

**RELATIVE VALUATION OF
BANGKOK AIRWAYS PUBLIC COMPANY LIMITED**



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BANGKOK AIRWAYS PUBLIC COMPANY LIMITED**

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RELATIVE VALUATION OF BANGKOK AIRWAYS PUBLIC COMPANY LIMITED

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ABSTRACT

Relative valuation method is one of the most admired enterprise valuation technique by using key financial ratio of its competitors or industry peers to compare and evaluate the target firm's value.

The purpose of this thematic paper is to evaluate the value of Bangkok Airways public company limited using relative valuation method. Five-years median of historical key financial ratio including P/E, P/BV and EV/EBITDA of sixed selected peers (data from 2014 to 2019) are applied to evaluate the firm value.

Based on the results, the estimate current price per share of Bangkok Airways is 15.32 baht, as of 15th November 2019, which show that the market price of Bangkok Airway is currently "undervalue", and the target price of Bangkok Airways during 2020 is between 15.39-15.55 baht per share, if the performance of Bangkok Airways meets the performance as the proforma's assumption.

The most striking point for value of Bangkok Airways is that the current price of the firm mostly come from on a value of shares in Samui Property Fund (SPF) and Bangkok Dusit Medical Service (BDMS) that hold by Bangkok Airways, otherwise the value of Bangkok Airways' operating assets, without considering non-operating asset, will eventually be zero

In conclusion, more than half of value come from Non-Operating Assets. The operating performance and profitability are then still poor and high risk, even though the market price of Bangkok Airways at the moment is undervalue, compared to its intrinsic value. The recommendation based on this situation is to HOLD.

KEY WORDS: Relative Valuation / Multiples / Airline / Peers

62 pages

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CHAPTER I

HIGHLIGHT

Over the past two years, Thailand's economic has not been in the best situation. By the end of 3rd quarter 2019, SET Index was at 1624.09 which reflected slow growth rate comparing with the historical performance. Since 2017, SET Index has increased around 1.02% per year which is a lot lower if compare to 10 years average, 9.32% per year.

Furthermore, by looking at nominal effective exchange rate and real effective exchange rate, the Thai baht has been appreciating and the price of goods and services in Thailand are considered more expensive. This is one of the reasons that affected the slowdown in tourism which contribute to the depressing performance of Thai airlines industry.

Since the tourism industry in Thailand seem not as good so there is an intense competition within airlines industry. Most of the airlines in Thailand have few alternative choices. Major one is price strategy. Turn the airlines industry to the red ocean.

Bangkok Airways' share price has dropped from 16.20 baht per share at the beginning of 2018 to 7.10 baht (Finance, n.d.), at the time of the valuation, 15th November 2019. The price drop is the result of declined financial performance and the expectation of investors about the future of Bangkok Airways. In this report, the case assumed that the Bangkok Airways will continues its operation as it has been doing for the 5 years which provides continuously making operating losses and negative free cash flow. According to these assumptions, the current intrinsic value of Bangkok Airways' operating assets using trailing P/E multiple and trailing earnings (negative) will eventually be zero. However, Bangkok Airways still has a relatively large number of shares in Samui Property Fund (SPF) and Bangkok Dusit Medical Service (BDMS). Because of the long-term investment; available-for-sales securities, it could raise the share price of Bangkok Airways up from zero to 15.32 baht per share by adjusted EV/EBITDA

multiple method, noted that this target price is based on the share price of SPF and BDMS on 15th November 2019 which could be changed every day.

Furthermore, the target price of Bangkok Airways on 31 December 2020 is expected at 15.39 baht per share by this assumption with 12-m forward adjusted EV/EBITDA multiple and estimated EBITDA in 2020E. This is because the average performance of Bangkok Airway during 5-years average is significantly higher than it in 2019 following the market situation stated earlier and estimated better performance of Bangkok Airway in 2020E. The target price is coherent to price in the IAA Consensus page in Settrade's website (Settrade, n.d.) which shows target price of Bangkok Airways ranges from 10.30 to 15.60 baht per share. This assumption is considered a conservative perspective based on 5-year Bangkok Airway's performance and market situation. Therefore, the estimate current price per share of Bangkok Airways is 15.32 baht, as of 15th November 2019 and the target price of Bangkok Airways during 2020 is between 15.39-15.55 baht per share. For conservative investors, I would recommend HOLD. Despite the lower market price of Bangkok Airways at the moment compare to the intrinsic value but more than half of value come from Non-Operating Assets, it would recommend that investors should invest directly in BDMS or SPF.

CHAPTER II

COMPANY OVERVIEW

2.1 Brief History

Bangkok Airways Public Company Limited, a Boutique Airlines, is one of the only main 4 airlines listed in The Stock Exchange of Thailand (SET). Apart from the major business-the airline business-the company has been operating on some other businesses, such as airport businesses and airport related businesses as well. (Bangkok Airways, 2018a)

The company was originally founded in 1968 under the name “Krungthep Sahakol” by Mr. Prasert Prasarttong-Osoth. In 1984, Mr. Prasert founded “Sahakol Air” and took over the airline business and later changed the name to “Bangkok Airways”.

The company went public February 2013 and became Bangkok Airways Public Company Limited, BA. The company raised 13 billion baht from the initial public offering (IPO) by offering 520 million new shares. The initial offered price range of 23-27 THB per share.

2.2 Bangkok Airways’ Businesses

2.2.1 Airline Businesses

Bangkok Airways is a regional airline based in Bangkok, Thailand. Full-service flights are provided for all traveler both business and leisure by the airline under the International Air Transport Association (IATA) code “PG”. PG flights mainly focuses on Short-haul routes mainly between the Suvarnabhumi International Airport, Samui Airport, Chiang Mai Airport and airports in major cities within up to 3,120 kilometers radius and up to 5 hours flight duration from its hubs. (Bangkok Airways, 2018b)

As of October 2019, the operated routes covering 28 scheduled destinations in 12 countries (including Thailand) as following,

“Bangkok, Samui, Ching Mai, Phuket, Krabi, Sukhothai, Trat, Lampang, Chaing Rai, Mae Hong Son, Hat Yai, Pattaya (U-Tapao), Luang Prabang, Phnom Penh, Siem Reap, Yangon, Mandalay, Nay Pyi Taw, Vientiane, Danang, Phu Quoc, Cam Ranh, Sihanoukville, Singapore, Kuala Lumpur, Maldives, Mumbai and Hong Kong.” (Bangkok Airways, 2018)

Additionally, the airline has completely established code-share agreement with other 27 international airlines. The code-share agreement would create more route networks and increase the number of passengers of PG flights, and also extend the destinations to cover 27 more international destinations in 19 countries (excluding Thailand).

This following table shows the list and quantity of the aircrafts that Bangkok Airways has been using in its operation,

Table 2.1 The list and quantity of the aircrafts that Bangkok Airways has been using in its operation

Fleet Type	As of December, 2018	As of December, 2017
Airbus A320	9	9
Airbus A319	15	14
ATR72-500	5	6
ATR72-600	11	9
Total	40	38

2.2.2 Airport Businesses

Bangkok Airways is the only airlines in Thailand that has run and operated some airports in Thailand, including Samui International Airport, Trat Airport and Sukhothai Airport.

Samui Airport runs 16 hours per day in areas more than 600 rai. In 2018, Samui Airport was recorded with more than 2.6 million passengers and over 30,000 flights. After that from 2006, Bangkok Airways leased out Samui Airport to the Samui Property Fund for 30 years. Nevertheless, the company still run the business as the operator of

the airport under the Sub-lease Agreement. The company has the ability to sub-lease the Samui Airport for aggregate term of not exceeding 30 years. Bangkok Airways agrees to pay rental fee around 26 million baht per month and also fixed service fee approximately 21 million baht with additional service fee to Samui Property Fund.

PGGS received the right for ground services for other airlines at Samui Airport. It has been reported that revenue from ground service gained from this service would be paid to PGGS but Bangkok Airways gains revenue from granting PGGS the right instead and Bangkok Airways owns 99.99% of PGGS's shares. Part of the revenue generated from Airport Operation will be paid to Samui Property Fund with rental service fee. On the contrary, the company will get dividend from the fund because the company hold 30% ownership in the fund.

Furthermore, the Trat Airport which runs 13 hours a day, starts from 06.00-19.00 hrs is also operated by Bangkok Airways on 1,300 rai. However, there is only one runway only 1,800 meters that is the shortest of all their airports. In 2018, this airport was recorded with 96,000 passengers and more 2,300 flights.

Sukhothai Airport runs 12 hours a day on the area around 1,018 rai. This airport has only one runway with a length of 2,100 meters. There was a record in 2018 with 84,000 customers with 1,700 flights. Significantly, Bangkok Airways is the only airline that flies to this destination.

2.2.3 Airport-Related Businesses

The company also provides other services, including cargo services, ground and passenger services, and flight catering services for Bangkok Airway flights and other airlines.

Ground services with passenger services and ground equipment services have been cooperated with BFS ground which 98.8% of its share owned by Bangkok Airways. BFS Ground runs all services to Bangkok Airways' and other airlines for chartered domestic and international flights.

In-flight catering is operated through BAC which is Bangkok Airways' subsidiary. Bangkok Airways own 90% of the share in BAC (see table 2.2). BAC provides all meals for Bangkok Airways and additional 23 airlines with international standards, including Good Manufacturing Practice (GMP), Hazard Analysis Critical Control Point

(HACCP) global standards, and Halal meals and Kosher meals Apart from In-flight catering, BAC organized all meals and refreshments at Bangkok Airways' lounge and the Business Class Lounges for other airlines at Suvarnabhumi International Airport.

BFS Cargo which is Bangkok Airways' associate company operates Cargo Services. Bangkok Airways belongs 50% of BFS Cargo's shares. At Suvarnabhumi International Airport, BFS Cargo also served international cargo service. It is the fact that BFS Cargo has an ability to operate premium cargo with perishable goods and valuable cargo that can provide high margins. In 2018, BFS Cargo got more than 60 clients under around 3 contracts.

This following table shows the list of Bangkok Airways' subsidiaries along with the nature of its business,

Table 2.2 Bangkok Airways' Lists of Subsidiaries

Company's name	Nature of business	Percentage of shareholding	
		2018 (%)	2017 (%)
Held by the Company			
Bangkok Air Catering Co., Ltd.	Catering services	90.00	90.00
Bangkok Airways Ground Services Co., Ltd.	Ground services	99.99	99.99
Worldwide Flight Services Bangkok Air Ground Handling Co., Ltd.	Ground services	99.88	98.88
Bangkok Airways Holding Co., Ltd.	Holding	99.99	99.99
Held by subsidiary companies			
BAC Gourmet House Co., Ltd. (99.99% held by Bangkok Air Catering Co., Ltd.)	Restaurant	89.99	89.99
Bangkok Air Catering Phuket Co., Ltd. (99.96% held by Bangkok Air Catering Co., Ltd.)	Catering services	89.96	89.96
Bangkok Air Catering Samui Co., Ltd. (99.99% held by Bangkok Air Catering Co., Ltd.)	Catering services	89.99	89.99
Bangkok Air Catering Chiang Mai Co., Ltd. (99.99% held by Bangkok Air Catering Co., Ltd.)	Catering services	89.99	89.99
SA Services Co., Ltd. (99.99% held by Worldwide Flight Services Bangkok Air Ground Handling Co., Ltd.)	Ground services	98.87	98.87

Table 2.2 Bangkok Airways' Lists of Subsidiaries (cont.)

Company's name	Nature of business	Percentage of shareholding	
		2018 (%)	2017 (%)
BFS Cargo DMK Co., Ltd. (51.00% held by Worldwide Flight Services Bangkok Air Ground Handling Co., Ltd.)	Cargo	50.43	50.43
Gourmet Primo Co., Ltd. (99.99% held by Bangkok Airways Holding Co., Ltd.)	Produce and process food for distribution	99.98	99.98
More Than Free Co., Ltd. (100.00% held by Bangkok Airways Holding Co., Ltd.)	Distribution of souvenirs in duty free shop	99.99	-
Bangkokair Aviation Training Center Co., Ltd. (100.00% held by Bangkok Airways Holding Co., Ltd.)	Aviation training business	99.99	-

Source: Bangkok Airways' 2018 Annual Report

CHAPTER III

MACROECONOMIC AND INDUSTRY ANALYSIS

3.1 Macroeconomic Overview

Thailand's Nominal Gross Domestic Product (GDP) was at 504 billion USD in 2019. In the third quarter of 2019, it reached 133.5 billion USD. It has been increased 2.3% YoY. The Real GDP Growth in Thailand is expected to grow at 4.1% per year, on average (from March 1994- June 2019) (CEIC Data, 2019a). By the end of 2019, Thailand's Real GDP Growth is expected to be 2.871% and projected to stand at 3.649% in December 2024. (CEIC Data, 2019b)

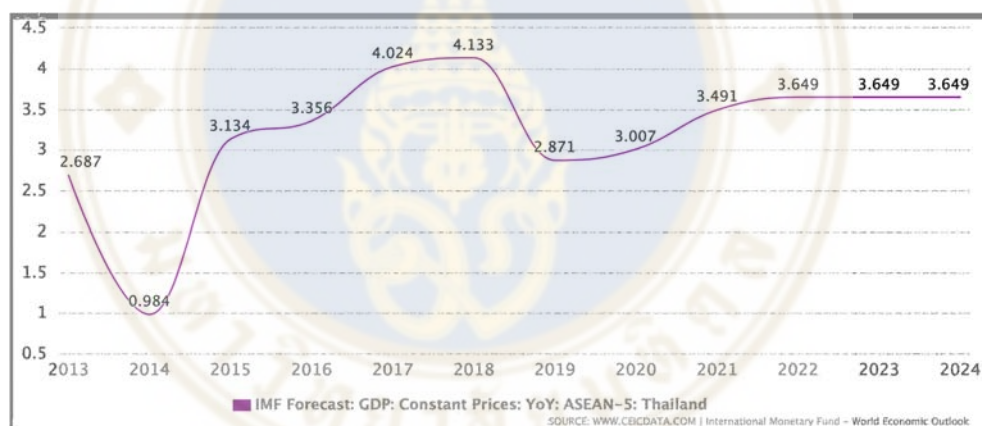


Figure 3.1 Thailand's GDP Growth Rate

Source: CEIC Data

While there are several trade wars going on, the major one would be the trade war between United States and China. Resulting in slower economic growth in both countries. According to International Monetary Fund (IMF) – World Economic Outlook, the economic is now growing at the slowest pace since the global financial crisis (IMF, 2019). United States' GDP growth rate which is 2.0% YoY in September 2019 which is lower than its average of 3.1%, from 1948 to 2019 (CEIC Data, 2019c). United States' GDP is forecasted to be at 2.35% by the December of 2019 and the growth

rate is seemed to be decreasing over the next 5 years (CEIC Data, 2019d). While China's GDP growth dropped from 6.7%, same period last year, to 6.2% (CEIC Data, 2019e) and it has been forecasted to keep decreasing to 5.5% in 2024 (CEIC Data, 2019f). Thailand is one of many countries that has been impacted by it. Resulting in significant reduction in Thailand's GDP growth rate in 2019, Thailand's export values dropped 5.8% YoY, Service exports contracted from the dropping in tourists' number and transportation income at -7.0% YoY. This directly affected the airline industry, in other word, affected Bangkok Airways' performance. Other than that, private consumption, private investment also has been slowing down . From the figure 3.1, the analyst from believes that after the trade wars have resolved, Thailand's GDP growth rate will slowly come back to its average.

While in Europe, the Brexit has been going on for about 2 years and has not been resolved, many airlines and companies claimed that they have been affected by it. Fortunately, Thailand's tourism is not severely affected by it. Figure 3.2 shows the number of arrivals to Thailand. The graph shows the that after the Brexit has started in 2016, the number of tourists from both United Kingdom and Europe remain constant. Figure 3.3 shows the amount of spending of tourism from the Europe, UK, USA and China, in million USD, which also telling the same story that after that Brexit has started the tourist receipts was also constant with some seasonality affects.

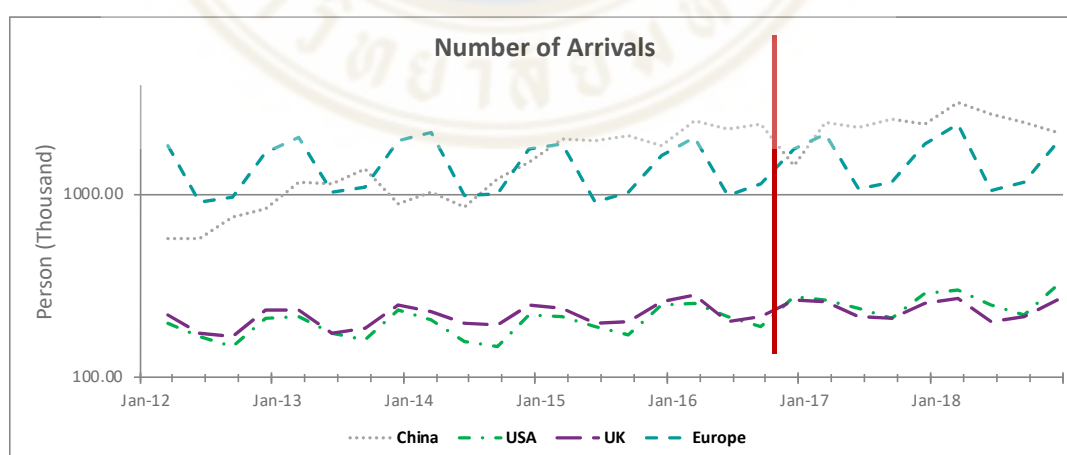


Figure 3.2 Number of Arrivals

Source: CEIC Data: TAT Intelligence Center

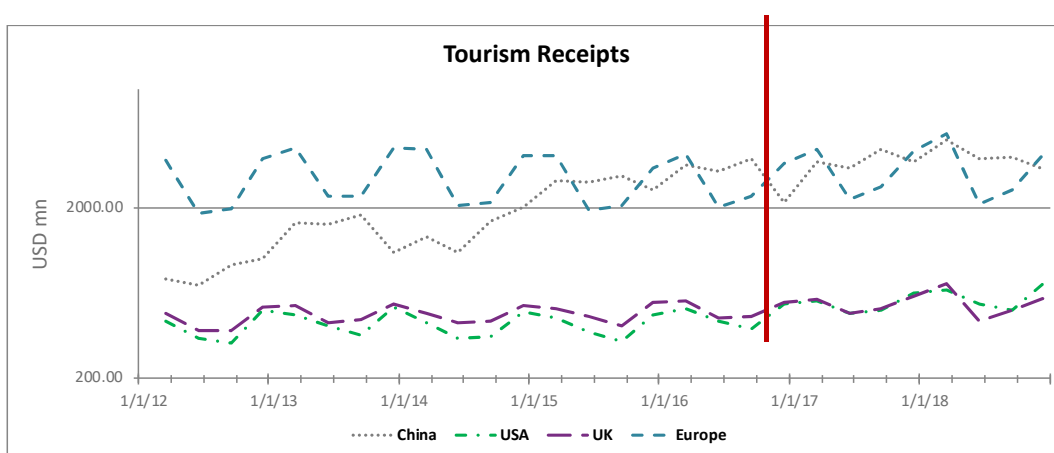


Figure 3.3 Tourism Receipts

Source: CEIC Data, TAT Intelligence Center

Apart from the reasons mentioned earlier, another factor that also has an impact on Thai economy is the appreciation of the Thai Baht. The Thai Baht has been continuously appreciating over the past two decades. At the end of August 2019, NEER was reported at 125.18 and REER was at 114.67 (Bank of Thailand, 2019). Figure 3.4 shows the historical Nominal Effective Exchange Rate and the Real Effective Exchange Rate of Thai Baht. The appreciation of Thai Baht causes Thai exporters to lose their competitive advantages. The REER shows that Thai goods is becoming more expensive as compared to other countries and that has negatively impacted Thai economic.

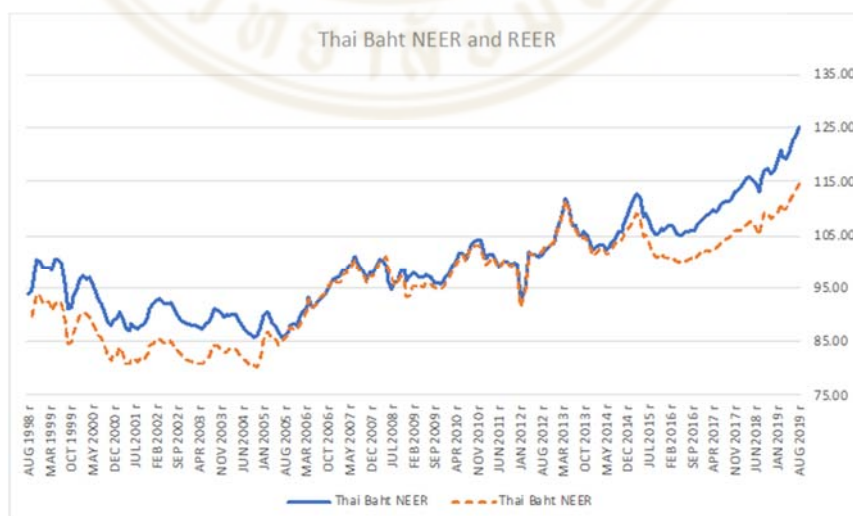


Figure 3.4 The appreciation of Thai Baht

Source: Bank of Thailand

3.2 Microeconomic and Industry Overview

Bangkok Airways is operating in Thailand's Airlines Industry which is reported sales value of approximately 333 billion baht by the end of 2018. Thailand's Airline Industry has been continuously growing at around 4% CAGR. The growth of airline industry is driven by the growth in tourism, both inbound and outbound. Low cost airlines have the advantage and also influencing an airlines industry in Thailand as the Free Independent Tourist (FIT) has been rising among middle-class people in China and India. Additionally, the government's campaign to promote domestic tourism in 55 secondary cities is another factor that feed the growth of Low-cost airlines. Tables 3.1-3.2 and figure 3.5 show that the sales value of airline industry has been steadily increasing over the past 5 years. (Euromonitor International, 2019)

Table 3.1 Airlines Historical Sales Value (In Million Baht)

Airlines: Sales Value 2014-2019						
	2014	2015	2016	2017	2018	2019 E
Charter	9,762	11,128	11,685	12,245	13,290	14,190
Low Cost Carriers	42,008	48,309	55,072	61,956	68,342	75,246
Scheduled Airlines	239,275	239,514	244,305	247,969	251,689	255,389
Airlines	291,044	298,951	311,061	322,171	333,321	344,825

Source: Euromonitor

Table 3.2 Airlines Historical Sales Growth Rate

Airlines: Sales Growth 2014-2019						
	2015	2016	2017	2018	2019 E	CAGR
Charter	14.00%	5.00%	4.80%	8.53%	6.77%	7.77%
Low Cost Carriers	15.00%	14.00%	12.50%	10.31%	10.10%	12.36%
Scheduled Airlines	0.10%	2.00%	1.50%	1.50%	1.47%	1.31%
Airlines	2.72%	4.05%	3.57%	3.46%	3.45%	3.45%

Source: Euromonitor

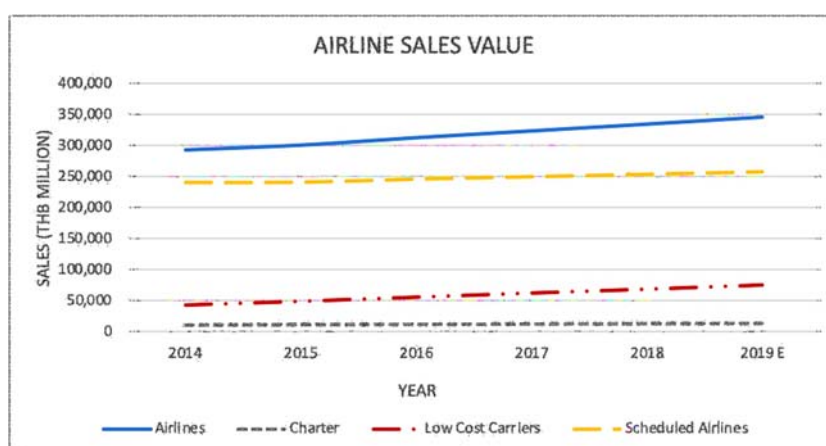


Figure 3.5 Airlines Historical Sales Trend

Source: Euromonitor

As mentioned earlier, Low cost airlines have had advantages from government's campaign and also other factors, including the growth rate of Low-cost airlines were higher than the other segments, 12.36% CAGR. In contrast, Bangkok Airways' main source of income came from scheduled flights which has not been growing very fast, only 1.31% CAGR.

Overall, CAGR of Thailand's airline industry is around 3.45% which is in the same range with the growth of Thailand's GDP. From these data, plus the outlook of the industry, including high competition in every segment, it can assume that Thailand's airline industry is quite saturated. There is no room for extraordinary growth. Every segment of this industry has been fully filled and there are more than one companies, competing against one another. Hence, the growth of airline industry is likely to be in line with the growth of the Thailand's GDP for over the forecast period. Table 3.3-3.4 and figure 3.6 show that the forecasted sales value of airline industry in the next 5 years.

Table 3.3 Airlines Forecast Sales Value (In Million Baht)

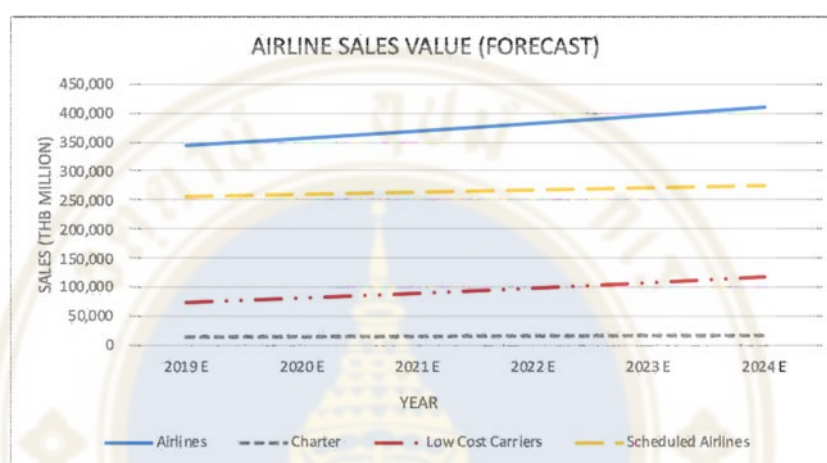
Airlines: Sales Value Forecasted 2019-2024						
	2019 E	2020 E	2021 E	2022 E	2023 E	2024 E
Charter	14,190	15,056	15,882	16,666	17,407	18,103
Low Cost Carriers	75,246	82,695	90,717	99,342	108,598	118,514
Scheduled Airlines	255,389	259,068	262,725	266,360	269,972	273,559
Airlines	344,825	356,818	369,324	382,368	395,976	410,176

Source: Euromonitor

Table 3.4 Airlines Forecast Growth Rate

Airlines: Sales Value Forecasted 2019-2024						
	2019 E	2020 E	2021 E	2022 E	2023 E	2024 E
Charter	14,190	15,056	15,882	16,666	17,407	18,103
Low Cost Carriers	75,246	82,695	90,717	99,342	108,598	118,514
Scheduled Airlines	255,389	259,068	262,725	266,360	269,972	273,559
Airlines	344,825	356,818	369,324	382,368	395,976	410,176

Source: Euromonitor

**Figure 3.6 Airlines Forecast Sales Trend**

Source: Euromonitor

Thailand's airline industry is expected to grow at around the same rate in every segment. Scheduled airlines will remain its growth rate at around 1.33%-1.47% between 2019 to 2024. Low cost airlines' growth rate will decrease as they are competing each other in the red ocean with pricing strategy and it will be difficult to growth in the long run.

One of the main factors that have a big impact on the profitability of every airline is the fuel price. A small change of fuel price could greatly change the profitability of an airline. On October 21, 2019, the jet fuel price was reported at 1.87 USD per gallon (Index Mundi, n.d.).

Since the price of jet fuel dropped in 2016, the trend in Figure 3.7 shows that it has been increasing continuously and it is expected to be increasing over time. Jet fuel is the product from Crude Oil and the price of Jet Fuel and Crude Oil tends to move together in the same direction, as shown in Figure 3.8.

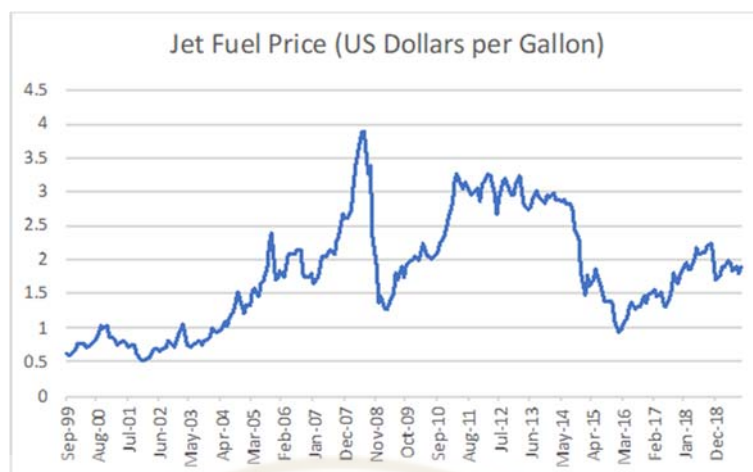


Figure 3.7 Jet Fuel Price (USD per Gallon)

Source: IndexMundi

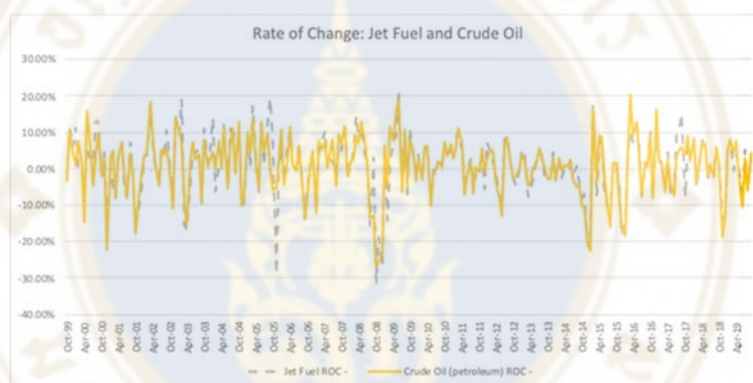


Figure 3.8 Jet Fuel and Crude Oil Relationship

Source: IndexMundi

Furthermore, the U.S. Energy Information Administrative (EIA), has published an Annual Energy Outlook of 2019 and in the report also includes the crude oil that is likely to be increasing continuously overtime. In result, the Jet Fuel price is also expected to be increasing as well (U.S. Energy Information Administration, 2019), as shown in Figure 3.9.

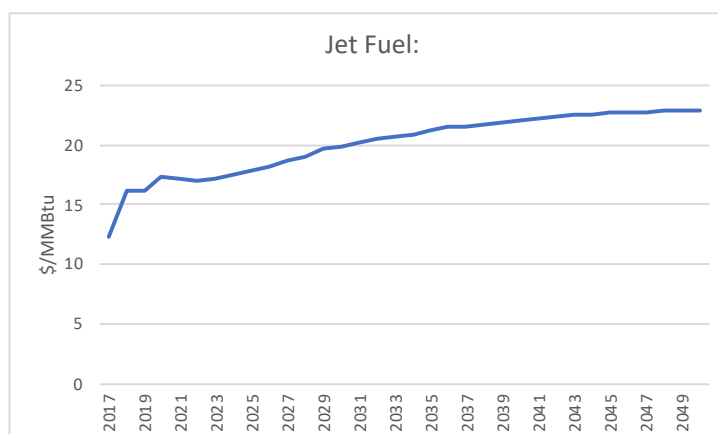


Figure 3.9 Jet Fuel Price Forecast (\$/MMBtu)

*MMBtu stands for One million British thermal units; a measurement of heating value.

Source: U.S. Energy Information Administration

We can safely assume that airlines industry will have to continue facing the rise of jet fuel price and will also drive the cost of rendering services up. Although, some airlines might have hedging policy to reduce the exposure to the fluctuation of oil price, but the higher volatility of oil price will affect the cost of hedging too. In conclusion, the rising of oil price will have a significant effect on the airlines' financial performance anyway.

3.3 Competition Analysis

The competition of airlines industry in Thailand is relatively high. Although, Bangkok Airways is the one and only boutique airline in Thailand. The airline differentiated itself from its competitors by having its lounges that are serving snacks and soft drinks which available for every Bangkok Airways' passenger in every airport in Thailand. However, travelers can easily substitute it with some other airlines anyway. For domestic travelers, there are several airlines that offer domestic flights, such as Nok Air, Thai Air Asia, Thai Smile, Thai Lion Air and Orient Thai. Bangkok Airways has some advantages over the competitors if customers want to travel so some specific destinations, like Koh Samui and Sukhothai, Bangkok Airways is the only airline that flies these routes, but the amount of travelers of these routes are relatively low compared to other routes. Other than these routes, customers are more likely to substitute it with other

airlines over a better flights schedule, price and their preferred airports. For international routes, Bangkok Airways also offers some destinations on its PG flights and Bangkok Airways has code-share agreements with several airlines to expand its destinations. However, the competition in international routes is even more competitive as there are huge number of airlines that fly to and from Thailand to many destinations around the world.

Table 3.5 shows the historical market share of major airlines that have been operating in Thailand since 2015 to 2018 and also the forecasted market share of the total sales of the airline industry in 2019. We can see that the market share of each airline is quite stable and not really fluctuated. The only one that seems to have gain more market share of the years is Asia Aviation, Thai Air Asia while the big player, Thai Airways maintains the same market shares for over the past 4 years. As well as Bangkok Airways, it has been holding around 6% market share over the same period.

Table 3.5 Thai Airlines' Market Share of Total Sales

	Thai Airlines' Market Share				
	2019 E	2018	2017	2016	2015
Thai Airways International PCL	12.6%	12.7%	12.8%	12.9%	12.6%
Asia Aviation PCL	9.4%	9.1%	8.7%	8.1%	7.8%
Bangkok Airways PCL	6.1%	6.1%	6.3%	6.0%	5.8%
Nok Airlines PCL	4.3%	4.2%	4.6%	3.9%	4.2%
Qatar Airways Group Plc	1.7%	1.6%	1.5%	1.5%	1.3%
Emirates Group Plc	1.6%	1.7%	1.6%	1.6%	1.7%
Cathay Pacific Airways Ltd	1.4%	1.4%	1.4%	1.6%	1.9%
Orient Thai Airlines Co Ltd	-	0.5%	0.5%	0.6%	0.7%
Business Air Centre Co Ltd	-	-	-	-	0.6%
Sky Asia Co Ltd (Nok Air)	-	-	-	-	-
Others	62.9%	62.8%	62.6%	63.8%	63.5%

Source: Euromonitor

Most of the airlines have their own loyalty program and it might seem like the program has been working very well because they were able to retains its customers, but there is more than the loyalty program that the airlines have to do to retain its customers.

Over the past period, there have been competitions going on in airlines industry, in term of the quality and also the price. Many airlines have been continuously making loss in the past period because of the price strategy. It also seems like the majority of

airlines' customers are sensitive to the price. The disruption of technology has made information more reachable, easier to access. Majority of the individual customers are very likely to do some researches and compare information to get the best deal for themselves. Finally, the price strategy drove the airlines industry into the red ocean and most of the airlines ended up with making loss even they have had higher passengers.



CHAPTER IV

INVESTMENT SUMMARY

Bangkok Airways is a regional airline, based in Thailand. The company has positioned themselves in the boutique airline segment. Despite the fact that Bangkok Airways is the only boutique airline in Thailand, the company has been facing intense competition because of the behavior of consumers. In my opinion, majority of the consumers are sensitive to the price and often choose the flight with lowest price with the acceptable flight schedule rather than the brand.

Apart from airline business, Bangkok Airways operates in a several more businesses through its subsidiaries such as airport business, in-flight catering, cargo and etc. However, these businesses are relatively small in revenue contribution compare to the airline business.

The company also hold a relatively large number of long-term investments; available-for-sales securities which are shares in Samui Property Fund (SPF) and Bangkok Dusit Medical Service (BDMS).

With a slowdown in tourism industry and intense competitions among Thai airlines. The profitability of many airlines has been very depressing. Bangkok Airways was also affected by it. The Travel Authority of Thailand (TAT) also acknowledged the downturn in tourism and will try to come up with campaigns to recover Thailand's tourism. As well as Bangkok Airways, the company has plans to attract more tourists from so-called "CLMV" countries.

Moreover, the company will expand many of its existing businesses such as Bangkok Airways has signed code-share agreement with a few more airlines in 2019, BAC announced professional airline catering unit at Chiang Mai International Airport, and the in-flight service provider at Don Mueang Airport. There is also a plan for new business for aviation Training Centre in Sukhothai in early 2020.

However, the preliminary financial analysis has shown that Bangkok Airways performance and profitability are getting worse than it used to be. By the end of 2018,

the company net profit was only 249 million baht which is very low compare to 1,797 million baht in 2015. The riskiness of Bangkok Airways has been increasing over the past 5 years since the operating income keeps reducing, resulting ICR less than 1, meaning that the revenue from the operation will no longer cover the finance costs.

The trailing 12 months financial statement shows net loss of 546 million baht. Yet the company has spent a lot in capital expenditure, resulting in a huge negative free cashflow to the firm of -4,338 million baht. The base case includes 2018 and until the 3rd quarter of 2019, which was a very bad period for Bangkok Airways, but it assumes that everything will be back to average. The revenue will continue to grow and eventually grow at the same rate as the industry. The costs or revenue will grow proportionally as a 5 years average percentage of their related revenue and further assumptions will be provided in relative valuation section. The earning of the firm will continuously be negative. Therefore, the value of Bangkok Airways' operating assets cannot be estimated by P/E multiple. However, by using P/PB and EV/EBITDA multiple methods and by including value of long-term investment, the estimate current price per share of Bangkok Airways is 15.32 baht, as of 15th November 2019 and the target price of Bangkok Airways during 2020 is between 15.39-15.55 baht per share. For conservative investors, I would recommend HOLD. Notwithstanding the market price that is lower than the intrinsic value of Bangkok Airways' share price. Investors should consider invest directly into SPF and BDMS.

After every airline in Thailand have reported net loss in the 3rd quarter of 2019, there is a demand to Excise Department for the discount in jet fuel excise tax. The excise tax is willing to discuss further detail, but so far, there is no official announcement or promise from the Excise Department yet.

CHAPTER V

FINANCIAL STATEMENT ANALYSIS

Preliminary Financial Statement Analysis: This section is the analysis of Bangkok Airways' consolidated financial statement (Thomson Reuters Eikon, n.d.) as of 31 December 2018.

5.1 Income Statement

By briefly look through the Income Statement, we can see that the bottom line has been showing down trend. Net income has dropped from 1,768 million baht in 2016 to only 249 million baht in 2018. Although the company's revenue has been growing but the cost of revenue has grown much faster, the situation causes the gross profit of the company to be narrower in the past couple years, see table 5.1 and 5.2.

From table 5.2, we can clearly see that the main source of Bangkok Airways' income came from the Passenger Revenue, which is the company main business, airline business, contributed up to 80.52% of the total revenue in 2018. The second largest portion of income came from the Sales and Service Income which operated by its subsidiaries, contributed up to 16.23% in 2018. From the data of 2014 to 2018, total revenue has grown at 3.64% CAGR. As mentioned earlier, the cost of revenue has grown slightly faster, 4.90% CAGR. Therefore, the gross profit margin has been decreasing at 4.09% CAGR. Apart from that, Selling General and Administration expenses also grow faster than the revenue as well, 6.39% CAGR.

Table 5.1 Bangkok Airways' Standardized Consolidated Income Statement

Income Statement					
Bangkok Airways					
(in million baht)	2018	2017	2016	2015	2014
Revenue	25,156	24,932	24,692	23,113	21,033
Passenger	20,259	20,249	20,431	19,104	17,513
Passenger service Charge	598	593	564	535	504
Freight	216	242	282	326	332
Sales and service income	4,082	3,848	3,415	3,148	2,684
Total Revenue	25,156	24,932	24,692	23,113	21,033
Cost of Revenue, Total	22,339	22,092	19,083	18,228	17,563
Gross Profit	2,816	2,839	5,609	4,885	3,470
Selling/General/Admin. Expenses, Total	4,045	3,941	3,836	3,464	2,967
Depreciation/Amortization	129	111	0	0	0
Other Operating Expenses, Total	(1,704)	(1,254)	(1,278)	(922)	(837)
Total Operating Expense	24,810	24,890	21,642	20,771	19,693
Operating Income (EBIT)	346	42	3,050	2,342	1,339
Interest Inc.(Exp.), Net-Non-Op., Total	11	1,277	(274)	(243)	(953)
Net Income Before Taxes (EBT)	357	1,318	2,776	2,099	386
Provision for Income Taxes	93	472	939	250	1
Net Income After Taxes	264	846	1,837	1,849	386
Minority Interest	(14)	(58)	(69)	(52)	(35)
Net Income Before Extra. Items	249	788	1,768	1,797	351
Net Income	249	788	1,768	1,797	351

Source: Thomson Reuters Eikon

Table 5.2 Bangkok Airways' Income Statement – Trend Analysis

Income Statement (Trend)							
Bangkok Airways							
(in million baht)	2018 CMS	CAGR	2018	2017	2016	2015	2014
Revenue	100.00%	3.64%	120%	119%	117%	110%	100%
Passenger	80.53%	2.96%	116%	116%	117%	109%	100%
Passenger service Charge	2.38%	3.48%	119%	118%	112%	106%	100%
Freight	0.86%	(8.24%)	65%	73%	85%	98%	100%
Sales and service income	16.23%	8.75%	152%	143%	127%	117%	100%
Total Revenue	100.00%	3.64%	120%	119%	117%	110%	100%
Cost of Revenue, Total	88.80%	4.93%	127%	126%	109%	104%	100%
Gross Profit	11.19%	(4.09%)	81%	82%	162%	141%	100%
Selling/General/Admin. Expenses, Total	16.08%	6.39%	136%	133%	129%	117%	100%
Depreciation/Amortization	0.51%						
Other Operating Expenses, Total	(6.77%)	15.28%	204%	150%	153%	110%	100%
Total Operating Expense	98.62%	4.73%	126%	126%	110%	105%	100%
Operating Income (EBIT)	1.38%	(23.71%)	26%	3%	228%	175%	100%
Interest Inc.(Exp.),Net-Non-Op., Total	0.04%	(140.97%)	(1%)	(134%)	29%	25%	100%
Net Income Before Taxes (EBT)	1.42%	(1.55%)	92%	341%	719%	544%	100%
Provision for Income Taxes	0.37%	147.57%	9300%	47200%	93900%	25000%	100%
Net Income After Taxes	1.05%	(7.32%)	68%	219%	476%	479%	100%
Minority Interest	(0.06%)	(16.74%)	40%	166%	197%	149%	100%
Net Income Before Extra. Items	0.99%	(6.64%)	71%	225%	504%	512%	100%
Net Income	0.99%	(6.64%)	71%	225%	504%	512%	100%

Source: Thomson Reuters Eikon

5.2 Balance Sheet

Table 5.3 and 5.4 shows the balance sheet of Bangkok Airways in number and trend respectively. The total assets of Bangkok Airways in 2018 were 62,067 million baht and it has been growing at 5% CAGR, since 2014. 50.52% of the assets were liabilities, 31,356 million baht and another 49.48% were the shareholders' equity, 30,711 million baht. The majority part of total assets is non-current assets, 81.58% of the total assets. The non-current assets consisted of 15,520 million baht of Property, Plant and Equipment (PP&E), 39.59% of total assets and 33,451 million baht of Long-Term Investment, 53.89% of the total assets. The current assets recorded only 18.42% of total assets or 11,430 million baht. Majority part of the current assets are cash and cash equivalents, 12.32% of total assets or 7,643 million baht. The Account Receivable and Inventory are relatively low as compare to other type of businesses, but it is normal for airlines business which we will see clearer when comparing to peer competitor.

Most of the liabilities were the debt. Total debt recorded 17,595 million baht or 28.35% of the total liabilities and shareholders' equity. The company also have other

kinds of liabilities, but those items are relatively small, such as Account Payable 3.43% and Customer Advance 4.08% of the total liabilities and shareholders' equity.

Shareholders' Equity was recorded 30,711 million baht or 49.48% of the total liabilities and shareholders' equity. The company has only 2,100 million share outstanding since 2014 at the par of 1 baht. The additional paid-in capital was 9,319 million baht and the biggest one was called "Other Equity" which the company does not disclose the information regarding this item, recorded 19,625 million baht or 31.62% of the total liabilities and shareholders' equity.

During the past five years, the company has been shifting toward debt financing. As we can see in figure 5.4, total debt has grown 131% since 2014 while the total equity has grown only 121% within the same timeframe.

Table 5.3 Bangkok Airways' Standardized Consolidated Balance Sheet

Balance Sheet					
Bangkok Airways					
Assets (THB Millions)	2018	2017	2016	2015	2014
Cash and Short Term Investments	7,648	9,996	10,670	13,243	13,700
Cash	54	58	68	125	168
Cash & Equivalents	4,294	3,487	2,983	4,503	2,007
Short Term Investments	3,300	6,451	7,618	8,615	11,525
Accounts Receivable - Trade, Net	1,710	1,704	1,846	1,634	1,502
Total Receivables, Net	1,713	1,854	1,966	1,847	1,705
Receivables - Other	4	150	119	213	203
Total Inventory	542	479	369	306	272
Prepaid Expenses	261	218	338	193	218
Other Current Assets, Total	1,266	1,834	850	256	665
Total Current Assets	11,430	14,381	14,192	15,846	16,561
Property/Plant/Equipment, Total - Gross	24,570	22,950	20,167	16,119	12,894
Property/Plant/Equipment, Total - Net	15,520	14,503	12,793	9,559	7,034
Accumulated Depreciation, Total	(9,050)	(8,447)	(7,374)	(6,560)	(5,860)
Goodwill, Net	26	0	0	0	0
Intangibles, Net	597	663	708	759	829
Long Term Investments	33,451	27,568	31,688	29,708	23,101
Other Long Term Assets, Total	1,043	828	907	1,141	1,055
Total Assets	62,067	57,942	60,289	57,013	48,579

Source: Thomson Reuters Eikon

Table 5.4 Bangkok Airways' Standardized Consolidated Balance Sheet-Trend Analysis

Balance Sheet (Trend)							
Bangkok Airways							
Assets (THB Millions)	CMS	CAGR	2018	2017	2016	2015	2014
Cash and Short Term Investments	12.32%	-11.0%	56%	73%	78%	97%	100%
Cash	0.09%	-20.3%	32%	35%	40%	74%	100%
Cash & Equivalents	6.92%	16.4%	214%	174%	149%	224%	100%
Short Term Investments	5.32%	-22.1%	29%	56%	66%	75%	100%
Accounts Receivable - Trade, Net	2.76%	2.6%	114%	113%	123%	109%	100%
Total Receivables, Net	2.76%	0.1%	100%	109%	115%	108%	100%
Receivables - Other	0.01%	-54.4%	2%	74%	59%	105%	100%
Total Inventory	0.87%	14.8%	199%	176%	136%	113%	100%
Prepaid Expenses	0.42%	3.7%	120%	100%	155%	89%	100%
Other Current Assets, Total	2.04%	13.7%	190%	276%	128%	38%	100%
Total Current Assets	18.42%	-7.1%	69%	87%	86%	96%	100%
Property/Plant/Equipment, Total - Gross	39.59%	13.8%	191%	178%	156%	125%	100%
Property/Plant/Equipment, Total - Net	25.01%	17.1%	221%	206%	182%	136%	100%
Accumulated Depreciation, Total	-14.58%	9.1%	154%	144%	126%	112%	100%
Goodwill, Net	0.04%						
Intangibles, Net	0.96%	-6.4%	72%	80%	85%	92%	100%
Long Term Investments	53.89%	7.7%	145%	119%	137%	129%	100%
Other Long Term Assets, Total	1.68%	-0.2%	99%	78%	86%	108%	100%
Total Assets	100.00%	5.0%	128%	119%	124%	117%	100%
Liabilities (THB Millions)	CMS	CAGR	2018	2017	2016	2015	2014
Accounts Payable	3.43%	4.8%	126%	125%	124%	97%	100%
Accrued Expenses	0.67%						
Current Port. of LT Debt/Capital Leases	1.17%	-8.3%	65%	49%	42%	45%	100%
Other Current liabilities, Total	8.11%	5.1%	128%	130%	121%	112%	100%
Customer Advances	4.08%	3.3%	118%	122%	110%	108%	100%
Income Taxes Payable	0.02%	-25.6%	23%	375%	72%	54%	100%
Other Payables	1.21%	0.0%	100%	93%	79%	83%	100%
Other Current Liabilities	2.79%	12.4%	179%	164%	183%	145%	100%
Total Current Liabilities	13.44%	4.4%	124%	123%	109%	97%	100%
Total Long Term Debt	27.12%	6.5%	137%	130%	122%	113%	100%
Total Debt	28.35%	5.6%	131%	124%	116%	107%	100%
Deferred Income Tax	8.59%	7.5%	144%	123%	143%	136%	100%
Minority Interest	0.11%	-11.4%	54%	59%	62%	113%	100%
Other Liabilities, Total	1.26%	14.3%	195%	161%	153%	123%	100%
Total Liabilities	50.52%	6.1%	135%	127%	122%	112%	100%
Shareholders Equity (THB Millions)							
Common Stock, Total	3.38%	0.0%	100%	100%	100%	100%	100%
Additional Paid-In Capital	15.01%	0.0%	100%	100%	100%	100%	100%
Retained Earnings (Accumulated Deficit)	0.05%	-161.9%	-9%	-123%	-183%	-119%	100%
Treasury Stock - Common	-0.59%						
Unrealized Gain (Loss)	0.00%	-100.0%	0%	116%	139%	134%	100%
Other Equity, Total	31.62%	-363.3%	-12661%	136%	136%	100%	100%
Total Equity	49.48%	3.9%	121%	112%	126%	122%	100%
Total Liabilities & Shareholders' Equity	100.00%	5.0%	128%	119%	124%	117%	100%

Source: Thomson Reuters Eikon

5.3 Financial Ratios

5.3.1 Profitability

In term of profitability, one of the most popular way to assess it is to use DuPont Analysis. Bangkok Airways' ROA, see figure 5.1, was 3.55 % and 4.16 % in 2015 and 2016, respectively. Unfortunately, it has suddenly dropped to only 0.06% and 0.46% in 2017 and 2018, respectively. By decomposing the ROA, following the DuPont Analysis, we can see that the profit margin is the main reason that the ROA has dropped dramatically. The profit margin was at 8.11% and 9.88% in 2015 and 2016 then it has dropped to 0.13% and 1.10% in 2017 and 2018. The total asset turnover (TATO) was quite stable over the past five years. Despite the small number of TATO, less than one, it is quite common in airline industry that require high investment in fixed assets to operates.

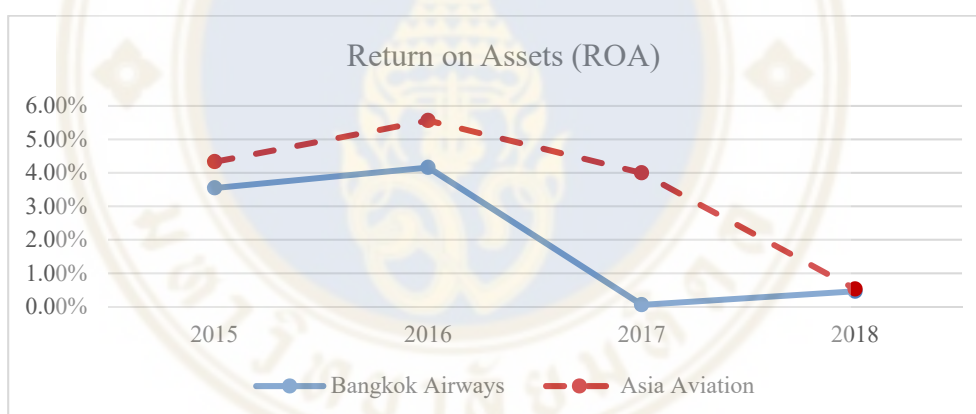


Figure 5.1 Return on Assets (ROA) Comparison

By comparing with its competitor, Asia Aviation, the ROA was in the similar range as Bangkok Airways in 2015 and 2016, but in 2017, while the ROA of Bangkok Airways has dropped to 0.06%, Asia Aviation can maintain its ROA at 4.00%. By 2018, Asia Aviation's ROA was 0.53%. The reason that ROA has dropped was also the decrease in profit margin, from 7.51% in 2015, 9.40% in 2016, 6.63% in 2017 and down to only 0.84%. The total assets turnover was in quite stable and also a bit higher than Bangkok Airways, it reflects the better assets utilization of the company.

The decreasing in ROA of both companies negatively affected their ROE. Bangkok Airways' ROE has been decreasing from 6.39% in 2015, 5.62% in 2016, 2.62% in 2017 and 0.84% in 2018, see figure 5.2. Apart from ROA, the capital leverage structure and earnings leverage of Bangkok Airways was pretty stable over the past 5 years. Similarly, Asia Aviation was in the same situation. The ROE has dropped from 3.95% in 2015, 6.37% in 2016, 4.86% in 2017 and down to only 0.23% in 2018.

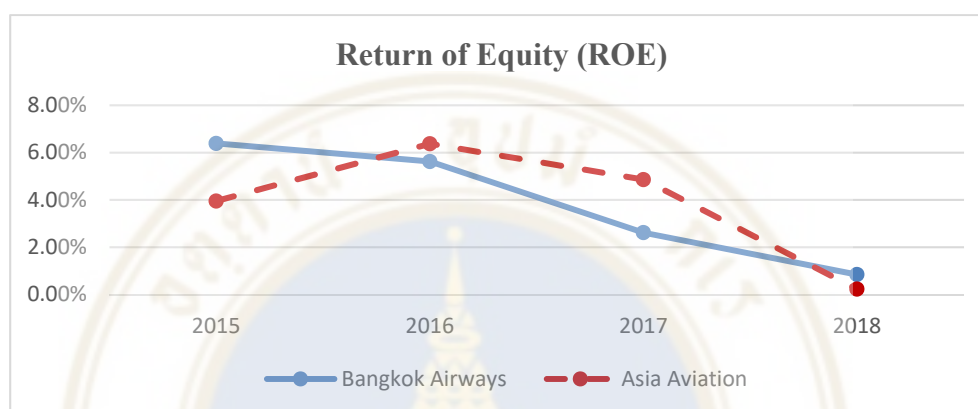


Figure 5.2 Return of Equity (ROE) Comparison

5.3.2 Risks

For the risks, in 2018 Bangkok Airways' current ratio was 1.37 and quick ratio was 1.12, see figure 5.3, while Asia Aviation's current ratio was 0.58 and quick ratio was 0.50, see figure 5.3. In term of liquidity, Bangkok Airways appears to be less risky than Asia Aviation.

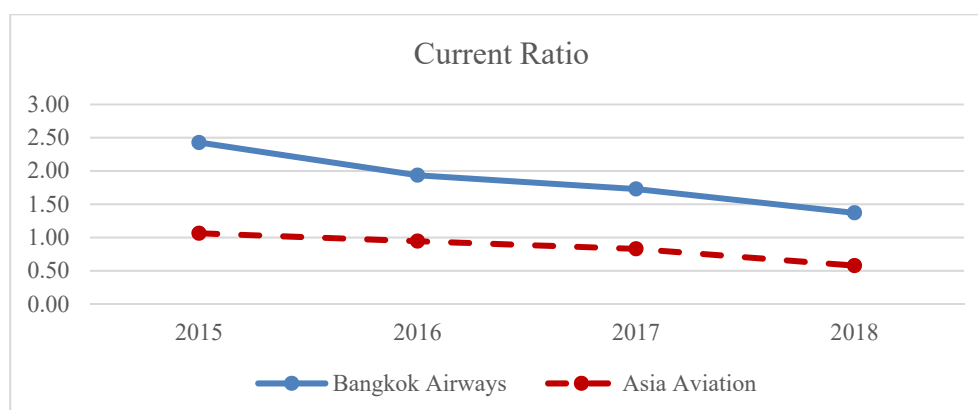


Figure 5.3 Current Ratio Comparison

For the solvency risks, Debt-to-equity ratio of Asia Aviation was 1.02 which was about two times higher than Bangkok Airways, 0.57, see figure 5.4. This shows that Asia Aviation has been using higher leverage. It also seems like Bangkok Airways is less risky by looking at the capital structure.

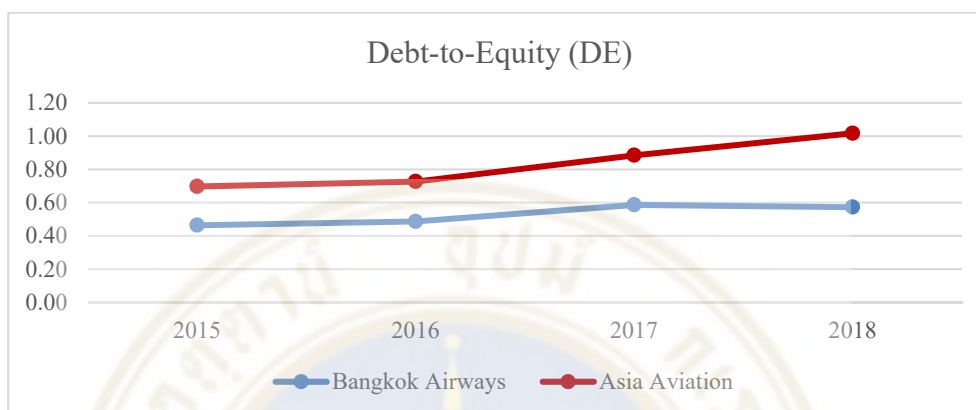


Figure 5.4 Debt-to-Equity (DE) Comparison

However, the ability to pay its financial obligation of both companies have been decreasing. The interest coverage ratio (ICR) of Bangkok Airways used to be around 2.3 in 2015 to only 1.19 in 2018, see figure 5.5. However, Asia Aviation used to be better than Bangkok Airways, in 2015, ICR was around 5.61, but in 2018, ICR dropped to only 0.89 which means that the operating income cannot cover the existing finance costs.

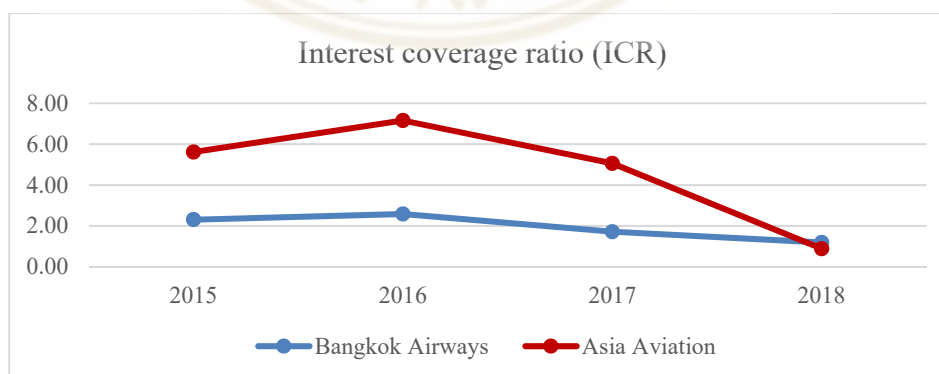


Figure 5.5 Interest coverage ratio (ICR) Comparison

5.3.3 Valuation and Investors' Confidence

In 2018, Bangkok Airways price per share went down to 11.6 which was only a half from its price in 2015. The most obvious reason is the significant drop in EPS, Bangkok Airways' EPS has dropped from 0.86 baht per share in 2017 to only 0.12 baht per share in 2018, see figure 5.6.

Comparably, Asia Aviation's EPS has hugely dropped from 3.05 baht per share in 2017 to only 0.14 baht per share in 2018. The difference is that Asia Aviation's share price also went down but not as severe as Bangkok Airways'. Asia Aviation's share price has dropped to 4.2 baht per share in 2018 from 6.15 baht per share in 2017.

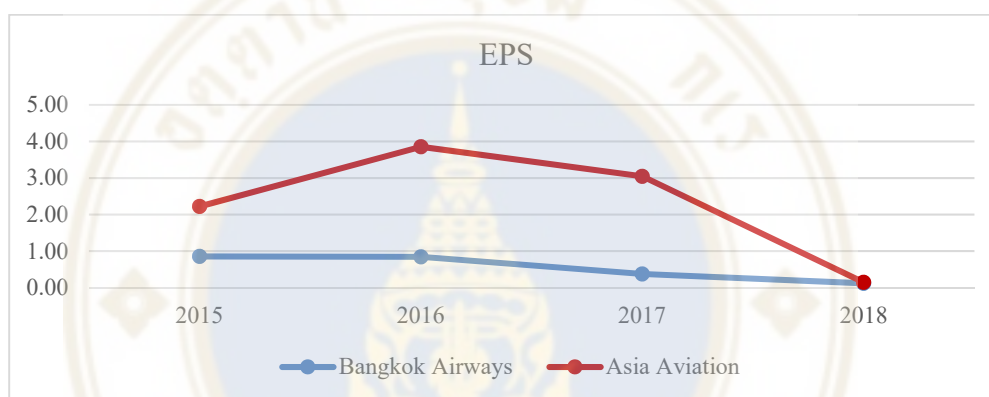


Figure 5.6 Earning per Share (EPS) Comparison

Price to earnings ratio of Bangkok Airways was relatively high when comparing to Price to earnings ratio of Asia Aviation. Overall, the performance, profitability and leverage ratio of both companies were very poor in 2018 compared to the earlier years. So, by looking at only the price to earnings ratio, the market price of Bangkok Airways is considered very expensive compared to price of Asia Aviation. In spite of the decreased share price, investors may be more confidence in Bangkok Airways than Asia Aviation.

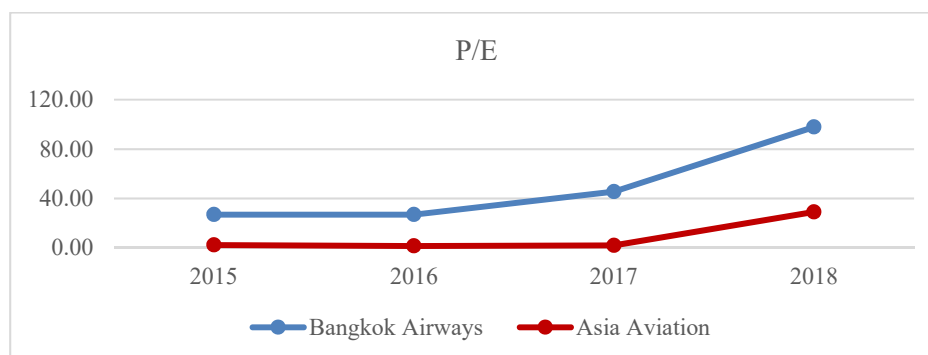


Figure 5.7 Price-Earnings Ratio (P/E) Comparison

	2018	2017	2016	2015
Profitability				
Return of Equity (ROE)	0.84%	2.62%	5.62%	6.39%
Return on Assets (ROA)	0.46%	0.06%	4.16%	3.55%
Earning Leverage (EL)	0.90	23.45	0.72	0.96
Capital Structure Leverage (CSL)	2.03	1.96	1.87	1.88
Return on Assets (ROA)	0.46%	0.06%	4.16%	3.55%
Profit Margin (PM)	1.10%	0.13%	9.88%	8.11%
Total Asset Turnover (TATO)	0.42	0.42	0.42	0.44
Accounts Receivable Turnover (ARTO)	14.10	13.05	12.95	13.01
Inventory Turnover (ITO)	43.76	52.10	56.54	63.07
Accounts Payable Turnover (APTO)	10.56	10.55	10.26	10.99
Fix Asset Turnover (FATO)	1.68	1.83	2.21	2.79
Liuidity Risk				
Current Ratio	1.37	1.73	1.94	2.43
Quick Ratio	1.12	1.43	1.72	2.31
Receivables Collection Period (RCP)	25.88	27.96	28.18	28.05
Inventory Collection Period (ICP)	8.34	7.01	6.46	5.79
Payables Deferral Period (PDP)	34.57	34.58	35.56	33.21
Cash Conversion Cycle (CCC)	-0.35	0.39	-0.93	0.63
Solvency Risk				
Debt-to-Equity (DE)	0.57	0.59	0.49	0.46
Debt-to-Total Assets (DTA)	0.28	0.29	0.26	0.25
Interest coverage ratio (ICR)	1.19	1.72	2.58	2.31
Sensitivity Ratio				
Degree of Operating Leverage (DOL)	805.63	-101.47	4.43	7.57
Degree of Financial Leverage (DFL)	1.03	-0.03	0.92	0.91
Degree of Total Leverage (DTL)	832.08	3.45	4.06	6.86
Valuation Ratio				
Price	11.6	17.1	22.7	23.1
EPS	0.12	0.38	0.84	0.86
P/E	97.83	45.57	26.96	26.99
P/BV	0.79	1.27	1.49	1.57

Figure 5.8 Bangkok Airways' Financial Ratio Analysis

Financial Ratio: Asia Aviation					
	2018	2017	2016	2015	
Profitability					
Dupont Analysis	Return of Equity (ROE)	0.23%	4.86%	6.37%	3.95%
	Return on Assets (ROA)	0.53%	4.00%	5.57%	4.33%
	Earning Leverage (EL)	0.21	0.62	0.61	0.49
	Capital Structure Leverage (CSL)	2.03	1.96	1.87	1.88
	Return on Assets (ROA)	0.53%	4.00%	5.57%	4.33%
	Profit Margin (PM)	0.84%	6.63%	9.40%	7.51%
	Total Asset Turnover (TATO)	0.62	0.60	0.59	0.58
	Accounts Receivable Turnover (ARTO)	28.13	27.15	32.14	38.05
	Inventory Turnover (ITO)	216.17	232.43	251.77	265.08
	Accounts Payable Turnover (APTO)	154.83	77.65	64.76	99.07
Fix Asset Turnover (FATO)	1.51	1.57	1.68	1.72	
Liquidity Risk					
Current Ratio	0.58	0.83	0.94	1.06	
Quick Ratio	0.50	0.75	0.86	0.96	
Receivables Collection Period (RCP)	12.98	13.44	11.36	9.59	
Inventory Collection Period (ICP)	1.69	1.57	1.45	1.38	
Payables Deferral Period (PDP)	2.36	4.70	5.64	3.68	
Cash Conversion Cycle (CCC)	12.31	10.31	7.17	7.29	
Solvency Risk					
Debt-to-Equity (DE)	1.02	0.88	0.73	0.70	
Debt-to-Total Assets (DTA)	0.34	0.31	0.27	0.27	
Interest coverage ratio (ICR)	0.89	5.06	7.16	5.61	
Sensitivity Ratio					
Degree of Operating Leverage (DOL)	-10.70	-1.95	3.81	20.22	
Degree of Financial Leverage (DFL)	0.45	0.90	0.86	0.81	
Degree of Total Leverage (DTL)	-4.86	-1.75	3.29	16.32	
Valuation Ratio					
Price	4.2	6.15	6.05	5.25	
EPS	0.14	3.05	3.85	2.22	
P/E	29.10	2.02	1.57	2.36	
P/BV	0.10	0.14	0.14	0.13	

Figure 5.9 Asia Aviation's Financial Ratio Analysis

CHAPTER VI

NEWS, EVENTS AND PRESS RELEASE

In this section will discuss about news, events and press releases that happened during 2019 which are relevant to the valuation of Bangkok Airways.

6.1 TAT Keen for More Regional, Indian Visitors

This news talked about the campaign “Fly Me to Thailand” which is the collaboration between The Tourism Authority of Thailand and Bangkok Airways. The campaign aims to attract more tourists from the so-called CLMV countries; Cambodia, Laos, Myanmar and Vietnam, by offering 800 baht voucher for shopping at department stores and discounts at more than 63 hotels, restaurants, entertainment venues and spa lounges to visitors from those nations flying with Bangkok Airways in a group of three or more anytime this year. The campaign is expected to generate 25,000 more tourists from these countries and generating approximately 924 million baht in revenue (The Nation Thailand, 2019).

6.2 Loss-Ridden Bangkok Airways Tightens Purse Strings

Bangkok Airways has posted loss of 190 million baht for the first six months of 2019. Mr. Puttipong Prasarttong-Osoth, the president of the company, still believes that the demand from the tourists in CLMV countries is still strong. He mentioned that the deducing in revenue is the result of the shifting in consumer preferences. The forward booking has dropped 4% for the second half of the year. The airlines plan to launch a few marketing campaigns to attract more customers and gain more revenue. He also mentioned the plan the expand the fleet, as well as replacing some of the old aircrafts but there is no confirmation, or any decision has been made yet. Apart from

the airlines business, the company plans to open new Aviation Training Centre in Sukhothai in early 2020 as well (Bangkok Post Public Company Limited, 2019a).

6.3 Thai Airlines' Losses Widen on Weak Tourism, Strong Baht

Not only Bangkok Airways but most of Thai airlines have reported losses in the second quarter, due to a decline in Chinese tourists and an appreciation of Thai Baht. And the government's decision to waive visa fees until October could attract more visitors during the low season (Thomson Reuters, 2019).

6.4 Direct Flight to Bangkok From Pune Airport on The Cards

The Airports Authority of India (AAI) revealed that Bangkok Airways are keen to open new routes from Bangkok to Pune, Jaipur, Port Blair, Bhubaneswar, Kolkata and Guwahati (Times of India, 2019)

6.5 Two New Ventures for Bangkok Air Catering (BAC)

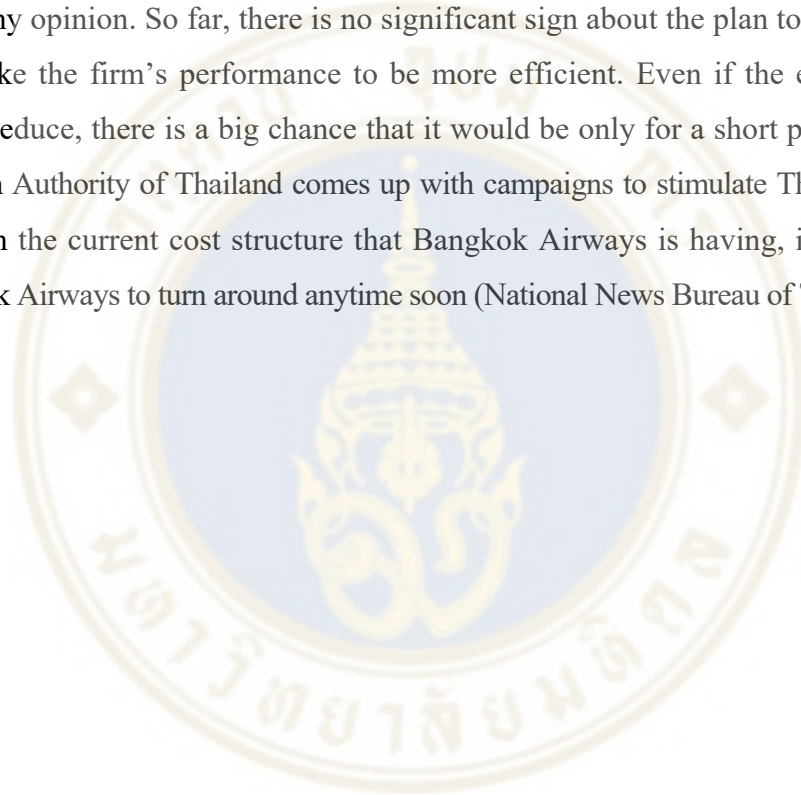
BAC, one of Bangkok Airways' subsidiaries, announces its two new ventures, including the first-ever professional airline catering unit at Chiang Mai International Airport, and the in-flight service provider at Don Mueang Airport (Bangkok Post Public Company Limited, 2019b).

6.6 Excise Department Eyes Jet Fuel Tax Discount to Help Domestic Airlines

After the 3rd quarterly reports have been published. Many Thai airlines have reported losses. Representatives from each airline have arranged meetings with Excise Department, asking for the reducing in excise tax for jet fuel. The Excise Department is actually considering it and willing to discuss further to find solutions that can help domestic airlines, but as of now, there is no solid solution or any promise yet. Excise

Department states that if they are going to reduce the excise tax on jet fuel, airlines must offer something in return. For example, Excise Department ordered airlines to come up with some plans that if the excise tax of jet fuel is reduced, how would it enhance tourism. According to Mr. Patchara Anuatasilpa, The Excise Department's Director General, the current jet fuel tax is not higher than taxes on other petroleum products. If there is any reduction in jet fuel excise tax, it is very likely to be only for a short-term (National News Bureau of Thailand., 2019).

To summarise, Bangkok Airways has many plans to generate more revenue, but in my opinion. So far, there is no significant sign about the plan to reduce the costs and make the firm's performance to be more efficient. Even if the excise tax on jet fuel is reduce, there is a big chance that it would be only for a short period. Although, Tourism Authority of Thailand comes up with campaigns to stimulate Thailand's tourism, but with the current cost structure that Bangkok Airways is having, it might not help Bangkok Airways to turn around anytime soon (National News Bureau of Thailand., 2019).



CHAPTER VII

RELATIVE VALUATION

The relative valuation method is the most important alternative method to determine the value of firm by comparing target firms to similar firms within similar industries. The most common relative valuation multiple are Price/Earnings (P/E), Price/Book value (P/BV) and Enterprise value/EBITDA (EV/EBITDA).

To determine the value of Bangkok Airway, firstly, the P/E ratio, P/BV ratio and EV/EBITDA ratio are determined based on averages of comparable firms. Secondly, EBITDA, Earnings and Book value of the firm in 2019 are forecasted using Proforma method. Thirdly, the comparable ratios are multiplied with the earnings per share, book value per share and EBITDA per share to get it value. Finally, all results will be discussed and compared, resulting in reasonable value of Bangkok Airway.

The Formula for calculated comparable ratios:

1. Price/Earnings ratio (P/E):

$$P_{i,t} = E_{i,t} \times \left(\frac{P}{E}\right)_{i,t}$$

Where,

$P_{i,t}$ = Price per share of the firm i in period t

$E_{i,t}$ = Earnings per share of the firm i in period t

$\left(\frac{P}{E}\right)_{i,t}$ = Comparable Price/Earning ratio for the firm i in period t

2. Price/Book value ratio (P/BV):

$$P_{i,t} = BV_{i,t} \times \left(\frac{P}{BV}\right)_{i,t}$$

Where,

$P_{i,t}$ = Price per share of the firm i in period t

$BV_{i,t}$ = Book value per share of the firm i in period t

$\left(\frac{P}{BV}\right)_{i,t}$ = Comparable $\frac{\text{Price}}{\text{Book value}}$ ratio for the firm i in period t

3. Enterprise value/EBITDA ratio (EV/EBITDA):

$$P_{i,t} = \text{EBITDA}_{i,t} \times \left(\frac{\text{EV}}{\text{EBITDA}}\right)_{i,t}$$

Where,

$P_{i,t}$ = Price per share of the firm i in period t (= Enterprise value per share)

$\text{EBITDA}_{i,t}$ = EBITDA per share of the firm i in period t

$\left(\frac{\text{EV}}{\text{BV}}\right)_{i,t}$ = Comparable $\frac{\text{Enterprise value}}{\text{Book value}}$ ratio for the firm i in period t

7.1 Comparable firms and comparable ratios

The P/E ratio, P/BV ratio and EV/EBITDA ratio are determined based on averages of comparable firms. The 16 firms with airlines business background both Thai firms and international firms are compared and discussed based on the most similarity to Bangkok Airways. Finally, six firms are selected for estimating ratios.

Table 7.1 shows the 6 selected firms (green text) including Cathay Pacific Airways, Hainan Airlines, Virgin, Jetblue Airways, Skywest and Asia Aviation have similarity to Bangkok Airways. In term of size, Virgin and Asia Aviation and Thai Airways has vary similar market capital compared to Bangkok Airways but revenue and asset of Thai Airways is too high compared to Bangkok Airways. In term of Price multiple, ANA holdings, Cathay Pacific Airways, Air China, Hainan Airline, Singapore Airlines, Jet blue and Sky West has similar P/BV and EV/EBITDA multiple to Bangkok Airways. However, ANA holdings, Air China and Singapore Airline has too much

different on size compared to Bangkok Airway. The detail of 6 comparable firms is illustrated in APPDIX1.

Table 7.1 Selection of comparable firms

	Identifier	Company Name	Country	Market Capital	Revenue	Asset	Trailing P/E	Trailing P/BV	Trailing EV/EBITDA
				Billion THB	Billion THB	Billion THB	Dec-2018	Dec-2018	Dec-2018
0	BA.BK	BANGKOK AIRWAYS PCL	Thailand, Tax 20%	14.49	25.16	62.07	97.83	0.97	6.58
1	THAI.BK	THAI AIRWAYS INTERNATIONAL PCL	Thailand, Tax 20%	16.15	200.59	268.72	N/A	1.3	13.42
2	9202.T	ANA HOLDINGS INC	Japan, Tax 30.86%	346.94	576.33	752.39	13.2	1.2	5.87
3	0293.HK	CATHAY PACIFIC AIRWAYS LTD	Hong Kong, Tax 16.5%	152.15	152.15	734.53	82.9	0.69	7.53
4	601111.SS	AIR CHINA LTD	China, tax 25%	478.81	586.76	1045.54	14.2	1.29	7.75
5	600221.SS	HAINAN AIRLINES HOLDING CO LTD	china, tax 25%	124.36	290.70	878.31	24.4	0.65	20.64
6	VAH.AX	VIRGIN AUSTRALIA HOLDINGS LTD	Australia, tax 30%	25.97	119.45	132.59	N/A	2.65	7.22
7	QAN.AX	QANTAS AIRWAYS LTD	Australia, tax 30%	206.37	368.30	397.23	10.4	2.61	4.09
8	REX.AX	REGIONAL EXPRESS HOLDINGS LTD	Australia, tax 30%	3.01	6.50	5.58	9.1	0.77	3.39
9	SIAL.SI	SINGAPORE AIRLINES LTD	Singapore, tax 17%	244.54	361.23	675.08	12.9	0.84	5.96
10	ALK.N	ALASKA AIR GROUP INC	USA, tax 21%	258.12	249.57	329.54	14.3	2	7.92
11	DAL.N	DELTA AIR LINES INC	USA, tax 21%	1073.46	1342.03	1820.03	9.7	2.48	5.58
12	JBLU.OQ	JETBLUE AIRWAYS CORP	USA, tax 21%	167.52	231.27	330.96	42.9	1.07	7.19
13	UAL.OQ	UNITED AIRLINES HOLDINGS INC	USA, tax 21%	695.02	1247.35	1480.52	11.5	2.26	6.01
14	SKYW.OQ	SKYWEST INC	USA, tax 21%	91.51	97.27	190.65	8.7	1.16	5.79
15	AAV.BK	ASIA AVIATION PCL	Thailand, Tax 20%	10.48	38.91	61.75	25	1	19.43
16	NOK.BK	NOK AIRLINES PCL	Thailand, Tax 20%	6.34	19.26	14.07	N/A	-3.75	N/A

7.2 Trailing Multiple

Five-year historical trailing multiples from 2015-2019 are determined to study changes and possibility of historical ratio in term of trend. The results show that the 5-yr median P/E ratio of comparable firms in airline business is equal to 17.91 with standard deviation of 17.33. Compare to 5-year median, during 2016, the trailing P/E Band shows that in relation to them self, the firms were undervalued and became overvalue at early 2019. At late 2019, the firms, however, undervalue again.

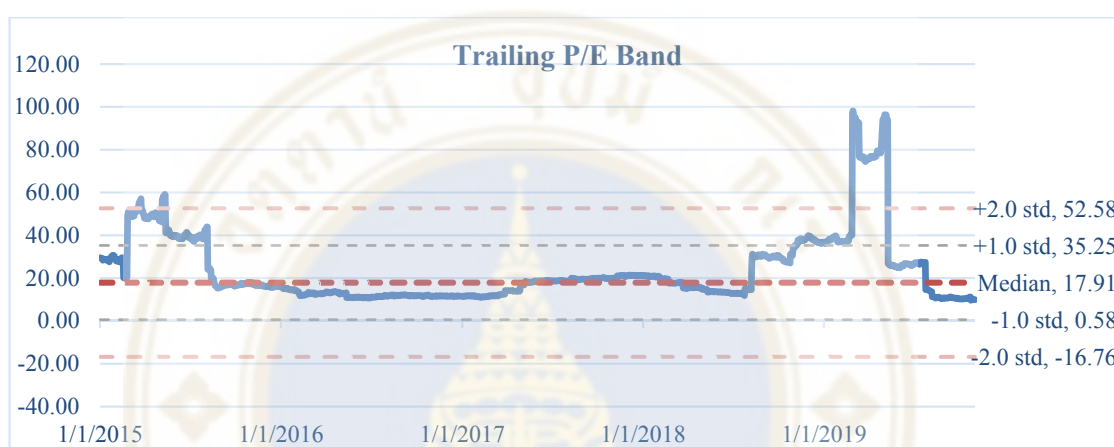


Figure 7.1 Trailing P/E Band

Similarly, the 5-yr median of trailing P/BV ratios is equal to 1.27 with standard deviation of 0.51. During 2015, the Trailing P/BV Band shows that in relation to them self, the firms were overvalued. Then, it became undervalue during late 2019.

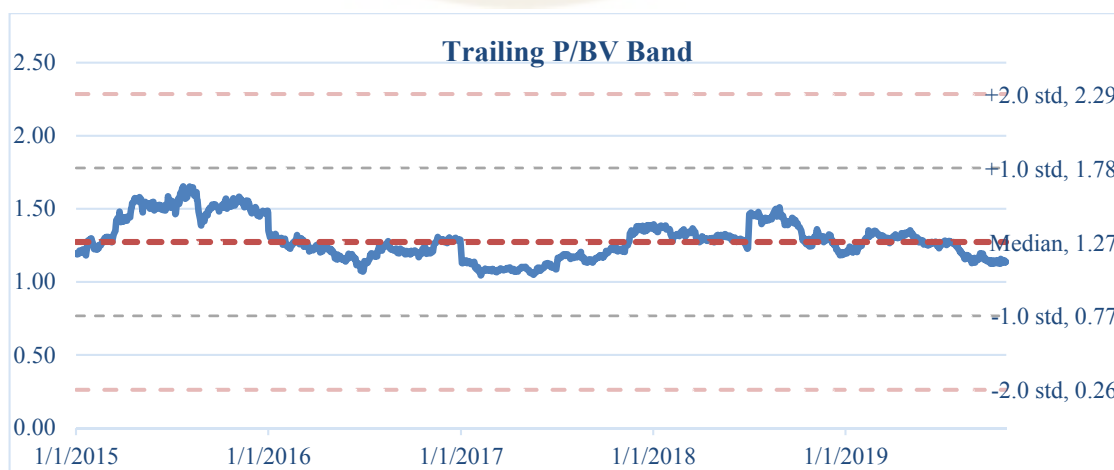


Figure 7.2 Trailing P/BV Band

In contrast, the trailing EV/EBITDA ratio show the different trend to P/E and P/BV ratio. the 5-yr median of trailing E/EBITDA ratios is equal to 10.27 with standard deviation of 8.95. During 2016-2017, the Trailing P/BV Band shows that in relation to them self, the firms were overvalued and became close to average from 2018. However, it was overvalued during late 2019.

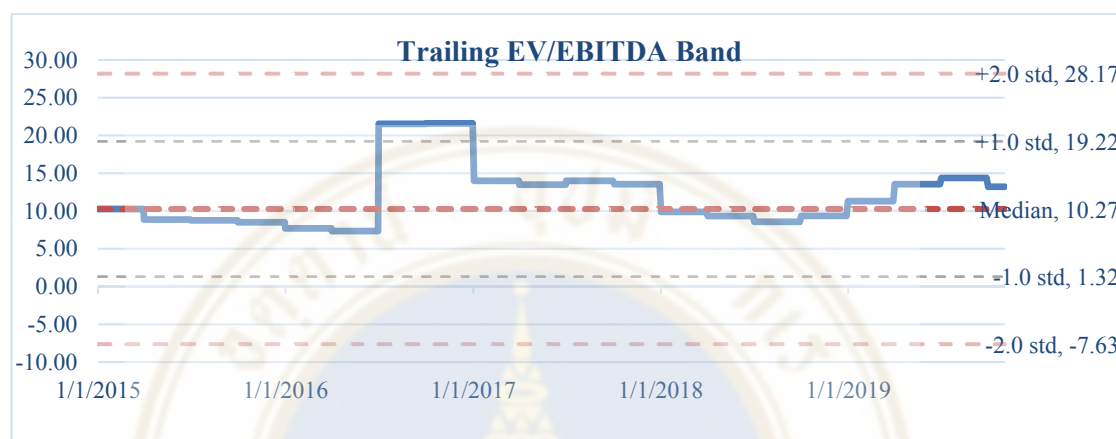


Figure 7.3 Trailing EV/EBITDA Band

From the historical trend analysis, P/E ratios and P/BV ratio turned to undervalued during late 2019, represent that investors are recently giving less prospect for airline business. The standard deviation of P/E and EV/EBITDA multiple is high compared to P/BV multiple, which show that Earning and EBITDA of airline business are more volatile compare to Book value. Therefore, Book value tends to reflect price of airline firms more accurate than earning.

7.3 Twelve-month forward multiple

A twelve-month forward multiple band from 2015-2019 is determined to study future performance of airline business and to estimate target price of the firm. Figure 7.4 – 7.6 show the trend of twelve-month forward P/E, P/BV and EV/EBITDA of 6 comparable airline firms during 2015-2019. Figure 7.4 shows that forward P/E ratio of comparable firm during 2015-2016 was undervalue in relation to 5-yr median them self, then it became overvalue in 2017, and lastly undervalue again in late 2019. The 5-

yr median of twelve-month forward P/E ratio of comparable firms in airline business is equal to 14.64 with standard deviation of 10.55.

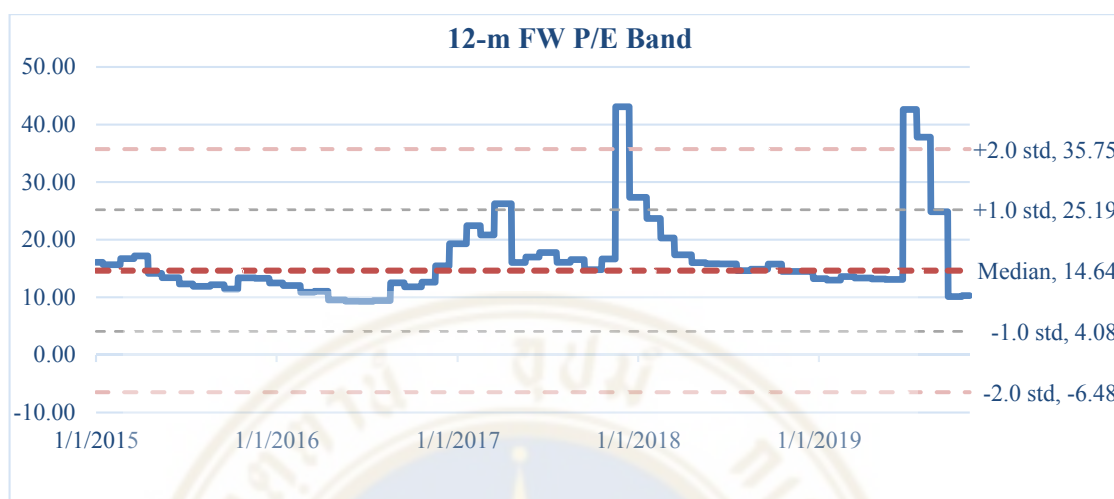


Figure 7.4 Twelve-month forward P/E Band

The twelve-month forward P/BV and EV/EBITDA multiple shows the same trend to P/E but less standard deviation. Both multiple was overvalue during 2015 compare to the 5-yr median and the multiples are gradually decline from 2018 and become undervalue in the late of 2019 compare to the 5-yr median band them self. The 5-yr median of twelve-month forward P/BV ratios is equal to 1.12 with standard deviation of 0.35 and the 5-yr median of 12-month forward EV/EBITDA ratios is equal to 7.03 with standard deviation of 3.6.

From twelve-month forward multiple trend analysis, P/E ratios, P/BV ratio and EV/EBITDA ratio all declined and turned to undervalued during late 2019. The result is showing that investors are recently giving less prospect for airline business same as the result of trailing multiple trend analysis.

More importantly, the declining of Earning of airline business such as Bangkok Airways and Asia Aviation, while book value is stable, during 2015-2019 same way to its price, illustrates that the average price of comparable firms is actually more sensitive to earning and EBITDA of the firms than book value.

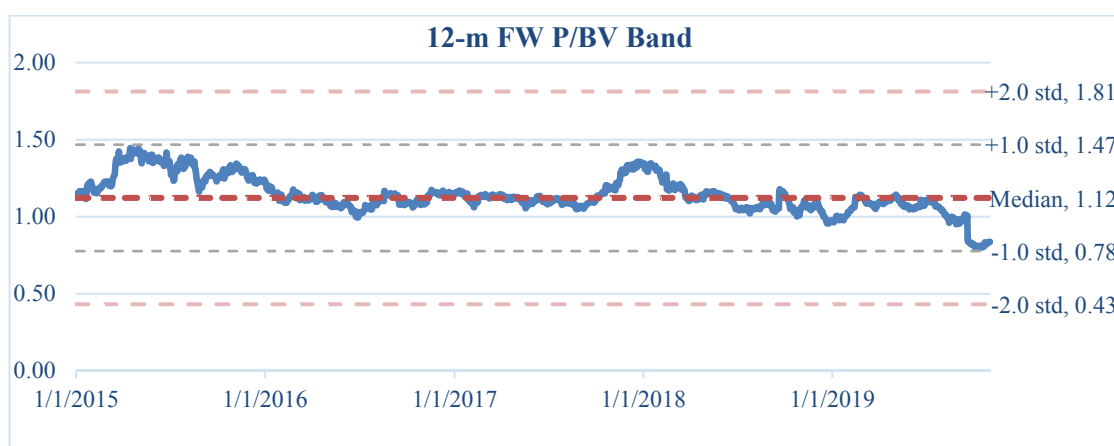


Figure 7.5 Twelve-month forward P/BV Band

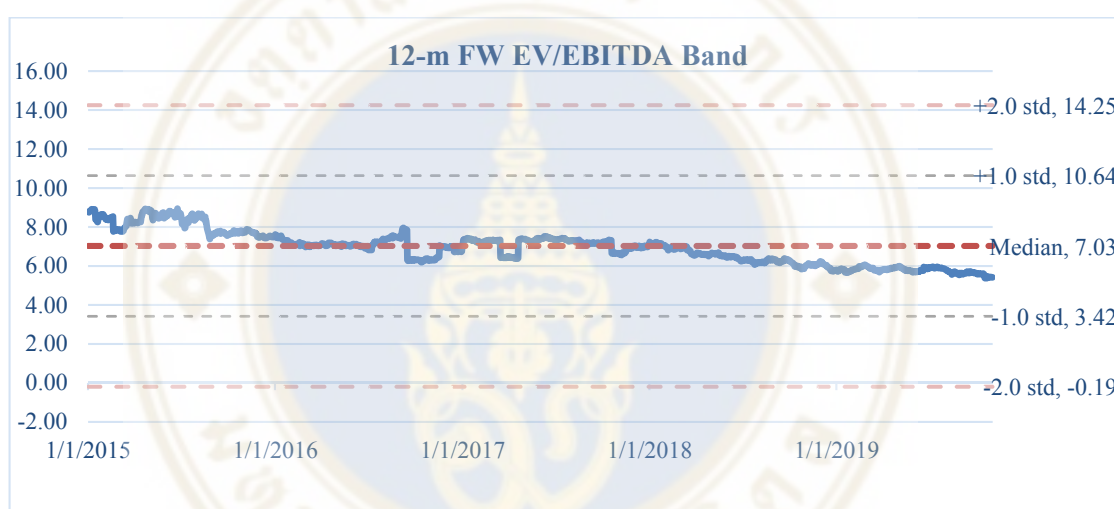


Figure 7.6 Twelve-month forward EV/EBITDA Band

7.4 Pro Forma Financial Statement

The financial projection will represent the current situation of the firm and will be forecasted based on the 5-year average information that can be gathered publicly. The other assumption will assume that the firm will be able to improve its efficiency and reflected in the reduction of costs. Further details will be discussed later on.

The assumptions will begin with the most current financial statement which is trailing 12 months financial statement (table 7.2) is best to reflect to current situation of the company. As it can see that, by the third quarter of 2019, Bangkok Airways has made net loss of 546 million baht. The total revenue was 24,228 million baht but the

operating expense was 25,013 million baht which is higher than the total revenue already. Although, the company has received some interest income, dividend income and also sold some of its investments, the Earning Before Taxes (EBT) or the Net Income Before Taxes is still negative. The negative EBT came from the operating loss and also the finance cost.

Table 7.2 Bangkok Airways' Trailing 12 Months Standardized Income Statement

Income Statement	
	Sep-19
	Trailing 12 Months
THB Million	
Passenger	19,190
Passenger service Charge	550
Freight	204
Sales and service income	4,284
Total Revenue	24,228
	-
Reversal of accrued concession fee	(140)
Other Operating Income/Expense	(5)
Other income	(1,932)
Cost of Sales and Services	22,823
Selling Expenses	2,029
Administrative Expenses	2,236
Other expenses	2
Total Operating Expense	25,013
	-
Interest income	101
Finance cost	(1,796)
Loss on exchange rate	(43)
Gain on exchange rate	79
Dividend income	577
Gain on sales of investments	385
ShareOfProfit fr. Investment inAssociat.	828
Net Income Before Taxes	(654)
Provision for Income Taxes	(119)
Net Income After Taxes	(535)
Non-controlling Interest of subsidiary	(12)
Net Income Before Extra. Items	(546)
	-
Net Income	(546)

Source: Thomson Reuters Eikon

This cashflow projection will begin with the filtering out some of the extra items in the trailing 12 months' income statement such as gain from sales of investment and etc. We will include only items that are recurring. The assumptions that have been used in this scenario are as following,

Sales: Bangkok Airways' passenger revenue came from two segments; scheduled and charter flights, and the its historical growth rate in sales of each segment were higher than the forecasted growth rate in sales of airlines industry (Euromonitor, 2019). The scheduled flight and charter flight have been growing at 2.42% and 92.16% CAGR, respectively while the airlines industry has been forecasted to grow at a slower rate. In this scenario (figure 7.3 and 7.4), the growth rate of sales of each segment are assumed to be slower and will be at the same rate as the industry by the end of year 5 (figure 7.5). For Passenger Service Charges, Freight and Sales and Service Income from its subsidiaries will be growing according to its trend and CAGR.

Table 7.3 Bangkok Airways Sales Break Down (Historical)

Revenue			2018	2017	2016	2015	2014
	CMS	CAGR					
Passenger Revenue	80.5%	2.96%	20,259	20,249	20,431	19,104	17,513
Schedule Flights	78.3%	2.42%	19,709	19,757	20,237	19,087	17,492
Charter Flight	2.2%	92.16%	550	492	194	17	21
Passenger service Charge	2.4%	3.48%	598	593	564	535	504
Freight	0.9%	-8.24%	216	242	282	326	332
Sales and service income	16.2%	8.75%	4,082	3,848	3,415	3,148	2,684
Total Revenue	100.0%	3.64%	25,156	24,932	24,692	23,113	21,033

Source: Bangkok Airways 2015-2018 Annual Reports

Table 7.4 Airlines Forecast Growth Rate of Sales

Airlines: Sales Value Forecasted 2019-2024						
	2019 E	2020 E	2021 E	2022 E	2023 E	2024 E
Charter	6.77%	6.10%	5.49%	4.94%	4.44%	4.00%
Low Cost Carriers	10.10%	9.90%	9.70%	9.51%	9.32%	9.13%
Scheduled Airlines	1.47%	1.44%	1.41%	1.38%	1.36%	1.33%
Airlines	3.45%	3.48%	3.50%	3.53%	3.56%	3.59%

Source: Euromonitor

Table 7.5 Bangkok Airways' Adjusted Growth Rate of Sales

Bangkok Airways' Adjusted Growth Rate of Sales					
	1	2	3	4	5
Adjusted Growth Rate of Scheduled Flight	2.20%	1.98%	1.76%	1.55%	1.33%
Adjusted Growth Rate of Charter Flight	74.53%	56.90%	39.26%	21.63%	4.00%

- **Cost of Revenue:** The majority part from cost of revenue is contributed from Fuel, Aircraft Maintenance, Personnel, Cost of Passenger services and Aircraft Rental. These items will be projected as an average percentage of their related revenue which is the sum of Passenger, Passenger Service Charge and Freight Revenue from 2014-2018. For the other cost of revenue that came from its subsidiaries will be projected as an average percentage of Sales and Service Income from subsidiaries.

- **Selling, General, Administrative Expenses and Other Expenses:** Increasing by following the its own CAGR.

- **Other Operating Income:** Increasing as a percentage of sales.

- **Interest Income:** Average percentage of the sum of Cash, Cash Equivalent and Short-Term Investment.

- **Dividend Income:** Average percentage of Long-Term Investment (Available-For-Sales Securities).

- **Gain and Loss on Exchange Rate:** Assumed to be zero.

- **Interest Expenses:** Cost of Debt times total debt.

- **Tax:** Thailand Statutory Tax Rate is 20%

- **Minority Interest:** The average percentage of Net Income

- **Dividend Payout:** If the firm can generate net profit, the firm will pay cash dividend to its shareholders. The amount would be the average percentage of Net Income after deducting minority interest. The data that has been used to find the average payout ratio were 2015-2017. In 2018, Bangkok Airways have paid out cash dividend a lot more than it has earned. In my opinion, by removing the data from 2018, the dividend payout ratio looks more sustainable. The rest of net income will be put in Retain Earnings.

- **Cash and Cash Equivalent:** Increase as an average percentage of sales.

- **Account Receivable:** Using Day Sales Outstanding (DSO) or Receivable Conversion Period (RCP)

- Inventory: Using Inventory Conversion Period (ICP)
- Plant, Property, and Equipment: The company does not disclose any information about the investment plan yet. In this case, the PP&E will be projected by following its own CAGR. The rationale is that the firm has been in the mature state for several years and there were always some investments in PP&E to keep the firm operate functionally. So, it is safe to assume that they will continue to reinvest and CAGR is the best proxy that we have here.
 - Depreciation and Amortization: Since the company does not report the gross PP&E, in this case, we use the average percentage of net PP&E.
 - Marketable Securities and Available-For-Sales Securities: Assumed that the firm will not invest more in these assets.
 - Account Payable: Using Payable Deferral Period (PDP)
 - Accruals and Advance from Customer: Average percentage of sales
 - Funding: Assumed that the firm will not issue any new shares. All of the fund needed will be funded by retained earnings and debts. If the firm is continuously making losses and having deficit retained earnings, the firm will also issue new debts to fund its operation. The proportion between short-term and long-term debts will be the average percentage of the total debts.

Table 7.6 Pro Forma Income Statement

INCOME STATEMENT	Trailing 12 Months			Method	Assumption	Pro Forma				
		Sep-19				1	2	3	4	5
THB Million										
Passenger		19,190				19,579	20,098	20,659	21,090	21,188
Scheduled*	2018 % of Passenger Reve	97%	18,669	Adjusted		18,670	18,671	18,672	18,673	18,674
Charter*	2018 % of Passenger Reve	3%	521	Adjusted		910	1,427	1,987	2,417	2,514
Passenger service Charge		550		CAGR	3%	569	589	610	631	653
Freight		204		CAGR	(8%)	188	172	158	145	133
Sales and Service Income (Subsidiaries)		4,284		CAGR	9%	4,659	5,066	5,509	5,991	6,515
Total Revenue		24,228				24,995	25,925	26,936	27,857	28,489
Cost of Sales and Services (COGS)		22,823			86.26%	21,562	22,520	23,561	24,561	25,376
Fuel*	2018 % of COGS	22%	5,042	Average % of Revenue**	22%	4,407	4,520	4,643	4,738	4,761
Aircraft Repair and Maintenance*	2018 % of COGS	16%	3,613	Average % of Revenue**	14%	2,769	2,840	2,917	2,977	2,991
Personnel Expenses*	2018 % of COGS	15%	3,519	Average % of Revenue**	15%	2,979	3,056	3,139	3,203	3,219
Cost of Passenger Services*	2018 % of COGS	14%	3,219	Average % of Revenue**	15%	3,098	3,177	3,264	3,331	3,347
Aircraft Rental*	2018 % of COGS	7%	1,597	Average % of Revenue**	9%	1,775	1,821	1,870	1,908	1,918
Other Cost of Revenue (Subsidiaries)*	2018 % of COGS	26%	5,832	Average % of Revenue***	140%	6,535	7,107	7,728	8,404	9,139
Selling General and Administration Expenses		4,265		CAGR	6%	4,538	4,828	5,137	5,465	5,814
Other Expense		2		CAGR	15%	3	3	4	4	5
Total Operating Expense		27,090				26,102	27,351	28,701	30,031	31,195
Other Operating Income		1,932		% of Sales	5%	1,247	1,294	1,344	1,390	1,421
Interest Income		101		verage % of Cash and ST Invest	1.55%	95	97	100	102	103
Dividend Income		577		Average % of LT Investment	1.35%	405	405	405	405	405
Loss on exchange rate		(43)				-	-	-	-	-
Gain on exchange rate		79				-	-	-	-	-
Earning Before Interest and Tax (EBIT)		(215)				640	371	84	(276)	(776)
EBITDA		1,202				2,253	2,260	2,297	2,316	2,261
Interest Expense		(1,796)		Rd * Total Debt	7.1%	(1,388)	(1,707)	(2,115)	(2,629)	(3,277)
Earning Before Tax (EBT)		(2,011)				(747)	(1,336)	(2,031)	(2,906)	(4,053)
Tax		(119)			20%	-	-	-	-	-
Net Income After Tax		(2,130)				(747)	(1,336)	(2,031)	(2,906)	(4,053)
Minority Interest		(12)		Average % of NI	(6%)	42	74	113	162	225
Net Income		(2,142)				(706)	(1,262)	(1,918)	(2,744)	(3,828)
Dividend Payout		(165)		Average % of NI (15-17)	59%	-	-	-	-	-
Retain Earnings		(1,966)				(747)	(1,336)	(2,031)	(2,906)	(4,053)

Table 7.7 Pro Forma Balance Sheet:

BALANCE SHEET	Trailing 12 Months		Method	Assumption	Pro Forma				
	Sep-19				1	2	3	4	5
THB Million									
Assets									
Cash and Cash Equivalence	5,362	Average % Sales	15%	3,710	3,849	3,999	4,135	4,229	
Maketable Securities	2,440	No Change		2,440	2,440	2,440	2,440	2,440	
Accounts Receivable	1,342	Average RCP	27.5	1,884	1,954	2,031	2,100	2,148	
Inventories	493	Average ICP	6.9	407	426	445	464	480	
Other Current Assets	1,121	No Change		1,121	1,121	1,121	1,121	1,121	
Total Current Assets	10,758			9,564	9,790	10,036	10,261	10,418	
Plant, Property, and Equipment (PPE) (net)	15,690	CAGR	17%	18,381	21,533	25,226	29,552	34,620	
Available for Sales Securities	29,972	No Change		29,972	29,972	29,972	29,972	29,972	
Other Non-Current Assets	4,508	No Change		4,508	4,508	4,508	4,508	4,508	
Total Non-Current Assets	50,171			52,861	56,014	59,706	64,032	69,100	
Total Assets	60,929			62,425	65,803	69,742	74,293	79,518	
Liabilities									
Accounts Payable	1,924	Average PDP	34.5	2,029	2,129	2,228	2,322	2,399	
Accruals	367	Average % Sales	2%	454	471	490	506	518	
Advance From Customer	2,153	Average % Sales	10%	2,524	2,618	2,720	2,813	2,877	
Notes Payable	45			49	61	75	93	116	
Other Current Liabilities	2,522	No Change		2,522	2,522	2,522	2,522	2,522	
Total Current Liabilities	7,010			7,578	7,801	8,034	8,257	8,431	
Long-Term Debt	17,843			19,519	24,011	29,748	36,982	46,085	
Other Non-Current Liabilities	6,236	No Change		6,236	6,236	6,236	6,236	6,236	
Total Non-Current Liabilities	24,079			25,755	30,247	35,983	43,218	52,320	
Total Liabilities	31,089			33,333	38,048	44,017	51,474	60,752	
Shareholders' Equity									
Common Stock	2,100	No Change		2,100	2,100	2,100	2,100	2,100	
Additional Paid-In Capital	9,319	No Change		9,319	9,319	9,319	9,319	9,319	
Retained Earnings (Accumulated Deficit)	(476)			(1,223)	(2,560)	(4,591)	(7,497)	(11,550)	
Treasury Stock - Common	(492)			(492)	(492)	(492)	(492)	(492)	
Other Equity	19,324	No Change		19,324	19,324	19,324	19,324	19,324	
Non-Controlling Interest	63	No Change		63	63	63	63	63	
Total Equity	29,839			29,092	27,756	25,725	22,819	18,766	
Total Liabilities and Equity	60,929			62,425	65,803	69,742	74,293	79,518	
Status	Balanced			Balanced	Balanced	Balanced	Balanced	Balanced	
Assets Except Marketable Securities	58,489			59,985	63,363	67,302	71,853	77,078	
Liabilities + Equity - Debt	43,041			42,857	41,732	39,920	37,218	33,317	
Total Debt	15,448			17,128	21,632	27,383	34,635	43,761	
Marginal Fund Needed				1,680	4,504	5,751	7,253	9,126	
Short Term		% of Total Debt	0.25%	4	11	14	18	23	
Long Term		% of Total Debt	99.75%	1,676	4,492	5,736	7,234	9,103	

From table 7.6, the total revenue will be increasing for over the next five years and will be approximately 28,400 million baht. The Passenger Revenue will be growing with the adjusted growth rate and reach 21,188 million baht in the next five years. The revenue from freight service will be slowing decreasing overtime as the trend of its own has shown. The reason might be the intensive competition and there are many new substitutions in the market.

The operating expenses will grow a bit faster and actually higher than total revenue already. But, in the first 3 years, the interest and dividend income can help offsetting it. In result, the Earnings Before Interest and Taxes (EBIT) will still be positive for the next 3 years, but unfortunately, by the end of year 4, the firm will start to make operating losses, resulting in negative EBIT. However, excluding depreciation, EBITDA of Bangkok Airways is still positive because depreciation of Bangkok Airways is quite big portion at around 8.8% of its total revenue. Anyway, after paying interest expenses and taxes, the firm will end up with net loss since year 1.

7.5 Value of Equity Per Share

The comparable ratios are multiplied with the earning per share, book value per share and EBITDA per share to get firm value.

To estimate current price of Bangkok Airways, the 5-yr median of trailing multiples are multiplied with 2019E Bangkok Airway's performance. As Bangkok Airways has negative earning in 2019E, the equity value per share from P/E multiple doesn't make economic sense. The equity value per share from P/BV multiple is 18.09 baht per share and 5.88 baht per share from unadjusted EV/EBITDA multiple.

However, to find current price of Bangkok Airways by EV/EBITDA multiple method, the equity value needs to be adjusted by considering non-operating asset and debt of Bangkok Airway

From description in Thomson Reuters, the Enterprise Value Calculation is:

$$\text{Enterprise Value} = \text{Market Cap} + \text{Preferred Stock} + \text{Long-Term Debt \& Capital Lease Obligation} + \text{Short-Term Debt \& Capital Lease Obligation} + \text{Minority Interest} - \text{Cash, Cash Equivalents, Marketable Securities}$$

Therefore, to find value of equity, it needs to add cash and less value of debt, then less value of debt and minority interest to the enterprise value. Non-operating asset have not deducted from the formula but the value of Available for sales Securities (part of non-operating asset) of Bangkok airways is a very huge portion, larger than its operating asset (operating asset value of Bangkok Airways in 2019E is less than half of non-operating asset value). Non-operating asset, then, is included to Bangkok Airway's value of equity, resulting value of equity equal to 15.32 baht per share. Table 7.8 shows the calculation of value of equity using 5-yr median trailing multiples.

Table 7.8 5-yr median trailing multiple calculation

Proforma 2019	BA Earning 2019	BA Book Value 2019	BA EBITDA 2019
2019 Earning, Bookvalue, EBITDA (M.Baht)	(2,142)	29,839	1,202
5-year Median Trailing multiple	17.91	1.27	10.27
Share outstanding (mil)	2,100	2,100	2,100
Value of Equity Per Share (Unadjusted)	N/A	18.09	5.88
Value of Operating Assets			12,342
ADD: Cash & ST Investment			7,802
ADD: Non-Operating Assets			29,972
LESS: Value of Debt			(17,888)
LESS: Non-Controlling Interest			(63)
Total Value of Equity	-		32,166
Share outstanding (mil)	2,100	2,100	2,100
Value of Equity Per Share (adjusted)			15.32
Actual Price @15NOV2019			7.15

To estimate target price of Bangkok Airways, the 5-yr median of twelve-month forward multiples are multiplied with 2020E Bangkok Airway's performance. As Bangkok Airways has negative earning in 2020E, the equity value per share from P/E multiple doesn't make economic sense. The equity value per share is 15.55 baht per share from P/BV multiple and 7.54 baht per share from unadjusted EV/EBITDA multiple.

To estimate target price using twelve-month forward EV/EBITDA multiple, the equity value needs to be adjusted by considering cash and non-operating asset same as trailing multiple method but, in this time, operating value of Bangkok Airways in 2020E is expected to be turn-around to 5 years average. Therefore, the 5-yr median of adjusted twelve-month forward EV/EBITDA multiples is higher than trailing multiple, resulting in 15.39 baht per share. Table 7.9 shows the calculation of value of equity using 5-yr median twelve-month forward multiple.

Table 7.9 5-yr median twelve-month forward multiple calculation

Proforma 2020	BA Earning 2020	BA Book Value 2020	BA EBITDA 2020
2020 Earning, Bookvalue, EBITDA (M.Bath)	(706)	29,092	2,253
5-year Median 12m FW multiple	14.64	1.12	7.03
Share outstanding (mil)	2,100	2,100	2,100
Value of Equity Per Share (Unadjusted)	N/A	15.55	7.54
Value of Operating Assets			15,836
ADD: Cash & ST Investment			6,150
ADD: Non-Operating Assets			29,972
LESS: Value of Debt			(19,568)
LESS: Non-Controlling Interest			(63)
Total Value of Equity	-	32,658	32,327
Share outstanding (mil)	2,100	2,100	2,100
Value of Equity Per Share (adjusted)			15.39

7.6 Multiple comparison and discussion

In order to ensure that whether the multiples reflect price of Bangkok Airways well, actual historical performances of Bangkok Airways including earning, book value and EBITDA are calculated using the five years median multiples. Then, the results are compared to the actual price of Bangkok Airways.

Figure 7.7 shows a comparison between Bangkok Airways's historical price calculated by trailing industrial P/E multiple compare to its actual price. The result shows that the price using P/E multiple has similar to the actual price in term of trend. This can prove that the price of Bangkok Airways is very sensitive to its earning. However, the standard deviation of these two data is 6.27, considered very high deviation as it is almost double of current firm's price. Moreover, the firm currently has negative earning, resulting in zero value by P/E multiple method. P/E multiple, therefore, not applicable for estimating the firm value of Bangkok Airways.

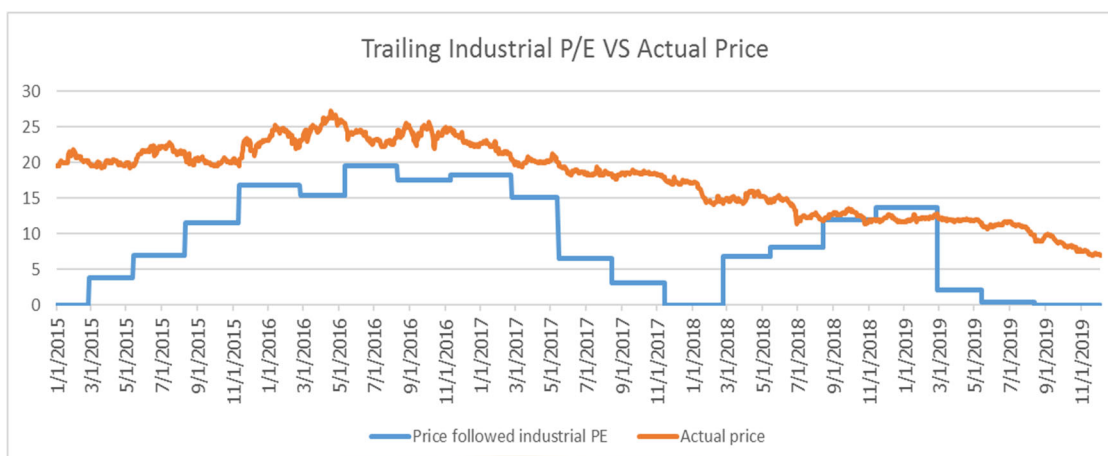


Figure 7.7 BA's price follows trailing industrial P/E and Actual price comparison

A comparison between Bangkok Airways's historical price calculated by trailing industrial P/BV multiple compare to its actual price shows that BA's price calculated by trailing industrial P/BV multiple between 2015-2017 is very close to its actual price. However, the price from P/BV multiple between 2018-2019 is stable at around 18 Baht per share, while the trend of actual price is decreasing. The average standard deviation during 5 years of the two data is 3.03 which much lesser than P/E multiple. This can be stated that, although the P/BV reflect price of Bangkok Airways more accurate than P/E ratio, BA's price by P/BC multiple is not accreted when the firm is in abnormal situation. In other words, P/BV multiple tend to predict price more accurate when the earning is stable or when predict price in a long-run.

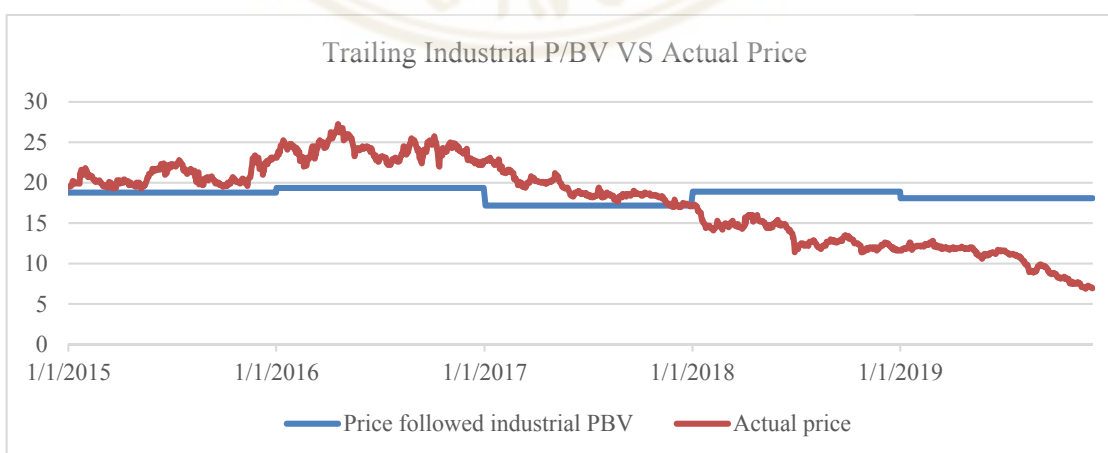


Figure 7.8 BA's price follows trailing industrial P/BV and Actual price comparison

Bangkok Airways's historical price calculated by both trailing industrial EV/EBITDA multiple before adjusted and trailing industrial EV/EBITDA multiple after adjusted are compared to its actual price in Figure 7.6.3. It is interesting that, between 2015-2018, Price calculated by using EV/EBITDA multiple without considering non-operating and debt (unadjusted) is closer to BA's actual price with 2.20 standard deviation than adjusted EV/EBITDA multiple which is 8.11 standard deviation. This reflect that investors do not pay attention much on the value of non-operating asset of Bangkok Airways. However, when the liquidated value of Bangkok Airways, adjusted EV/EBITDA multiple is looked more make sense than unadjusted. In other word, most of the time, when BA's price is calculate by EV/EBITDA multiple, price before 2019 are seem to be undervalue.

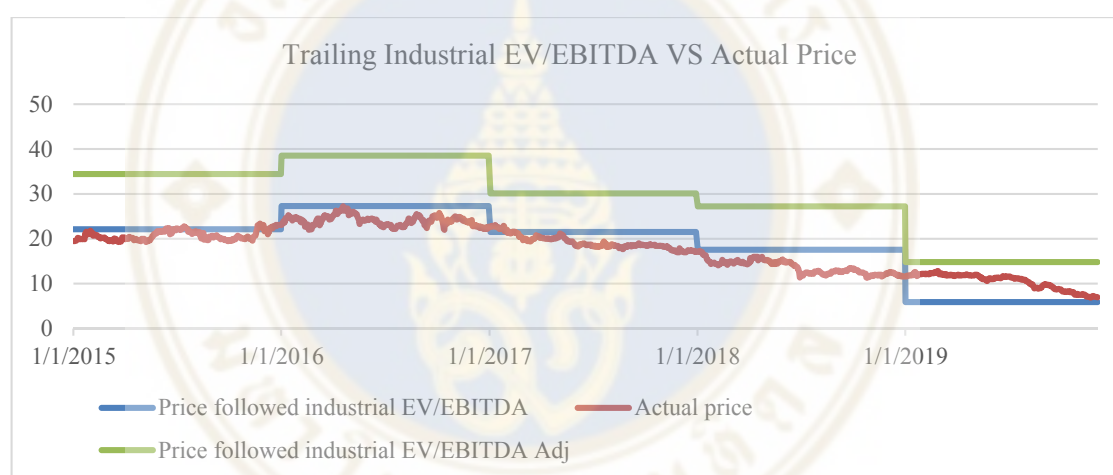


Figure 7.9 BA's price follows trailing industrial EV/EBITDA, adjusted EV/EBITDA and Actual price comparison

Twelve-months forward industrial multiples are also compared to its actual price by the same way to the trailing industrial multiples. The price from twelve-months forward P/E multiple and P/BV multiple are slightly less than trailing, which show more conservative, and do not have any noticeable different to the results from trailing multiples in term of trend. However, figure 7.6.4 shows that actual price of Bangkok Airways is in the middle between price calculated by adjusted twelve-month FW Industrial EV/EBITDA and unadjusted. In term of standard deviation, price calculated by adjusted

twelve-month FW Industrial EV/EBITDA has 3.86 standard deviation slightly less accurate, compare to 3.35 standard deviation of unadjusted EV/EBITDA.

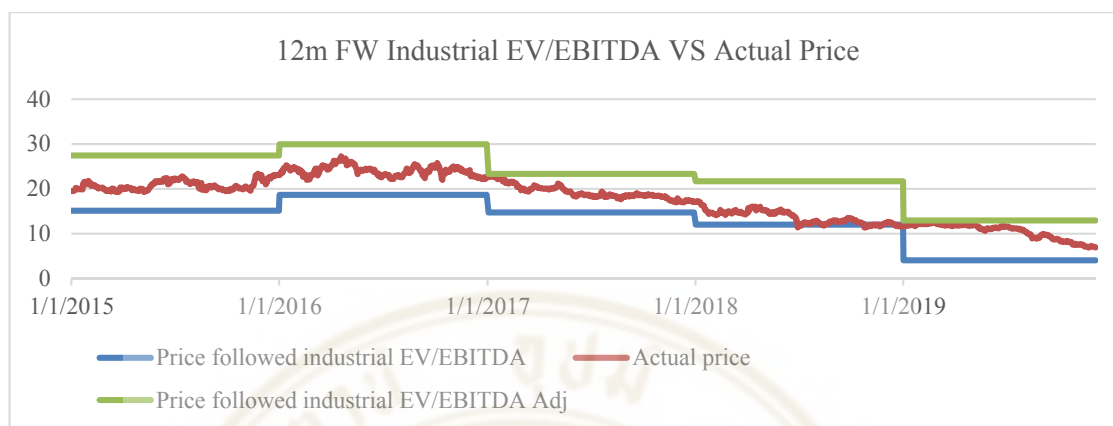


Figure 7.10 BA's price follows twelve-month FW industrial EV/EBITDA, adjusted EV/EBITDA and Actual price comparison

From trailing P/BV multiple and trailing EV/EBITDA multiple calculation, the results show that the current price of Bangkok Airways should be 15.32 followed adjusted EV/EBITDA multiple because EV/EBITDA multiple seems to be more accurate when Bangkok Airways is in abnormal situation or in financial crisis.

On the other hand, the result from P/BV methods at 18.09 baht per share would reflect longer term value for Bangkok Airways for example the form value when the firm would like to liquidated. Compare to the actual price, the actual price on 15 November 2019 is 7.15 baht per share which represent that the Bangkok Airways price is now undervalued and investor is offering less prospect to Bangkok Airways already.

To consider target next year price, the twelve-month forward multiples themselves are smaller value than the trailing multiples which showing that the results from twelve-month forward multiples are more conservative.

Since the next year performance of Bangkok Airways is expected that the firm will be turn around and the firm's performance will be back to its 5 years average, the price from twelve-month forward P/BV multiples at 15.55 baht per share is also make sense for predict the firm's price. Moreover, the price 15.39 baht per share, calculated by adjusted twelve-month forward EV/EBITDA multiples is 15.39 bath per share very

similar to price from P/BV multiple. The expecting next year target price for Bangkok Airways is can be 15.39 – 15.55 baht per share.

7.7 Conclusion

The current price per share for Bangkok Airways using relative method at 15.32 baht based on trailing EV/EBITDA method is more reasonable compared to other trailing multiple ratios. Comparing to the market price of Bangkok Airways, it was 7.15 baht per share in 15 November 2019. It can be concluded that the market price of Bangkok Airway is currently “undervalue”.

The target price of Bangkok Airways in 2020 can be increased to 15.39-15.55 baht per share, if the performance of Bangkok Airways meets the 5 years average performance as the proforma’s assumption.

Table 7.10 BA’s price calculated by relative methods summary

	5-yr median Trailing Multiple		5-yr median 12m FW Multiple	
	Equity value (Baht/Share)	SD	Equity value (Baht/Share)	SD
P/E	N/A	6.28	N/A	7.32
P/BV	18.09	3.03	15.55	3.36
EV/EBITDA	5.88	2.20	7.54	3.35
EV/EBITDA (adj)	15.32	8.11	15.39	3.86

Although the market price of Bangkok Airways at the moment is undervalue, compared to its intrinsic value, more than half of its value come from Non-Operating Assets. The operating performance and profitability are then still poor and high risk. Therefore, the recommendation based on this situation is to HOLD.

CHAPTER VIII

INVESTMENT RISKS AND DOWNSIDE POSSIBILITIES

1. The intrinsic value may or may not equal the market price

The target price in this paper is based on the many assumptions that may or may not be true. Moreover, the methods used in this paper are based on traditional finance that assume that investors have adequate knowledge in finances. The assumption is that the market price will may or may not be correct at this moment, but in long-term, the market price should be equal to the intrinsic value. While, in reality, many investors do not know anything about finances. Even educated investors might act irrationally, due to psychological and expectation.

2. The assumptions in this paper based on public information only

There may be some private information that the company does not disclose to the public, at the time of the valuation.

3. The assumption about improving efficiency is just a hypothesis

In this paper, there are two valuation models, the first model is the base case which assume that the firm will continues to operate as it has been doing for the past five years. The other assumption is that the company will be able to reduce its costs. However, the amount of cost saving is just hypothetical numbers only because, at the time of the valuation, there is only a news that Excise Departments might offer some discount for jet fuel excise tax but there is no official announcement and information about the cost saving program yet.

4. The company may use different capital structure

In this paper, we assume that the company will not issue any new share. All the operations will be funded with debt. If the firm changes the capital structure, there is a high chance that the WACC will change. If the firm issues new share, the EPS will be diluted and share price might change dramatically.

5. The company has high exposure from exchange rate risk

In this valuation, the gain and loss on exchange rate are assumed to be zero. Apart from the gain and loss on the exchange rate, if Thai Baht appreciates, tourism will be impacted negatively and that will also affect the performance of Bangkok Airways as well.



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Appendix A: Six comparable firms for relative valuation method

	Stock	Company	Country	Market	Industry	Business
1	0293.HK	CATHAY PACIFIC AIRWAYS LTD	Hong Kong, Tax 16.5%	HKG	Airlines	Cathay Pacific Airways Limited is a Hong Kong-based investment holding company principally engaged in airline and related businesses. The Company operates its businesses through two segments. The Airline segment is engaged in passenger transport and cargo transport. The Non-airline segment is engaged in the provision of catering, ground handling and aircraft ramp handling services, as well as cargo terminals operation. The Company operates its businesses in countries mainly in Asia, Europe and North America. PRICE PERFORMANCE
2	600221.SS	HAINAN AIRLINES HOLDING CO LTD	China, tax 25%	SHH	Airlines	Hainan Airlines Holding Co., Ltd. is a China-based airline company. The Company mainly provides passenger air transportation service, freight air transportation service and charter flight service. The Company is also engaged in the production of in-flight supplies, aviation equipment, aeronautical ground equipment and spare parts. The Company conducts its businesses within domestic market and to overseas markets.
3	VAH.AX	VIRGIN AUSTRALIA HOLDINGS LTD	Australia, tax 30%	ASX	Airlines	Virgin Australia Holdings Limited is engaged in the operation of a domestic and international airline business, and the operation of a frequent flyer program. The Company's segments include Virgin Australia Domestic, which includes operations using the fleet of Boeing B737 aircraft, Airbus A320 and A330 aircraft, and Fokker F50 and F100 aircraft, and comprises Australian domestic flying, including regional network and cargo operations; Virgin Australia International, which includes operations using a mix of Airbus A330, Boeing B777 and B737 aircraft, and comprises Trans-Pacific, Abu Dhabi, Trans-Tasman, Pacific Island and South East Asia flying, including international cargo operations; Velocity, which includes operations of its loyalty program, and Tigerair Australia, which includes operations using a narrow body fleet of Airbus A320 and Boeing B737 aircraft, and comprises Australian domestic flying targeting the budget leisure market and international flying to Denpasar.

	Stock	Company	Country	Market	Industry	Business
4	JBLU.OQ	JETBLUE AIRWAYS CORP	USA, tax 21%	NSM	Airlines	JetBlue Airways Corporation is a passenger carrier company. The Company provides air transportation services across the United States, the Caribbean and Latin America. Its segments include Domestic, and Caribbean & Latin America. It operates various kinds of aircrafts, including Airbus A321, Airbus A320 and Embraer E190. It also provides premium transcontinental product called Mint. As of December 31, 2016, Mint included 16 fully lie-flat seats, four of which were in suites with a privacy door. The Company also provides Fly-Fi in-flight Internet service across its Airbus fleet. It provides its customers a choice to purchase tickets from three branded fares, which include Blue, Blue Plus and Blue Flex. Each of these fare include different offerings, such as free checked bags, reduced change fees and additional TrueBlue points. As of December 31, 2016, its Airbus A321 aircraft in a single cabin layout had 200 seats and those with Mint premium service had a seating capacity of 159 seats.
5	SKYW.OQ	SKYWEST INC	USA, tax 21%	NSM	Airlines	SkyWest, Inc., through its subsidiaries, SkyWest Airlines, Inc. (SkyWest Airlines) and ExpressJet Airlines, Inc. (ExpressJet), operates regional airline operations in the United States. The Company's segments include SkyWest Airlines, ExpressJet and SkyWest Leasing. The SkyWest Airlines segment provides regional jet service to airports primarily located in the Midwestern and Western United States, as well as Mexico and Canada. The ExpressJet segment provides regional jet service to airports primarily located in the Eastern and Midwestern United States, as well as Mexico, Canada and the Caribbean. The SkyWest Leasing segment includes its E175 aircraft ownership business. As of December 31, 2016, the Company offered scheduled passenger service with approximately 3,160 daily departures to destinations in the United States, Canada, Mexico and the Caribbean. The Company's flights are operated as Delta Connection, United Express, American Eagle or Alaska Airlines.

	Stock	Company	Country	Market	Industry	Business
6	AAV.BK	ASIA AVIATION PCL	Thai, Tax 20%	SET	Airlines	Asia Aviation Public Company Limited is a Thailand-based holding company engaged in a low-cost airline and relevant business in relation to airline operation under the brand Thai Air Asia. The Company operates three business segments: scheduled flight operation; charter flight operations, and other business starting from the services before boarding, in-flight services and other services in relation to air passenger services. Scheduled flight operation is the provision of passenger air transportation services to routine destinations based on scheduled flights. The Company sells tickets through its distribution channels such as Website, sale counters and travel agents. Charter flight operation is the provision of passenger air transportation services to non-routine destinations. Flights are operated when there is a hiring from customers who normally are tourist agency companies.

Source: Thomson Reuters