Vision"
- Focus on opportunities and existing strengths to grow sustainability

Company Profile

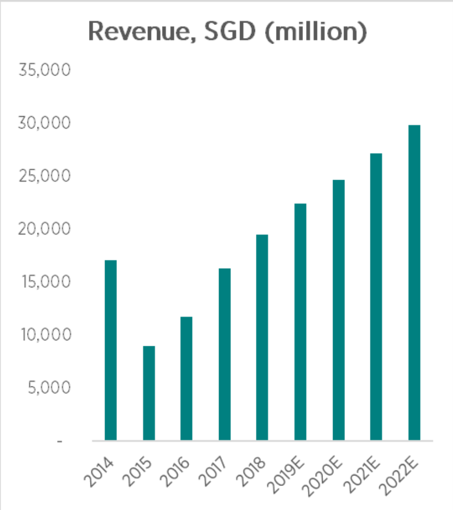


Fig 1. Revenue

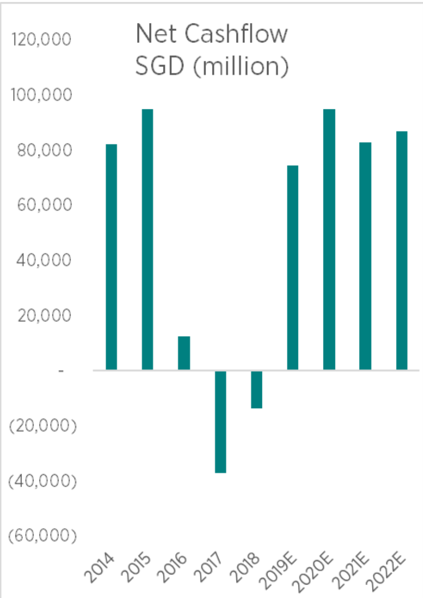


Fig 2. Net Cashflow

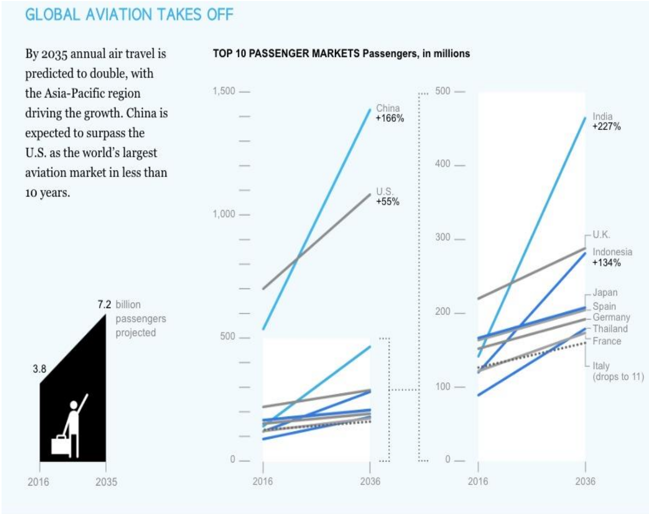
CAO's principal business comes from the supply and trade of bonded jet fuel to Chinese airline companies. CAO currently has a monopoly in this field given to them by the Civil Aviation Administration of China for Chinese airline companies on Chinese soil, and have expanded their business internationally including, most recently, Los Angeles International Airport (LAX). CAO is also engaged with the trading of other energy products besides jet fuel as well as equity stakes in multiple assets.

CAO's primary assets and dividend-paying associates have allowed CAO to vertically integrate the jet fuel supply chain in China. These assets and associates are mostly centered around airport refuelling stations at Shanghai Pudong International Airport, oil pipelines (China National Aviation Fuel TSN-PEK Pipeline Transportation Corp Ltd), and fuel storage facilities (Oilhub Korea Yeosu Co Ltd.).

CAO can hold its position throughout the supply chain of the Chinese aviation industry while still maintain a high degree of stability and financial health regardless of fluctuating oil prices. CAO has this stability due to their business model which buys bonded jet fuel from producers at a fixed price and then supply fuel to the airlines at a cost-plus pricing model. This model ensures that even though oil prices are uncertain for the foreseeable future given rising trade tensions, potential macroeconomic developments in OPEC nations, and US sanctions on Iran coming up, CAO's bottom line is not affected like so many oil producers did in 2016 when over 200 oil and gas companies filed for bankruptcy. In the meantime, CAO has a negligible amount of debt and ensured financial health going forward for years to come with the fast-growing Chinese aviation industry.

Chinese Aviation Industry

The Chinese aviation industry has been booming over the last decade with a significant increase in domestic and international tourism. Due to a rising middle class with disposable income and government support of the industry, Chinese passenger counts have increased by more than 45% for flights just within China with a similarly growing demand for international travel. If current trends of travel growth continue, Chinese passenger counts are set to hit an all-time of 600 million passengers in 2018. Furthermore, the China is set to become the largest aviation market in the world by 2022 according to the International Air Transport Association.



SOURCE: INTERNATIONAL AIR TRANSPORT ASSOCIATION

Fig 3. Global Aviation Snapshot

To accommodate this rising demand, the Civil Aviation Administration of China is working to develop new airports and terminals. According to its China Aviation Development 13th Five-Year Plan, China will have a total of 260 airports, an increase of 85 from 175 airports in 2010 to service these flights. Furthermore, the Chinese aviation industry is set to benefit as the Chinese government is seeking to implement its global "One Belt, One Road" development policy as there will be an increase business flights from China to emerging markets.

These developments have created opportunities for Chinese airlines to disrupt the global aviation market as they are increasing their market share. Currently, three Chinese airlines (China Southern, Air China, and China Eastern) are ranked in the top 15 global airlines by passenger volume and this is set to increase as Chinese airlines are experiencing double digit passenger growth. At the same time, regional competitors are either experiencing slower growth or decline in their passenger volume as Chinese airlines expand outside of the Chinese domestic market.

Fig 4. Global Commercial Fleet Projections

SOURCE: BOEING

Global Jet Fuel Industry

This growth in the Chinese aviation industry has contributed to a strong rise in demand for jet fuel globally along with other global factors. According to IHS Markit, global jet fuel demand is set to rise from 8 percent of total oil demand to 10 percent by 2040 due to overall lower oil prices, an expanding middle class in Asia, and freight markets that are gaining strength due to rising international trade and ecommerce. IHS Markit connects this trend to the rising aviation industry in Asia and China saying that while lower oil prices of the last few years have contributed some to increased air travel, the biggest contributor has been the growing the middle class in Asia who are now able to spend their disposable income on travel. This is only set to increase as 160 million more people are set to join the middle class each year to 2025.

Business Model

CAO was incorporated on 26 May 1993 and placed on the Singapore Stock Exchange in 2001. The company currently has two major shareholders: China National Aviation Fuel Group Ltd (CNAF) with a controlling 51.31% stake and BP Investments Asia Limited with a 20.17%, with the public holding the remaining 28.52% of the company. The controlling company of CAO, CNAF, is a state-owned enterprise of the Chinese government and currently the largest provider of aviation transportation logistics services in China. Due to this controlling stake in CAO, CAO's chairman has always been a member of the CNAF including both the new CEO, Wang Yanjun and his predecessor, Meng Fanqiu.

CAO's current business model is split between three divisions and roles in the Chinese aviation industry: jet fuel supply and trading, the sale and supply of other oil products, and investments in oil-related assets. The first division is currently their largest business and their largest source of revenue as CAO is the largest physical jet fuel trader in the Asia Pacific region. CAO also currently has the sole import license for bonded jet fuel into China. CAO supplies the bonded jet fuel to all major airports in China including China's largest gateways such as Beijing Capital International Airport, Shanghai Pudong International Airport, and Guangzhou Baiyun International Airport. In addition to the major Chinese airports, CAO supplies jet fuel for 43 international airports outside of mainline China including ones in

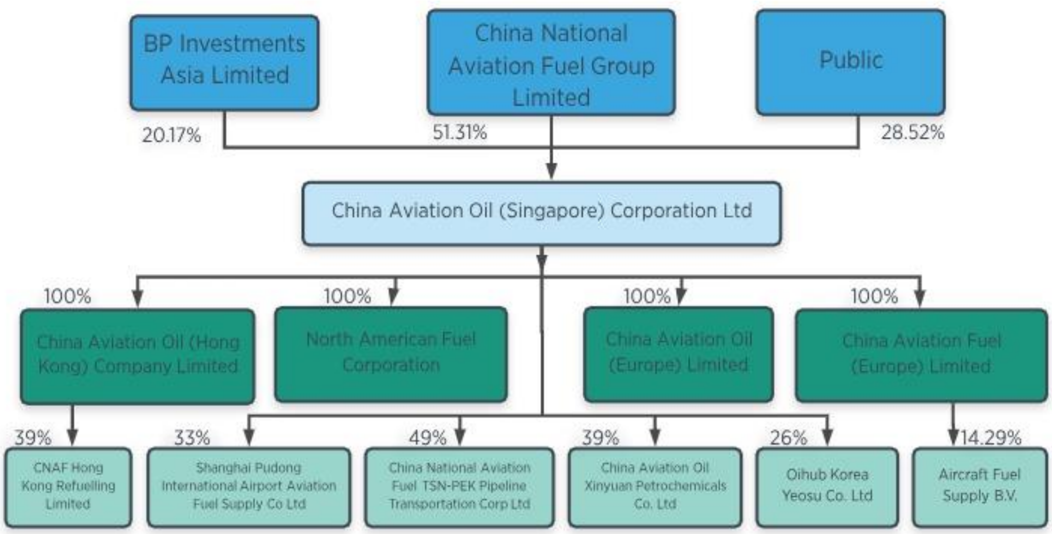


Fig 5. Company Structure

North America and Europe. This last aspect of their jet fuel business has been growing as well as the supply of these international airports now makes up more than 30% of CAO's jet fuel business and was able to double the amount it has supplied to non-Chinese airlines in the last few years.

The second division of CAO is the supply and trade of other oil products, specifically gas oil, fuel oil, and aviation gas. This division was opened in 2008 in a move to diversify the firm's product offering and has allowed CAO to expand into new markets and industries. For example, CAO's gas oil business has been supplied to the commercial (construction specifically) and agricultural sectors in Indonesia while their fuel oil business has been to supply maritime activities in Southeast Asia.

The third division of CAO that contributes to their revenue has been their investments in associate companies which are in different areas of the oil industry. The most significant of these has been their partnership with Shanghai Pudong International Airport (SPIA) to operate the entire fuel supply business directly to the airlines for flights flying out of the airport, rather than just supplying the airport itself. This has been a big driver of CAO's income and operating profit as CAO and is looking to grow due to the recently built fifth runway at SPIA with further growth coming in 2019 once SPIA completes a new passenger hub.

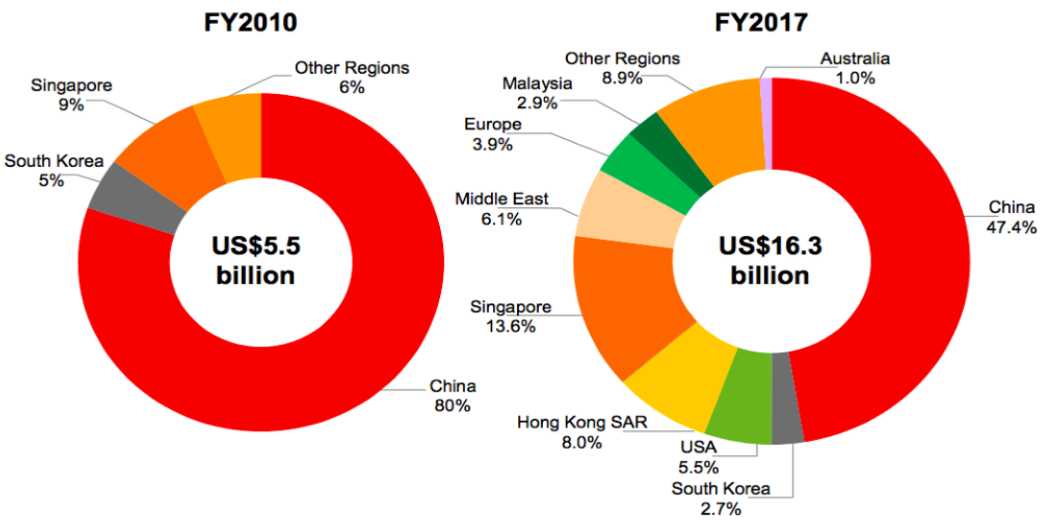


Fig 6. CAO Geographic Presence

Management Vision

According to CAO's Vision Statement, CAO's management is looking to transform the firm "To be a global top-tier integrated transportation fuels provider, constantly innovating and creating value for our shareholders, employees, business partners and the community." CAO's management followed up to accomplish this vision in significant ways in the last couple of decades. CAO has undergone a total corporate restructuring which brought in BP as a strategic investor. Following this restructure, CAO has won the award for "Most Transparent Company" in the energy category 7 years in a row by the Securities Investors Association of Singapore (SIAS) as well as receiving the "Best Investor Relations" by the Singapore Corporate Awards in 2018.

CAO's management has followed this restructuring and established clean reputation with its Vision 2020 plan starting in 2013. According to the CAO website, this plan will consist of plans to expand its operations globally (which they have been accomplishing), exploit the growing the aviation industry in Asia (which they are currently capitalizing on), and to double their revenue and profits as compared to 2012.

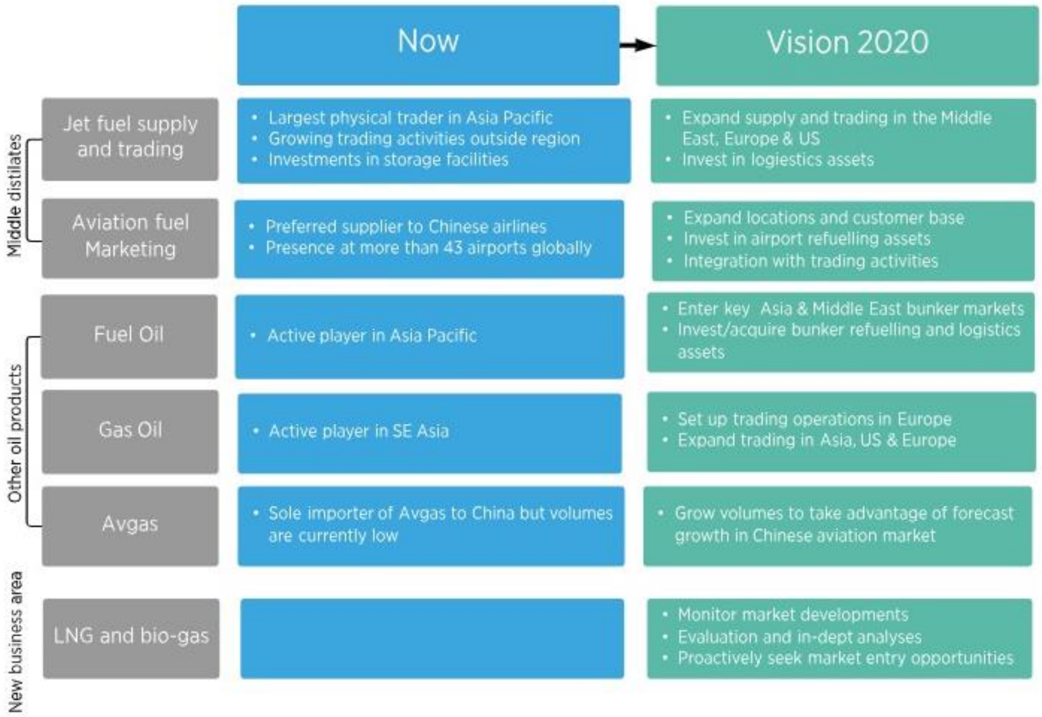


Fig 7. Vision 2020

Corporate Governance

CAO has demonstrated a spotless record of corporate governance and environmental practices over the last decade. CAO follows the International Integrated Reporting Council's standards and the SGX's Sustainability Reporting guide in their financial and environmental reporting to Singaporean investors. Following a controversy in 2004 where CAO's CEO was providing dishonest information to investors. CAO has since strengthened its internal monitoring and accountability standards and has won multiple awards by Singapore investors for its transparency and its investor relations. CAO has also expanded this principle of responsibility and transparency to other aspects such as environmental compliance, workplace health and safety, oil spill prevention, and their procurement practices. CAO has had an excellent track record in these areas as they have adhered to all local and regional environmental laws, minimized workplace injuries, vetted their oil-bearing vessels, and have had no breach in Trade Sanctions policy.

Pricing and Operations Model

CAO supplies bonded jet fuel using a cost-plus model in China at fixed prices from oil producers. This ensures stability regardless of fluctuating oil prices and a potential to improve its margins as CAO trades higher volumes when the oil market is in contago (where the spot price is lower than the forward price). During periods of oil price backwardization (where the spot price is higher than the forward price), volume of sales does not drop significantly as orders are simply procured at short notice by airlines as close as they need it. CAO also maintains continuity in its prices to airlines as the oil produced outside of China is sold to CAO at a price fixed one month ahead of delivery. So, while this may affect revenues for CAO, its expenses are similarly impacted therefore ensuring stability in its profit margin.

With a strong foundation in the Chinese aviation industry due to its monopoly, CAO has taken its model to expanded in competitive regions such as the United States, Europe, as well as participate in semi-closed markets like Singapore by joining the jet fuel consortium CAHFI. In these competitive markets, CAO has competed well against industry giants such as Chevron as well as smaller, more regional and specialized firms.

Future Opportunities

CAO is set to grow at a faster rate in the near future after a recent acquisition of a jet fuel supply and trading outfit in the United Kingdom named Navires Aviation for US$8 million. Along with acquiring key supply chain contracts throughout Europe, Navires also has an interest in Aviation Fuel Supply BV which holds a concession on the biggest airport in the Netherlands to manage the distribution of jet fuel to airlines similarly to how CAO operates in SPIA.

CAO has commented on this acquisition saying it represents an opportunity to strengthen and expand its foothold in the European market by using Navires' supply network on the continent. Furthermore, this acquisition was completely funded through internal resources and is not expected to have any material impact on CAO's earnings per share or net tangible assets per share for the fiscal year ending in December 31, 2018.

CAO owns a 33% stake in one of the largest international airports in the world, Shanghai Pudong International Airport that is continuing to expand with a new passenger hub and increased traffic with a new Disneyland Resort opening in Shanghai

Valuation

Revenue assumptions:

One of the underlying assumptions with our valuation is the future revenue growth rates of the company. Revenue for the next years is expected to grow at a gradually slower pace than the previous two years while with 20% for 2018, 15% for the next year, 10% for the three years after that, and 5% as the perpetual growth rate. We believe this estimate of future growth is valid as the CAO is set to expand internationally and receive more sources of revenue following their acquisition of Navires. In addition, we expect CAO to grow at this rate as the growth in the Chinese aviation industry is projected to be high in the near future but will eventually stabilize.

	2014	2015	2016	2017	2018 E	2019 E	2020 E	2021 E	2022 E
Tax	5%	5%	5%	5%	5%	5%	5%	17%	17%
Net Working Capital of Sales	1%	2%	2%	2%	2%	2%	2%	2%	2%
Operations Expenses Factor	0.10%	0.14%	0.16%	0.12%	0.12%	0.1%	0.1%	0.1%	0.1%

Tax, Working capital and Operational expenses.

Our calculations have the tax rate at 5% until 2020 because CAO first received tax relief from the Singapore government in 2010 for 5 years and was renewed for 5 more years in 2015. Though it is likely that CAO will receive another 5-year extension in 2021, we chose to make the conservative assumption that CAO will not receive another extension and the tax rate will reset to the 17% standard corporate tax in Singapore to account for this possibility.

We also assume that CAO will keep its working capital at 2% from sales as it has stabilized since 2015.

Operational expense might slightly go down from 0.12% to 0.10% as company is stabilizing and it will succeed to manage expenses on the level of 2014.

Cost of sales, Capital Expenditures and Other income.

Cost of sales are quite high for oil and gas industry and we assume that they will stabilize on 99.8%. Before that it was in range of 99.6%-99.8% and it heavily depends on ability of the company to buy oil on cheaper price and sell when price goes up. In this scenario, we do not expect CAO to increase CapEx by more than 10%, but we investigated the possibilities and evaluated possible outcomes in "Different scenarios" section. We also assume that income from its investment operations will continue growing as CAO associates' performance has been improving and CAO will continue to invest more. We assumed the growth rate of other income will be 15%.

	2014	2015	2016	2017	2018 E	2019 E	2020 E	2021 E	2022 E
Revenue growth	0%	-47%	30%	39%	20%	15%	10%	10%	10%
Revenue, SGD in millions	17,061	8,987	11,703	16,268	19,521	22,449	24,694	27,164	29,880

Million USD	2014	2015	2016	2017	2018	2019E	2020E	2021E
Sales	17,061.0	8,987.5	11,703.2	16,267.6	19,521.1	22,449.3	24,694.2	27,163.6
Cost of sales	17,033.6	8,952.0	11,659.1	16,228.9	19,482.1	22,404.4	24,644.8	27,109.3
Operating Expenses	17.6	12.7	18.5	18.9	23.4	22.4	24.7	27.2
EBIT	9.8	22.7	25.5	19.8	15.6	22.4	24.7	27.2
Other income	41.2	40.9	66.4	72.5	68.9	79.6	84.7	89.4
Interest expense	(1.5)	(0.3)	(0.3)	(1.6)	(0.7)	(0.9)	(1.1)	(0.9)
Income tax	51.0	63.6	91.9	92.2	84.5	102.1	109.4	116.6
Tax, 5% till 2020(17%)	2.6	3.2	4.6	4.6	4.2	5.1	5.5	19.8
Net Income	46.9	60.2	87.0	86.0	80.3	97.0	103.9	96.7
Operating Cash flow	47.2	54.0	(0.5)	(27.2)	81.1	97.7	104.7	97.5
CF from CapEx	35.0	35.3	37.3	48.7	35.2	35.2	35.2	34.7
rking Capital(AR+I-AP)	183.7	177.9	202.1	260.7	390.4	449.0	493.9	543.3
low due to changes in working capital		5.7	(24.2)	(58.6)	(129.7)	(58.6)	(44.9)	(49.4)
Net Cash flow	82.2	95.0	12.6	(37.2)	(13.5)	74.4	95.0	82.8

WACC.

We used average yield of US treasury bonds with maturity longer than 10 years as CAO reports its financials in USD as it buys its oil from multiple international sources, US bonds represent an international standard for a risk-free rate, and CAO's business is expanding internationally beyond China and Singapore. To get the average, we used last 18 years YTM. Beta is calculated on last 3 years price changes. As CAO has relatively small debt and does not issue bonds, we calculated the cost of debt based on the interest rates and debt volume, which gave us 2.32%. Risk premium was defined as the average return of the SGX index over the last 15 years was 10-11%.

Component	Value
US treasury bonds (LT>10) YTM (2000-2018)	4.06%
Beta	0.89
Debt Cost	2.32%
Risk premium	6.5%

WACC	
Cost of Debt	2.32%
Cost of Equity	9.8%
Debt (SGD in millions)	165,600
Equity (SGD in millions)	1,178,000
WACC	8.9%

Explanation of results.

Using a growth rate of 3% we arrived at the terminal value of USD$1.5B. Considering the current level of debt and cash, we calculated the Equity value to be USD $1.375B. Based on the number of shares outstanding and the equity value, we believe the fair price for CAO's stock in USD $1.61. Using the SGD to USD exchange rate as of the date of the report of 1.38, we came to final target price of S$2.22 which gives us upswing of S$0.84.

Results	
Current price	**S$ 1.38**
Market cap	**S$ 1.178B**
Number of shares	**853.6M**
Equity value (DCF)	**USD$ 1.375B**
Target price(USD)	**USD$ 1.61**
Upswing	**S$ 0.84**
Target price(SGD)	**S$ 2.22**

Different scenarios, Sensitivity and Possible outcomes.

We applied our DCF model to analyse several scenarios, including growth of CAO's investments into subsidiaries, slower growth of the oil industry and possible external events that can influence the financial position of CAO.

Our first scenario is if CAO increases its current long-term investments of $321M by 20% in next 5 years. This will have a negative impact on our cash flows in the short-term but can increase our terminal value shows the fair price range of S$1.63 if there is 0% return growth and S$2.71 if our return on investments grows at 25%. In case oil price volatility influences our gross margin and it drops to 0.1%, the fair share price will be S$1.62. We also completed a sensitivity analysis to see how price depends on the premium and growth rates. If we increase our assumed risk premium rate from 6.5% to 12% our target price lands at S$1.33 which is lower than the current price. On the other hand, our model shows that even if the company's main business is not growing after 5 years, the stock is still undervalued with a fair price of S$ 1.64.

		Risk Premium			
		5.50%	6.50%	8%	12%
Perpetual growth	1.5%	2.09	1.87	1.63	1.22
	2.0%	2.22	1.97	1.70	1.25
	2.5%	2.37	2.09	1.78	1.29
	3.0%	2.55	**2.22**	1.87	1.33
	3.5%	2.77	2.38	1.97	1.37
	4.0%	3.05	2.58	2.10	1.42
	4.5%	3.40	2.81	2.24	1.47
	5.0%	3.87	3.11	2.41	1.53

Future risks and threats

The future risks of the company are determined by two major factors:

1. **Uncertain macroeconomic conditions would lead to fluctuating fuel prices thereby directly affecting the bottom line of the stock.** Barclays Capital assumes that the U.S. tariffs of 20% of all imports from China would result in a permanent loss in income of 0.2-0.4% of the GDP in the long run. As the company primarily supplies oil to China, any revenue losses to China would directly impact the company's stock performance.

2. **Foreign exchange rate fluctuations is another source of risk for China Oil Aviation.** For the nine months ended 30 September 2018, RMB and Korean Won depreciated by approximately 5.61% and 4.26% respectively against the US Dollar compared to end of December 2017 thereby giving rise to the translation loss on foreign associates. RMB and Korean Won both appreciated by 4.17% and 4.82% respectively against the US Dollar in the same period last year.

Recommendation

After looking closely at the **business model of this firm**, its **future opportunities**, its **past performance and stability following its corporate restructuring in 2004**, and its unique position **holding the monopoly over the supply of bonded jet fuel in the rapidly expanding Chinese aviation industry**, we recommend investors to buy this stock as we are confident the stock to rise in value and return steady dividends to its investors.

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