International School of Economics

Ablayeva Leila

Alexeyenko Larissa

Jamanchin Kirill

Financial Evaluation of Air Astana Group amid Initial Public Offering (IPO)

Thesis submitted for

The degree of Bachelor in

6B04104 Finance

Supervisor: Aliya Kulmukhanova

Astana 2023

ABSTRACT

The current diploma research work is intended to assess the financial performance of leading Kazakhstani airline company, Air Astana JSC amid Initial Public Offering (IPO). The financial valuation is conducted by implementation of the market-based and income-based approaches used in valuation of the economic value of an enterprise. Financial valuation of the company is based on the financial information covering five-year period, 2017-2021.

Market-based valuation was developed by calculation of the market multiplies by financial evaluation of the publicly listed airlines such as Aeroflot, Turkish Airlines, China Southern Airlines, American Airlines and Singapore Airlines representing different regional markets. The results of the market-based valuation approach determined implied share price of Air Astana JSC at 7.05 USD or 3 149.86 KZT (1 USD= 446.79 KZT) (National Bank Currency, 06.04.2023).

However, the income-based valuation method had been based on the company's predicted future cash flows being discounted (Sean R. Saari, 2017). In order to obtain more relevant results, short-term and long-term cash flow forecasts were conducted. Determined discounting interest rate (WACC) equaled 9.4% given corporate income tax rate of 20% and existing debt-to-equity ratio of the target company (Air Astana JSC). The implied share price based on short-term cash flow estimations was equal to 1.92 USD or 857.83 KZT per share, while long-term cash forecast derived with the implied share price of 22.15 USD or 9 896.39 KZT per share (1 USD= 446.79 KZT) (National Bank Currency, 06.04.2023).

Based on the outcomes of the valuation methodologies, it is determined that the income-based valuation method (based on long-term cash predictions) revealed overvaluation of the target business stock price, whereas the market-based valuation method demonstrated undervaluation of the firm.

CONTENT LIST

INTRODUCTION

The current research work is dedicated to financial evaluation of Air Astana Group, which is a leading national airline company in Kazakhstan. The financial evaluation is based on the income and market methods. Prior to the financial assessment, the current section will address the company's background, the main purpose of the research as well as the research questions will be developed. The current research addresses the government initiatives of privatization of state-owned enterprises by offering the shares to Kazakhstani citizens. Hence, the work is important from the perspective of both Kazakhstani government and its citizens who are interested in purchasing the shares.

Research Purpose and Objectives

During the Presidential Address to the Nation in January, 2022, President Kassym-Zhomart Tokayev addressed the renewal of the People's IPO (Initial Public Offering) during which Kazakhstani citizens will be privileged to purchase the stocks of the leading national companies owned by the Social Welfare Fund "Samruk-Kazyna" (Tengrinews.kz, 2022). IPO - is an initial public offering in which a company for the first time releases its papers on the market and they are acquired by investors. Thus, the public has the opportunity to become co-owners of the company, and own shares, even if they are small (kapital.kz, 2022). The main stages of the IPO are the selection and appointment of the right advisors, analysis of the timing of the IPO, approval of the type and placement of shares, as well as the creation of committees or departments to manage and control the process (kase.kz). There are several concerns that need to be addressed in light of the difficulties that international firms have had while going public (Financial Times, 2017). For instance, due to US sanctions, Aeroflot Airlines experienced a severe funding shortage; for American Airlines Group, the main issue was fierce market competition, which decreased cost shares. The corporation has had to contend with rising competition from other airlines, particularly low cost airlines (The Guardian, 2013). According to China Southern Airlines' experience, the

COVID-19 pandemic resulted in a fall in visitor numbers (Financial Times, 2021), whilst Turkish Airlines experienced a decline in tourism as a result of political unrest in Turkey and rising gasoline prices (WSJ.com, 2010) . Some of the companies such as such as KEGOC, KazTransOil, Kcell and others have undergone the IPO in previous years. During the speech, the president ordered to accelerate the IPO of the national companies and named KazMunaiGas JSC and Air Astana Group as two companies that will undergo IPO and will become publicly-traded companies. While KazMunaiGas JSC had become publicly-listed company in December, 2022 (Kapital.kz, 2022). However, the prospects of IPO of Air Astana Group have not been clear despite the willingness of the company to become a publicly listed company leading to increased attention towards the company.

Taking into account the lack of official information about the approximate share prices of Air Astana Group, the current research work is aimed at conducting financial evaluation of the Company. The work can benefit ordinary citizens that are interested in purchasing company's shares, as well as private/public investment funds and the government. The work be based on the application of income-based and market-based valuation methods as they provide with both comparative and industry-level insights about the enterprise's value. Moreover, additional tools such as SWOT, PESTLE, KPI and airline industry will be applied in order to identify the current position of the enterprise in regards to the competition as well as to identify main risks that could negative influence on the IPO.

The following research objectives will be also addressed over the course of the research work:

To conduct in-depth analysis of the industry factors, macroeconomic outlook and company-level factors influencing on the financial soundness of the company ahead of IPO.

1. To conduct financial evaluation of the company based on the market-based and income-based approaches.
2. To identify main macroeconomic, industry-level and operational risks influencing on the company's financial performance.

3. To analyze the current risk management measures undertaken by the company.

4. To develop practical recommendations and vivid conclusions about the selected enterprise.

Research Questions

Moreover, the research work is focused on the following research questions, which will be addressed over the course of the project:

1. What are main operational, industry and macroeconomic factors influencing on the operational and financial performance of Air Astana Group?
2. How does the company address the risks associated with changing business environment caused by economic, social, legal and political factors?
3. What is the current economic value of Air Astana Group in comparison with other publicly listed airlines (market-based approach)?
4. What is the current economic value of Air Astana Group based on the income-based approach?

DEFINITIONS AND ASSUMPTIONS

This section of the research project is aimed at analysis of the existing academic literature related to the financial evaluation of the companies. Moreover, the section will be sub-divided into sub-sections including the key concepts, income-based and market-based evaluation methods, the advantages and disadvantages of evaluation methods.

Key Concepts

Before moving into the analysis of the main academic works dedicated to the financial evaluation of Air Astana Group, it is significant to define main relevant concepts, which will be used in the research process.

Financial evaluation is one of the most commonly referred academic concept in corporate finance. The term is defined as a process of applying different financial appraisal methods with an aim of determining fair market value of an enterprise (Asia Development Bank, 2019). Based on

the available financial data, which can be found in financial statements including the income statement, balance sheet, and statements of cash flows, a financial evaluation of a company is conducted (Schmidt, 2023).

The discounted cash flows approach may be used to evaluate the company's financial position. The Discounted Cash Flow (DCF) model is a method for valuing investments that relies on projecting future cash flows and applying a rate of return that takes into account the risk involved for the investor (Shrieves & Wachowicz, 2001). It is one of the most commonly used financial evaluation approaches.

Furthermore, the financial evaluation of an entity is focused on the appropriate levels of a financial risk. The financial risk can be defined as "a probability of losing financial investments made into a project" (Holton, 2004).

Financial Evaluation Approaches

The financial evaluation of a company can be conducted by application of several methods. Indeed, DeCress (2021) has defined several approaches of the financial appraisal. Three most commonly used approaches include market approach, cost approach and Discounted Cash Flow model. The following Figure 1 represents information about three types of the financial evaluation:

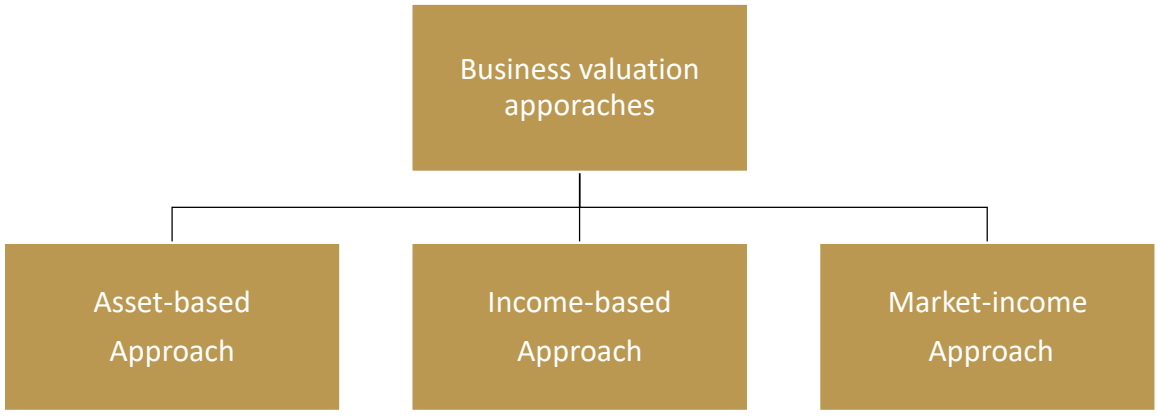

Figure 1: A company/asset valuation approaches (DeCress, 2021)

The asset approach or cost approach is defined as a financial evaluation method based on the asset and cost of the replacement (Hayes, 2023). The method operates on the following

equation: Tangible and intangible assets' current value less current liabilities equals current equity (DeCress, 2021).

The net asset method is considered as a main method of the asset-based approach that is based on the aforementioned formula (DeCress, 2021). The net asset method is considered to be effective in case of the holding companies or capital-intensive enterprises. Deev (2011) outlined potential advantages and disadvantages of the asset-based valuation method. According to author, main benefit of asset-based approach was that it is easy to apply and simple to understand. Moreover, the approach is not based on any assumptions and the numbers are derived from the factual financial information. The net asset method is inferior in using it to predict the future of the firm because it is based on trustworthy information about the real assets that the enterprise actually has, eliminating abstractness.

The market-based approach of the financial valuation is based on the comparison of the similar companies in the industry. The following Figure 2 represents the application of the market-based approach of valuation:

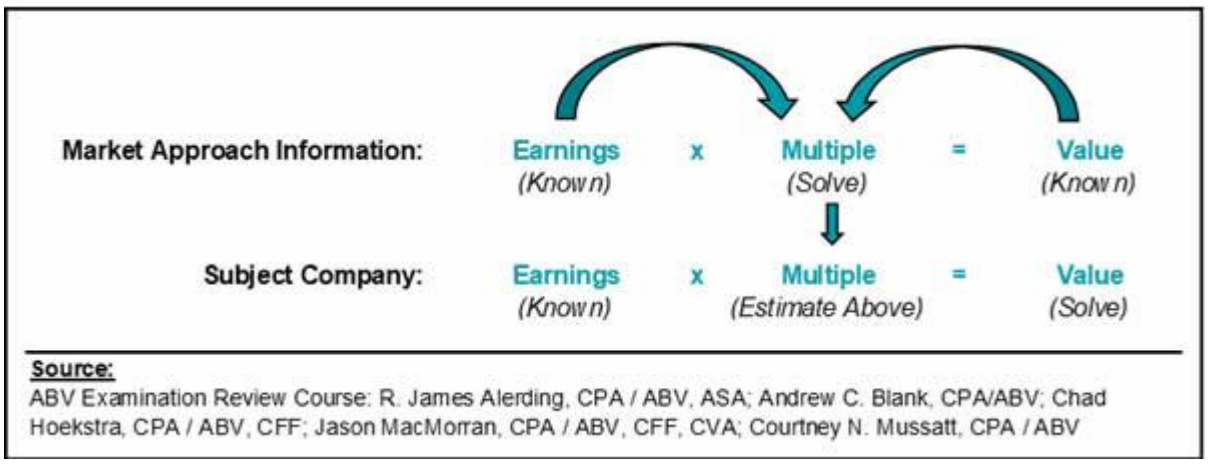

Figure 2: Market-based approach of business valuation (DeCress, 2021)

DeCress reported that the market-approach is based on the multiples derived from the transactions of the earnings and value information (DeCress, 2021). The method determines key multiples and applies them to the target firm to determine the value of the company. Goh, et al., (2015) highlighted the benefits of the valuation method. According to authors, the main benefit of the

market-based method was that it is built on the actual data and financial information of the identical companies in the industry (Goh, et al., 2015). Moreover, the method was considered as moderate complexity since it requires certain calculations to derive the multiples, which are based on the available financial information. However, Deev (2011) argued that the approach requires assumption development and it is limited to the present time information as the analysis is retrospective (using the historical information). The selection of the identical public companies was considered as another challenge of applying the market-based approach in financial valuation process.

The third business valuation approach is an income-based approach, which is considered as the main valuation method in finance (DeCress, 2021). The capitalization of cash flows and discounted cash flow methods are two examples of income-based methodologies. The capitalization of the cash flow technique is based on the assumption that a firm or investor anticipates long-term cash inflows from an investment. Therefore, the cash inflows are converted into values being divided by the rate adjusted to the growth rate.

Kiss (2015) accentuated on the flexibility of the income-based approach to the changes. Furthermore, the approach is future-oriented and takes into consideration the future cash flows in line with the market changes (discounting interest rate). Additionally, the method considers the time value of money (Kiss, 2015). Nevertheless, the complexity of the approach is perceived as one of its shortcomings. Indeed, income-based approach requires an accurate measure of the future cash flows as well as interest rates used for the discounting purposes. As a result, it requires high levels of expertise and time. It is worth noting that the method is based on the probabilities and assumptions that can be easily manipulated.

The next tables outline main Key Performance Indicators used by Air Astana to measure its operational performance:

Table 1: KPIs and definition

No.	KPI name	Definition	Formula
1	The total number of passengers	The total number of passengers being carried out by an airline.	Total Passengers = business + economy + infant + charter + staff
2	Total Revenue	Total revenue being made in the period	Total Revenue = Passenger Revenue + Cargo & Mail Revenue + Other Revenue+ Gain from Sale-Lease-Back
3	Load Factor	The % of seats that have been occupied by travelers.	Load factor = average load/peak load
4	Net Profit/Loss	The net profit/loss for the period.	Net Profit/Loss = Total Revenue – Total Expenses
5	Greenhouse gas emissions	Total GHG emissions produced by the company.	GHG Emissions = A*EF, where A is data on production/rendering services and EF is emissions factor.
6	Net Promoter Score	The measurement used for calculating the customer loyalty from -100 to 100 score.	NPS score = % of Promoters - % of Detractors.
7	On-time performance	The timeliness of the flights carried out	On-time performance = (Actual Flight Time-Scheduled Flight time)/Scheduled Flight time
8	CASK	CASK (Cost of Available Seat Kilometer) or CASM is a measure commonly used in airline industry that is a unit cost. It is measured in cents and measures the cost of a seat mile being offered	CASK = Total Cost/Number of passengers
9	Operating profit	The profit from the main operations	Operating Profit = Operating revenue – Operating expenses

RESEARCH METHODOLOGY

Development of an appropriate research methodology is one of the key factors influencing the research data quality since based on the methodology appropriate assessment tools will be selected.

Research Methodology

In order to achieve research goals and objectives, it was decided to rely on two valuation approaches such as income-based and market-based approaches. The both types of the valuation approaches will be based on the financial information derived from the official annual reports of the subject company (Air Astana Group) and selected peer companies covering the period of 2017-2021 as some of the peer companies used in the market valuation have not yet published their results for 2022.

Income-based approach

The basis for the income-based valuation technique is the forecasting of future cash flows and the use of a discounting model to get the Weighted Average Cost of Capital (WACC) (Gordon, 2022). Given two essential factors influencing on the valuation quality such as FCF estimations and WACC, it was decided to implement short-term and long-term FCF forecasting. The short-term FCF forecasting is based on financial information of last three years of company operations and the forecast will cover the period of 2017-2022. The long-term FCF, on the other hand, will be calculated using the revenue/passenger flown method and the projection horizon will span ten years.

Market-based approach

The market-based approach will be based on the analysis of five publicly listed airline companies including Singapore Airlines, Turkish Airlines, Aeroflot, China Southern Airlines and American Airlines. The multiplies used in the market-based approach will include the following ratios:

1. Earnings per share (EPS).

2. Price to Earnings (P/E) ratio.
3. Price to Book (P/B) ratio.
4. Price to Sales (P/S) ratio.
5. Economic Value/EBITDA.
6. Economic Value/EBIT.
7. Economic Value/Sales.

The financial information used in estimation of the multiples will be based on the annual financial statements of the companies covering the period of 2017-2021. In calculation of the market multiples, the 2021-year financial information will be used.

Method Justification

The financial valuation of an enterprise requires the objective assessments, which would provide with the accurate information about the company's value. Therefore, the application of two methods such as market-based and income-based approaches could enhance the understanding of an enterprise's value positively influencing on the research findings. Moreover, the market-based valuation approach will provide with an opportunity to compare selected target company with the regional and international airline companies.

However, it is important to note that the benchmarking against other companies based on the market-approach may have potential shortcomings as selected companies could be larger in terms of operations as well as revenue turnovers. Nevertheless, such comparison could provide with an opportunity to analyze the financial performance of selected companies with the target company's performance.

Overall, the application of the market-based and income-based approaches could provide with significant and more detailed information about the target company's financial performance as well as its value. Moreover, the mixed method will ensure obtaining information from different sources providing more validity and reliability.

AIRLINE INDUSTRY OUTLOOK

The analysis of the current outlook in airline industry of Kazakhstan will be considered in this section. The section will address key factors influencing on the airline company operations, the impact of COVID-19 as well as increasing jet fuel prices. The analysis will provide with an insightful information about the key political, market, social as well as economic factors influencing on the airline operations.

Company Background

Being established as a joint-venture in 2001, Air Astana Group made its first flight on May 15, 2002. Since then, the company has been become one of the successful airline startup companies in post-Soviet region with one of the highest growth rates (AirAstana.com, 2023). The joint-venture was established by the government of Kazakhstan and BAE Systems PLC (United Kingdom) with the majority share owned by the government of Kazakhstan 51% (Annual Report, 2023). BAE Systems PLC owns 49% of the company (AirAstana.com, 2023).

The company's strong compliance with the safety requirements enabled to achieve a regional and international recognition. Indeed, Air Astana Group possesses the European Aviation Safety Agency's part 145 approval allowing flights to the European countries (AirAstana.com, 2022). In May, 2021 the company has successfully passed Air Transport Association's Operational Safety Audit for 8th time (AirAstana.com, 2022).

In order to cater to Kazakhstani customers who are price-conscious and to support the growth of the nation's competitive aviation sector, Air Astana Group launched Fly Arystan in 2019 (AirAstana.com, 2019). According to the company's Annual Report, Air Astana Group has 29 aircrafts consisting of Boeing 767-300, Airbus A320neo, Airbus A321, Airbus A321neo LR, Airbus A321neo, Embraer E190-E2 (AirAstana.com, 2022). As of 2022, the total number of aircrafts leased by Fly Arystan was equal to 14 Airbus A320 aircrafts.

Kazakhstani Airline Industry

The Kazakhstani Airline Industry can be considered as relatively small, but it is one of the dynamically developing and growing markets in the world. Peter Foster, the CEO of Air Astana Group reported that the Kazakhstani airline market was the fastest growing market in post-pandemic period.

According to the Aviation Administration of Kazakhstan, there are 53 Kazakh air operators registered in the country, which cover different segments including the commercial, charter, cargo and others (Annual Report, 2021). In fact, Air Astana is considered as one of the six airlines in Kazakhstan with the EU safety certification to fly to European countries. As of April 2019, the total number of the international airlines with regular flights to Kazakhstan was equal to 24 (passenger flights) and 5 (cargo operations). The total number of airports in Kazakhstan is equal to 20 and 18 of them are eligible for the international flights. The majority of the airports are state-owned or privately-owned companies except for the Aktau International Airport that is based on the public-private ownership. The following two pie charts demonstrate the market share of Air Astana in relevance to other major airlines in Kazakhstan in domestic and international flights market:

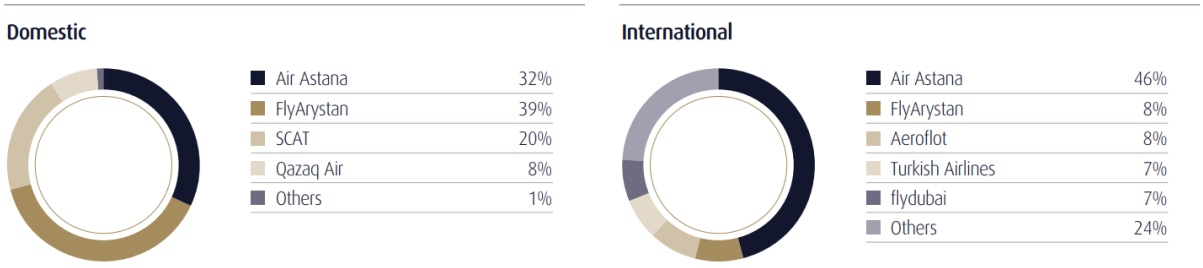

Figure 3: The domestic and international market share of Air Astana Company in 2021 (Annual Report, 2021)

It is important to note that the information is for the 2021 year ended and it is expected that there would be changes in the structure of the international market as of 2022 since Aeroflot Company might have lost its market share. It is important to note that the development of the

aviation industry in Kazakhstan is dependent on the capacity building and infrastructural developments. It is necessary to note that a new terminal in Shymkent International Airport is under the construction process adding up 35 000 square meters leading to an increase of the passenger capacity from 150 to 2000 passengers. Moreover, in the Western Kazakhstan region, the Uralsk International airport is under the expansion process with an aim of doubling the size to increase the airport capacity from 100 passengers to 200 passengers. It is worth to note that the Kazakhstani aviation industry has passed ICAO Coordinated Validation Audit and the safety compliance levels of the industry reached 84% that was 15% higher than the global average rate in post-pandemic period.

Infrastructural Developments

According to the Annual Report of Air Astana Group (2021), the domestic routes have been completely restored and the rising demand for the flights contributed to launches of new domestic destinations with an aim of developing domestic tourism. The new flights were launched to Turkestan, Alakol, Shuchinsk-Borovoe and Balkhash. Overall, the international flight routes have restored 66% of pre-pandemic levels operating in 65 international directions.

Cargo Traffic

Overall, cargo traffic has demonstrated strong growth in 2021 with an increase of 18.7% in cargo ton-kilometers (CTK). Compared with the year 2018, the cargo segment demonstrated an overall increase of 3.5% (Annual Report of Air Astana, 2021). It is significant to mention that since the launch of the cargo services, it was the second record levels of cargo increases. Nevertheless, it is important to note that the performance results of the cargo sector could even be higher unless available cargo ton-kilometers had not decreased by 10.9% in comparison with the results of 2019. Moreover, an increased international traffic has enabled more cargo capacity in Air Astana. In addition, it is important to highlight the freight deliveries as well as conversions have demonstrated strong growth rate of 25.9% (Annual Report of Air Astana, 2021). The demand for the imported goods was high particularly in case of the PPE.

Ongoing Geopolitical Tensions

One of the considerable influences on the airline industry of Kazakhstan was the ongoing military conflict between Ukraine and Russia, which led to the loss of these market segments by the Kazakhstani airline companies resulting in the revenue losses ranging between 8-10% (Annual Financial Report of Air Astana, 2022). Since February 2022, both Air Astana and Fly Arystan suspended their flights to and over Russia and Ukraine (Annual Financial Statements, 2022). As a result, Air Astana with its subsidiary brand, Fly Arystan have lost the revenue of 8% and 2% respectively. Taking into consideration that the global as well as regional airline industry have not been completely recovered from COVID-19, the geopolitical tensions between Ukraine and Russia forced the airlines to suspend their flights and re-direct their flight capacities to other destinations. The suspension of the flights to Russia was mainly due to the removal of the insurance of the flights to the country within the framework of the economic sanctions. Hence, the majority of the insurance companies refused to provide with the insurance the flights to and from Russia (Bartlett, 2022).

Furthermore, the airline industry has experienced the jet fuel shortages due to the imposed economic as well as financial sanctions on the Russian fuel producers, which were the main suppliers of the jet fuel for Air Astana Group. Kazakhstani airlines had to rely on the Russian jet fuel manufacturers due to the low capacity as well as high prices in the domestic markets. The imposed sanctions against Russia increased the complexity of the jet fuel imports into Kazakhstan. Moreover, the economic sanctions increased internal demand for jet fuel in Russia, which was due to its use by Russian airlines (commercial and military).

It is also necessary to note that the geopolitical situation between Russian and Ukraine has influenced on the operational complexities related to the supply of the materials, the aircraft technical maintenance and engineering, the supply of aircraft lubricants as well as other aspects related to the effective operations of aircrafts.

COVID-19 Outlook

Despite the fact that the global pandemic nears to its end, it was one of the main negative factors influencing on both domestic and international travels. Indeed, as of 2020, Air Astana Group reported the overall losses of 94 million USD due to the COVID-19 and related restrictions (Bartlett, 2022). Indeed, it was one of the rare moments when the company reported the losses. The impact of the pandemic was considerable in 2021 influencing on the ability of the company to operate domestically as well. Hence, the company maintained its domestic route quantity at previous levels of 30, whereas the subsidiary Fly Arystan had increased overall number of domestic routes from 21 to 24. The 2021 year was marked with the record high levels of the passenger carriage in the history of the airline with the 6.6 million passengers, which was 79% higher than the 2020 performance. The low-cost subsidiary, Fly Arystan carried out almost half of the total passenger traffic, whose revenues were mainly driven by high domestic demand for flights.

Furthermore, it is important to consider that the COVID-19 was still relevant factor, which forced the company to review its five-year business for 2022-2026 period. In 2022, some of the international routes of the company were challenged by the COVID-19 restrictions in some tourist destinations, while the others continued to re-open and close due to the COVID-19 infection spikes. In 2022, the Chinese market for the Kazakhstani airlines was still closed due to ongoing COVID-19 restrictions.

Jet Fuel Price Surge

The jet fuel costs represent the largest proportion of the operating expenses of Air Astana Group. The ongoing military conflict between Russia and Ukraine contributed towards an increased demand for the crude oil and gas prices throughout 2022. Indeed, International Air Transport Association (IATA) monitors the fuel prices. As it can be observed from the Figure 4, the jet fuel prices have been considerably fluctuating globally:

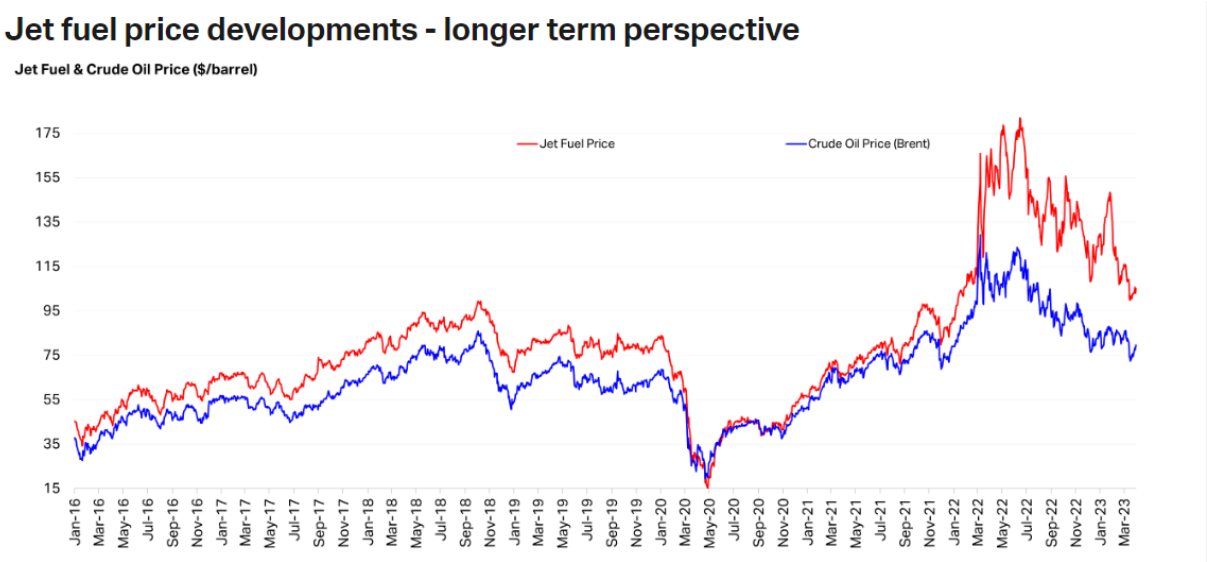

Figure 4: Global Brent Oil Price movements vs. jet fuel price movements (IATA.org, 2023)

As it can be noted from the Figure 4 above, there is a positive correlation between oil and jet fuel prices. The graph demonstrates that in last two years both oil and jet fuel prices have been surging. The peak period was 2022. Taking into account the shortage of imports of jet fuel from Russia in 2022, Air Astana Group has been exposed to the jet fuel price fluctuations considerably. However, to reduce the negative effect of the price fluctuations, the Group implements hedging techniques through implementing the financial derivative instruments. To do so, the Group purchases the Asian call options and enters into contractual agreements with an investment bank.

OVERVIEW OF AIR ASTANA GROUP

Key Performance Indicators

Air Astana Group is a group of companies consisting of Air Astana JSC and Fly Arystan. Fly Arystan is a low-budget airline company and is a subsidiary of Air Astana JSC. The Group operates in both international and domestic routes that are 64 in total.

According to the Annual Report of the Group (2021), the key performance indicators include the followings:

1. The total number of passengers.
2. Total revenue.
3. Load factor.
4. Net profit/Loss
5. Greenhouse gas emissions
6. Net Promoter Score
7. On-time performance
8. CASK [1]
9. Operating Profit

The total passenger numbers are considered as one of the significant KPIs of the company. The following Figure 5 represents information about the total passengers flown in 2019-2021.

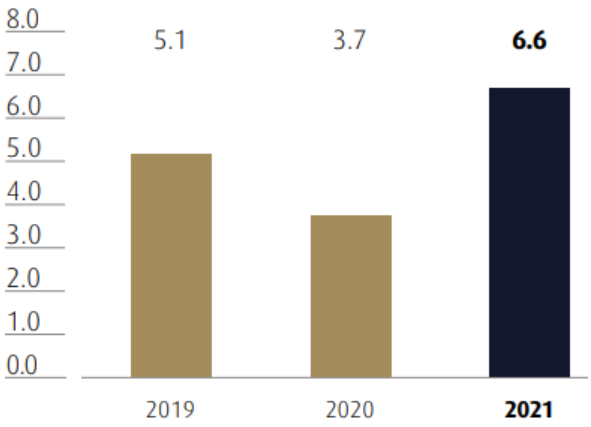

Figure 5: Total number of passengers flown in 2019-2021 (in millions of people) (Annual Report of Air Astana Group, 2021)

The dramatic drop in total passenger traffic in 2020 was related to the COVID-19 pandemic and relevant restrictions. However, in 2021 there was a bounce back effect with the total number of passengers increasing to 6.6 million people surpassing pre-pandemic results in 2019.

[1] CASK (Cost of Available Seat Kilometer) or CASM is a measure commonly used in airline industry that is a unit cost. It is measured in cents and measures the cost of a seat mile being offered. Source: https://skymartsales.com/glossary/cask.php

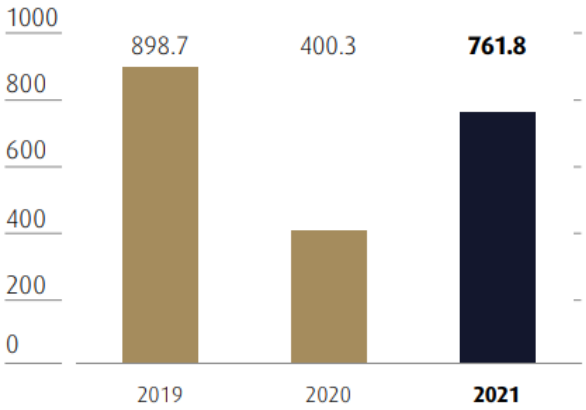

Figure 6: Total revenue trends of Air Astana Group in 2019-2021 (in thousands USD) (Annual Report, 2021)

As it can be noted from Figure 6, there is a positive relationship with the total passenger flown and total revenues leading to the conclusion that the most part of the company's revenues are from the passengers.

Another KPI measuring the operational performance of the Air Astana Group is total load factor. The following Figure 6 represents information about the total load factor:

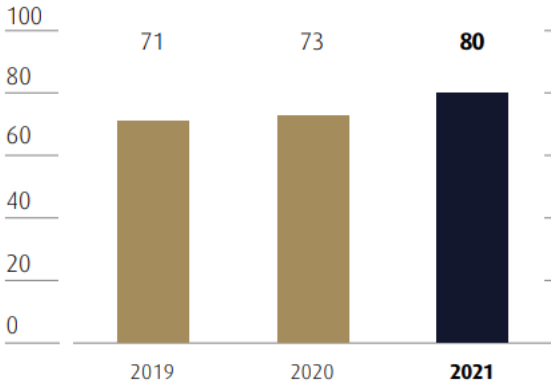

Figure 7: Total load factor in 2019-2021 (in %) (Annual Report, 2021)

By dividing the total number of people by the total number of available seats, the total load factor is calculated. Indeed, the Group has demonstrated an outstanding performance in terms of load factor that upbeat the results of pre-pandemic period with the 80%.

The net profit of the company during the pandemic had considerably decreased as it can be observed in the following Figure 8:

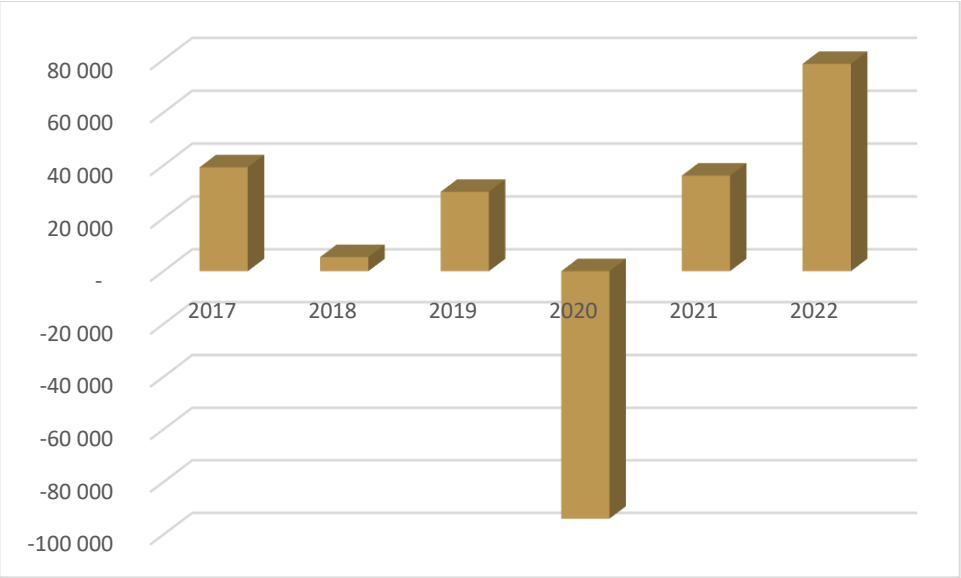

Figure 8: The net profit in 2019-2021 (in million USD)

As it can be observed from the graph above, the company's net profit after taxes in 2021 was equal to 36.1 million USD, which was higher than the pre-pandemic period. It is important to note that Air Astana Group reported the record high levels of net profit in 2022 with 78.414 million USD (Annual Financial Statements, 2022).

Furthermore, the following Figure 9 represents the summary of other performance indicators:

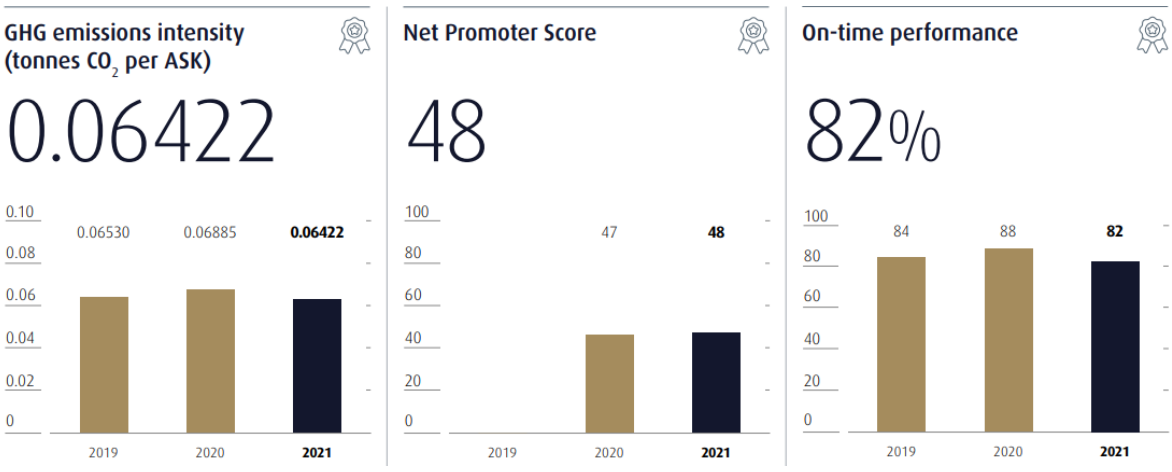

Figure 9: GHG Emissions, Net Promoter Score and On-time Performance Indicators (Annual Report, 2021)

Based on the graph above, it can be concluded that the company's GHG emissions had decreased slightly in 2021 in comparison with 2020 results. On the other hand, the Net Promoter Score had slightly improved by 1. Nevertheless, the Group's on-time performance had decreased considerably from 88% in 2020 to 82% in 2021, which could be related to the increased air traffic. In addition, the CASK or (cost of available set kilometer) also demonstrated slight decrease from 5.78 cents in 2020 to 5.11 cents in 2021.

The following graph demonstrates information about the operating income of the company in 2019-2022.

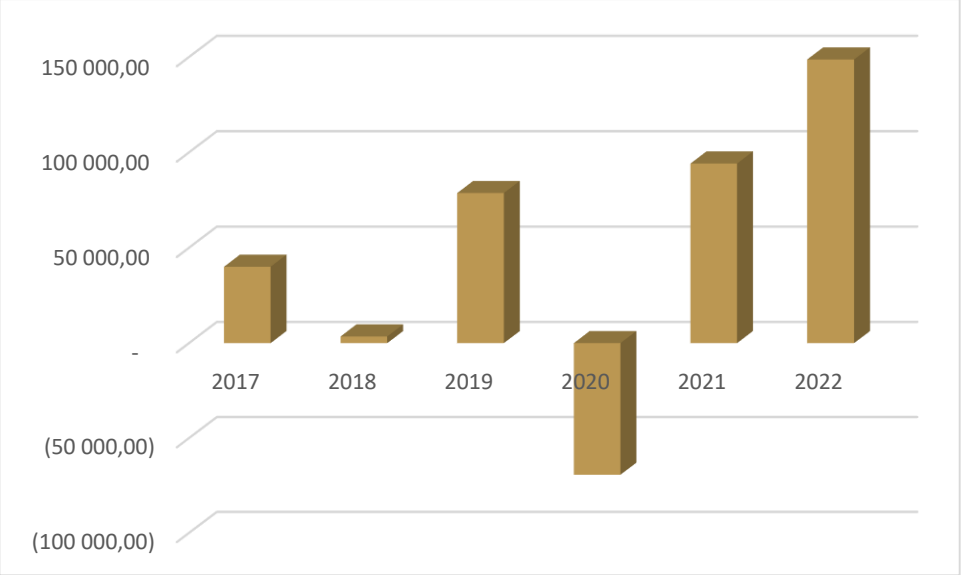

Figure 10: Operating income of Air Astana Group in 2019-2022 (in million USD)

Based on the observation of Air Astana's net profit levels, it can be concluded that the Group's operating income (EBIT) will demonstrate similar trends. As noted from the Figure 9, the operating income levels were peaked in 2022 equaling to 148.715 million USD (Annual Financial Statements, 2022).

Fly Arystan

Fly Arystan is a subsidiary company that belongs to Air Astana JSC. Being founded in 2018, the brand is focused on the low-budget passengers and aims at developing the domestic routes mostly. Currently, the company's fleet consists of Airbus 320 aircrafts. In total, there are

17 aircrafts operating in both domestic and international markets. In total, the company flies to 34 destinations.

In 2022, the company was awarded with a four-star rating making it one of the 5 companies with such rating. As it was mentioned earlier, the company's domestic market has demonstrated strong performance. Indeed, in domestic market, Fly Arystan's market share accounted for 39% and the company's total number of passengers has been steadily increasing as new domestic and international routes were launched.

Future Strategy

Air Astana Group has become the leading airline group in the Central Asia and India, which is supported by its annual recognition in Skytrax awards[2]. The company's future is focused on the commitment to connect Kazakhstan with the rest of Eurasia through provision of true Kazakh hospitality. Moreover, the Group is considered as one of the key drivers of economic relations by connecting the largest landlocked country with the world. The launch of Fly Arystan enabled the Group to increase the domestic mobility inside the country. To achieve this strategy the Group focuses on the following aspects:

1. Responding with the highest possible level of agility.
2. Harnessing the efficiency.
3. Focusing on the service excellence.

There are three main aspects of the future strategy at Air Astana Group in order to achieve its overall corporate strategy.

[2] Skytrax World Airlines Awards is described also as the "Oscars of the aviation industry" and is the top quality-based honor for airlines, serving as a worldwide measurement of excellence. Source: https://skytraxresearch.com/service/airline-of-the-year-awards/

SWOT and PESTLE analysis

SWOT analysis' main findings are summarized on the following Table 2:

Table 2: SWOT analysis summary

Strengths	**Weaknesses**
• Well-established world class passenger service. • Dominant market position as a national flag carrier of Kazakhstan. • Modern aircraft fleet with three types of aircrafts: Boeing, Airbus and Embraer with the maximum of 8 years of exploitation. • International recognition and awards for the excellence. • The strategic partnerships with leading international airlines. • High level of commitment towards CSR and ESG principles. • Strong and effective financial management. • Effectively governed company. • Strong expertise and contribution towards the airline industry development in Kazakhstan. • High level of reliability and safety. • State-of-art airline operations in engineering, maintenance and servicing. • Ab-initio and A66 programs to nurture company's pilots and engineers. • Transparent and effective corporate governance.	• High level of dependence on the limited Kazakhstani market. • High level of vulnerability to political and economic changes as a quasi-governmental organization. • Low level of international presence of the company. • Inflexible pricing strategies that contribute towards uncompetitive prices compared with other rivals. • Limited ability to expand on the regional and international levels. • Limited distance capacity of the aircrafts to reach long-distance destinations.
Opportunities	**Threats**
• The potential expansion into Asian and Middle Eastern markets. • Development of alliances and partnerships with international airlines. • Developing new routes. • De-regulation of the visa regimes in tourist destinations by the Kazakhstani government. • The growth of domestic tourism in Kazakhstan. • Embracing the digital transformation by leveraging on the IT.	• Air Astana faces intense competition by international and regional carriers entering Kazakhstani market. • High level of economic and political instability. • High levels of security and safety risks imposed by the industry. • Intensifying environmental regulations in Kazakhstan. • Increasing jet fuel prices. • Economic sanctions imposed on Russia affecting on the company's operations.

The following Table 3 represents key findings from the PESTLE Analysis of Air Astana Group:

Table 3: PESTLE analysis summary

Political	**Economic**
• Strengthening governmental regulations. • The vulnerability to the political factors and situation in neighboring countries (e.g. Russia, Kyrgyzstan). • The political instability inside the Kazakhstan caused by the domestic, social and economic factors. • Changing diplomatic and political relations with EU and other western countries.	• Rising inflation rates in Kazakhstan. • The growth of Air Astana depends on the growth of the national GDP of the country. • Constant exchange rate fluctuations and devaluation of the national currency. • The dependence of the national economy on oil exports. • Rising competition from the domestic and international airlines.
Social	**Technological**
• Changing demographics and the need to adapt to new generation of passengers both business and leisure. • Technological advancements influencing on the brand perception, marketing communication and other aspects of digital innovations aimed at operational efficiency and customer service. • Constantly changing travel patterns and the demand for new directions. • Changing passenger lifestyles. • Emergence of the middle-income social class.	• The digitalization of the customer services and experience. • The Big Data Analytics. • Constant technological advancements such as new payment systems, new operational systems and platforms. • Cybersecurity and threat issues as the transactions become digital. • Online booking platform and systems with the user friendly and easy to navigate characteristics.
Legal	**Environmental**
• Strengthening of environmental regulation in Kazakhstan. • Changes in the Tax Code and Labor Codes. • Additional controls over the foreign payments to the counterparts. • Strengthening of anti-trust laws and anti-monopoly regulations. • Additional legal requirements on the corporate safety and security. • New legal regulations enhancing customer rights and protection. • International regulations of controlling, monitoring and complying.	• Climate change and GHG emissions requires Air Astana to take further steps to minimize the negative impact of its operations. • The need to address environmental sustainability. • The introduction of ESG (Environmental, Social and Governance) as mandatory. • The potential disasters such as earthquakes: Air Astana's fleet is mostly located in seismically active region (Almaty City).

FINANCIAL VALUATION OF AIR ASTANA GROUP

This section of the research work is intended to analyze the results of market-based and income-based valuation approaches. The section first outlines the general information including the results of the financial ratio analysis, the descriptions of the selected airlines, market-based approach and income-based approach findings. The following Table 3 demonstrates information about the peer companies included in the analysis:

Table 4: Benchmark Companies

Company	Country
Aeroflot Airlines (AFLT)	Russian Federation
American Airlines Group (AAL)	The United States of America
China Southern Airlines (ZNH)	China
Singapore Airlines (SINGY)	Singapore
Turkish Airlines (THYAO)	Turkey

Financial Ratio Analysis

Aiming to analyze the financial performance of the target and selected companies, three types of financial ratios such as the profitability, liquidity and debt ratios were analyzed. The financial ratios were calculated based on the financial information covering the period of 2017-2021 for each company. For some graphs, the average value of the indicators for 5 years was used, and for some graphs individual years was considered. Also, the financial ratios of Air Astana can be found in Appendix 3. The following Figure 10 represents information about the profit margin ratios:

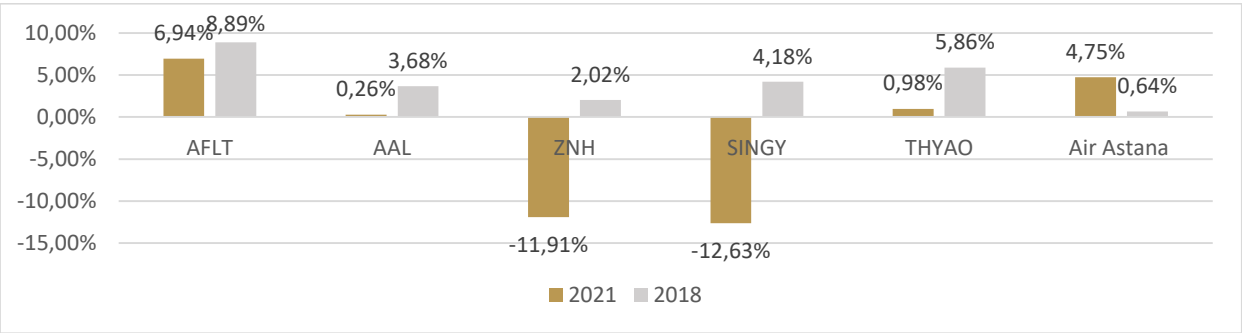

Figure 11: Profit Margin Ratios of Air Astana and Five selected airlines

The profit margins were calculated for 2021 and 2018 separately in order to compare the results before and after the pandemic period. As it can be observed from the graph, out of six companies including Aeroflot, American Airlines, China Southern, Singapore Airlines, Turkish Airlines and Air Astana, Aeroflot showed the highest profit margin result in 2018. Looking at 2021, it can be concluded that Air Astana performed well after the pandemic period, while China Southern and Singapore Airlines demonstrated negative margin profit.

Nevertheless, the analysis of the gross profit margin ratios applying the averaging method demonstrated that Air Astana Group demonstrated the highest ratio out of six companies included in the valuation.

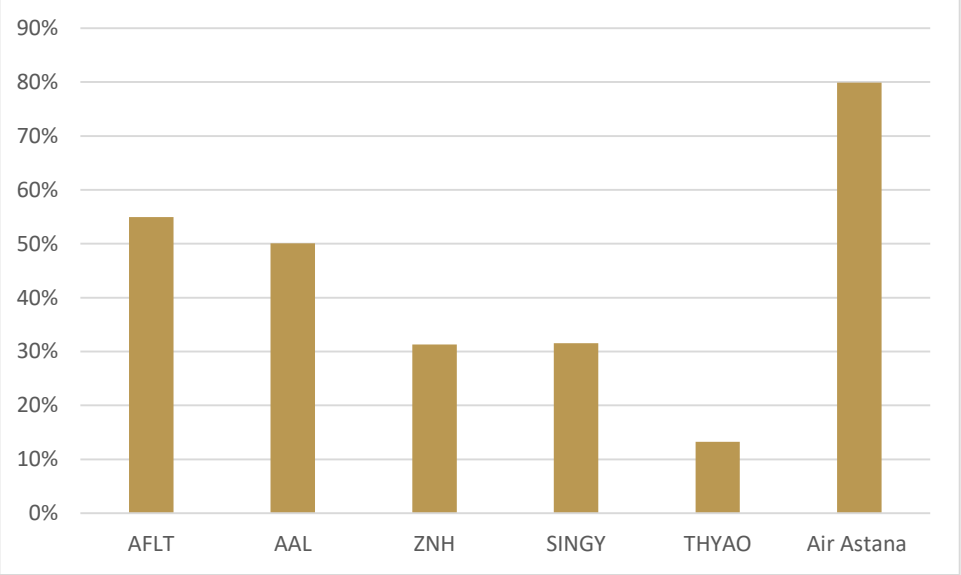

Figure 12: Gross Profit Margin of selected companies vs. Air Astana

Furthermore, the three types of returns such as Return on sales (ROS), Return on Assets (ROA) and Return on Equity were calculated. The following Figure 13 and Figure 14 show ROS and ROA of selected companies:

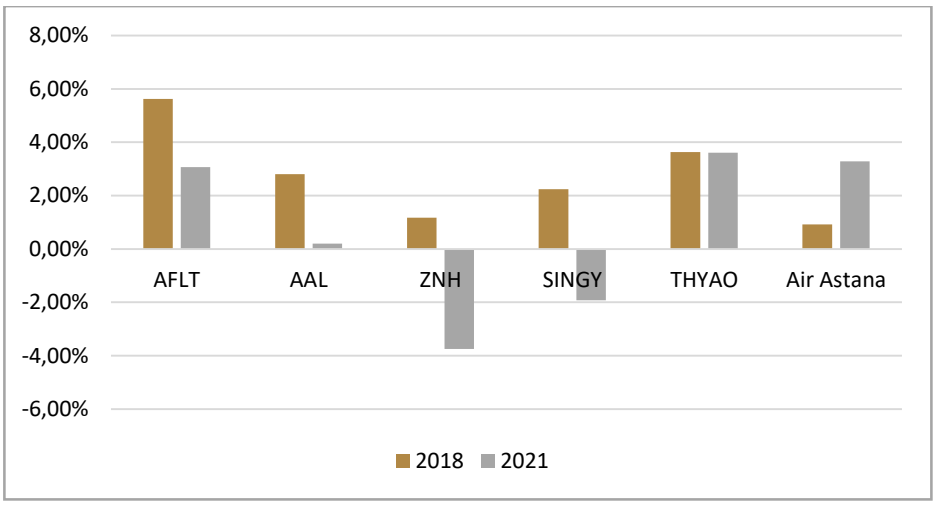

Figure 13: ROA ratios of selected companies

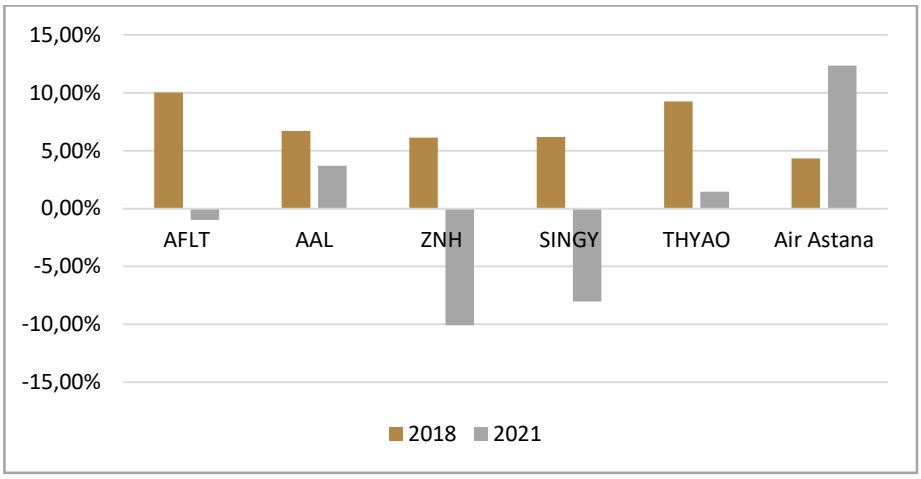

Figure 14: ROS ratios of selected companies

Looking into the financial ratios of six major airlines – Aeroflot, Air Astana, American Airlines, China Southern, Singapore Airlines, and Turkish Airlines – for the pre-pandemic year of 2018 and the post-pandemic year of 2021 the ROA and ROS of these companies were higher in 2018 than in 2021. This is due to the COVID-19 pandemic's effects, which severely hurt the aviation sector in 2021 and resulted in a sharp drop in profitability. On the other hand, 2018 was a pre-pandemic year when the industry was thriving with growth and expansion. The higher ROA and ROS in 2018 were due to strong demand for air travel, stable fuel prices, and lower operating costs. The global economy was performing well, and people had more disposable income to spend

on travel. With fewer competitors than there are now, the competition was also less fierce. In conclusion, these airlines were more profitable in 2018 due to the good operating environment and increasing demand for air travel.

Furthermore, to evaluate the liquidity level of the selected companies in regards to Air Astana Group, three ratios such as Current Ratio, Quick Ratio and Cash ratios were calculated by applying the arithmetic mean covering last five years:

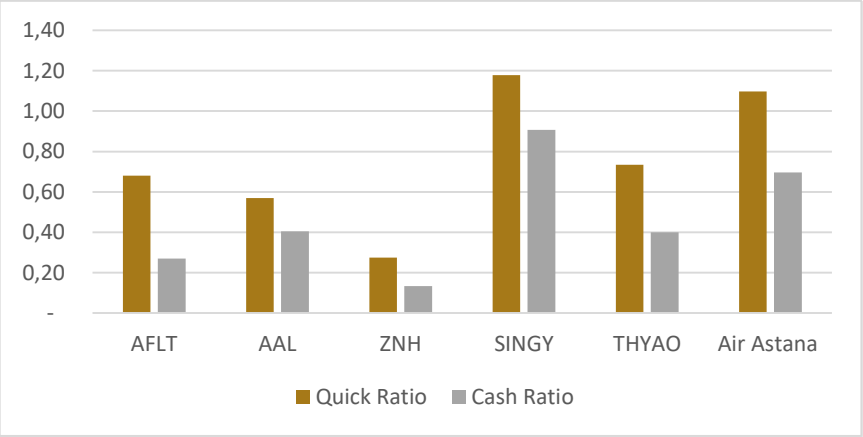

Figure 15: The liquidity ratio analysis of selected companies and Air Astana

According to the liquidity ratio analysis, it is possible to conclude that Air Astana outperforms other companies. For instance, the current ratio of Air Astana Group was higher than 1.2 and the quick ratio was higher than 1. On the other hand, Singapore Airlines (SINGY) maintained the current and quick ratios slightly above 1, while the cash ratio slightly below 1. Turkish Airlines liquidity ratios were lower than 1 and cash ratio was equal to 0.4 in five-year period.

Moreover, the debt ratios were calculated in order to understand the nature of the capital structure in selected companies. As it can be noted from the Figure 15, all of the airlines demonstrated high levels of indebtedness:

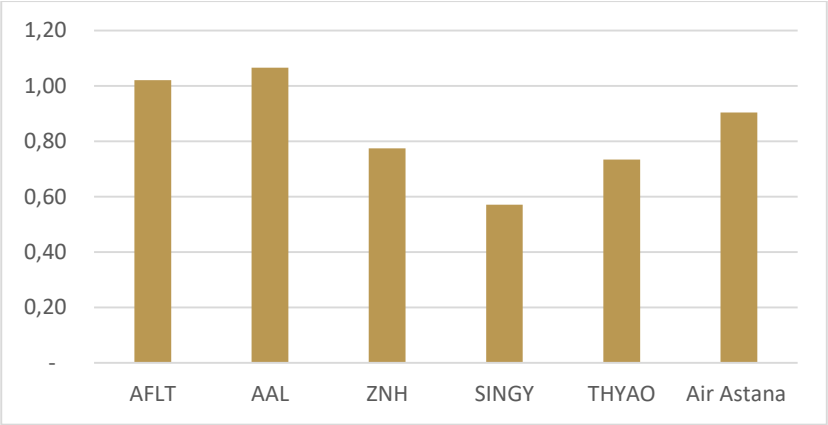

Figure 16: The indebtedness ratio of selected companies and Air Astana

Overall, it can be concluded that selected peer companies and Air Astana shared several similarities. For instance, the ratio analysis demonstrated that all airlines share high level of debts meaning that they tend to prefer debt financing over the equity financing. However, it is necessary to highlight that the majority of the airline liabilities are derived from the aircraft lease obligations that make up the significant share in the debt structure of the respected companies.

Market-based Valuation Approach

Multiples Calculation

Table 5 shows the information about the multiples calculation of the benchmark companies and Air Astana Group. Explanation of the multiples can be found in Financial Evaluation Approaches and Research Methodology parts.

Table 5: Multiplies Calculation

'000 USD	Air Astana	Aerflot	American Airlines	China Southern Airlines	Singapore Airlines	Turkish Airlines	Average
Sales	715 794,00	491 733,00	48 971,00	101 644,00	7 614,80	97 378,00	
EBIT	94 160,00	-4 757,00	1 805,00	-10 238,00	-610,70	1 414,00	
NI	36 159,00	34 106,00	127,00	-12 106,00	-962,00	959,00	
Depreciation	120 832,00	120 506,00	2 298,00	24 241,00	1 999,60	76,00	
EBITDA	214 992,00	115 749,00	4 103,00	14 003,00	1 388,90	1 490,00	
Assets	1 102 193,00	64 716,00	64 716,00	323 211,00	7 868,60	26 537,00	
Cash and Cash Equivalent	226 357,00	8 965,00	8 965,00	21 456,00	21 456,00	2 682,00	
Interest-bearing Debt (Book Value)	789 179,00	815 484,00	37 128,00	149 190,00	14 430,10	14 020,00	
Equity (Book Value)	63 974,00	-146 438,00	-5 799,00	67 851,00	22 800,40	6 836,00	
Market Value of Debt	710 261,10	733 935,60	33 415,20	134 271,00	12 987,09	12 618,00	
Market Value of Equity	0,00	67 036,26	10 123,96	574 213,15	17 063,07	189 888,00	
Total shares outstanding	17,00	2 396,72	650,64	16 948,44	2 967,49	1 380,00	
Stock Price (Yearly average)	0,00	27,97	15,56	33,88	5,75	137,60	
EPS	2 127,00	14,23	0,195	-0,71	-0,324	0,69	2,82
P/E	1,0	2,0	79,72	-47,43	-17,74	198,01	42,90
P/B	2	0	-1,75	8,46	0,75	27,78	6,96
P/S	3	0	0,21	5,65	2,24	1,95	2,04
EV/EBITDA	2	7	8,43	49,06	6,19	134,11	40,93
EV/EBIT	5	-166	19,15	-67,11	-14,07	141,32	-17,44
EV/Sales	1	2	0,71	6,76	1,13	2,05	2,45

Based on the calculated peer company multiplies, the following implied share price was calculated:

Table 6: Implied Enterprise Value by Market-based approach valuation

Valuation Implied by EV (in thousands, except per share price)							
Item	Target Company	Multiple	Implied Enterprise Value for the Target	Less: Net Debt	Implied Equity Value for the Target	Total outstanding shares	Implied Share Price for the Target
EBIT	94 160	- 17,4	- 1 642 119	483 904	- 2 126 024	1 700 000	- 1,3
EBITDA	214 992	40,9	8 798 752	483 904	8 314 847	1 700 000	4,9
Sales	715 794	2,5	1 754 622	483 904	1 270 718	1 700 000	0,7
							$1,5

Table 7: Implied Share price by Market-based approach valuation

Valuation Implied by Share Price (in USD)			
Item (per Share)	Target Company	Multiples	Implied Share Price for the Target
Earnings	$1,00	44,01	$44,01
Book Value	$2,00	(15,95)	-$31,91
Sales	$3,00	1,56	$4,67
			$5,6

Overall, it can be concluded that overall share price of Air Astana by the market-based valuation approach was equal to 7.05 USD per share. The market-based valuation approach has demonstrated that the average implied share price was equal to 7.05 USD or 3 149.86 KZT per share (1 USD= 446.79 KZT) (National Bank Currency, 06.04.2023). Through the results, it may be concluded that the market share price of Air Astana was relatively lower in comparison with peer companies. The main reason for these differences in a prices per share was that the benchmark of the compared companies with Air Astana in terms of volume and cash turnover is several times larger. Also, the air companies have different market shares. For instance, Air Astana do not have a lot of international flights compared to other companies, which directly affects to its revenue and financial indicators.

Income-based Valuation Approach

As it was already mentioned, two most important elements of income-based valuation method are an accurate cash flow estimation and determination the discount rate to be implemented in determining the company's value. Moreover, it is necessary to highlight that the Free Cash Flow estimations were made for short and long-terms. With short term FCF and long term FCF, it is possible to look at the forecast in the long and short term and compare their results with each other. For short-term FCF estimations, the main advantage is the current and new information taken over the past few years. This means that the calculations will be more up-to-date and closer to the present day. The peculiarity of long-term FCF is that to calculate the Total Revenue the data of passenger traffic was used. The short term FCF projections were based on the three-year financial information (Table 8). The following table contains a reference to tables with the formulas used.

REFERENCE TABLE – INSTRUCTION

Steps	Reference	Formulas (is applicable)
Step 1. Calculation of operating data	Table 8	1.CAGR = SQRT (Sales 2021/ Sales 2019)-1 2.% Growth = CAGR + 0,005 3.Sales 2022E = Sales 2021* (1+CAGR)
Step 2 Historical Working Capital Data	Table 9	Day Sales Outstanding = Accounts Receivable/ Sales * 365 AR 2022E= Sales 2022/ 365 * DSO (average) Net Working Capital= Total Current Assets – Total Current Liabilities
Step 3 Calculation of FCF Projection	Table 10	Sales 2022 = Sales 2022E* (1+ % Growth) FCF= EBIAT + D&A +CAPEX + NWC
Step 4 Projection of Working Capital	Table 11	Increase / Decrease of NWC = - NWC 2019-NWC 2022E
Step 5 Calculation of % of total Capitalization	Table 12	% of Total Debt = (Loans (non-current) + Lease Liabilities (non-current) + Loans (current) + Lease Liabilities (current)) / (Total Equity + Total Current Liabilities+ Total Non-current Liabilities) Next, find the average for 5 years
Step 6 Calculation of Predicted Leveraged Beta	Table 13	1. Unlevered Beta= Predicted Leveraged Beta (Peer Company) / (1+(1-Marginal Tax Rate) * (Debt/Equity)) 2. Unlevered Beta (Air Astana) = Average of Unlevered Betas of Peer Companies

		3. Predicted Leveraged Beta= Unlevered Beta (Air Astana) * (1+(1-Marginal Tax Rate) * (Debt/ Equity))
Step 7 Calculation of Cost of Equity	Table 14	Cost of Equity=Risk-free rate + Market risk premium*Levered Beta + Size Premium + Country Risk Premium
Step 8 Calculation of WACC	Table 15	WACC = Debt-to-Total Cap* After tax cost of Debt+ Equity-to-Total Cap * Cost of Equity
Step 9 Exit Multiple and Perpetuity Growth Model	Table 16	Terminal Value = Terminal Year EBITDA * Multiple (EV/EBITDA) Implied Growth Rate= (Terminal Value * WACC – Terminal Year FCF) / (Terminal Value + Terminal Year FCF)
Step 10 Present Value Estimation	Table 17	Discount Factor = 1/ (1+ WACC) ^n PV of FCF= Discount Factor * Unlevered FCF PV of Terminal Value= Discount Factor * Terminal Value
Step 11 Calculation of share price	Table 18	Enterprise Value = PV of FCF + PV of TV Implied Share Price = (Enterprise Value – Total Debt + Cash and Cash Equivalent) / № of Shares Outstanding

Table 8: Operating Data of Air Astana Group 2019-2021

Air Astana Historical Operating Data					
	Fiscal Year Ending December 31			CAGR/AVG	
(in 000 USD)	2019	2020	2021	('19 - '21)	2022E
Operating Data					
Sales	898 729	400 264	761 838	-7,9%	701 422,3
% Growth	N/A	-55,5%	90,3%		-7,4%
Cost of Goods Sold	489 922	235 004	371 515		200 606,5
% Sales	54,5%	58,7%	48,8%	54,0%	54,0%
Gross Profit	408 807,0	165 260,0	390 323,0		500 815,8
% Margin	45,5%	41,3%	51,2%		
Selling, General & Administrative	39 436	40 169	28 259		29 967
% Sales	4,4%	10,0%	3,7%	6,0%	6,0%
EBITDA	160 054,0	31 721,0	214 992,0		470 849
% Margin	17,8%	7,9%	28,2%		
Depreciation & Amortization	81 355	101 035	120 832		141 033,1
% Sales	9,1%	25,2%	15,9%	16,7%	16,7%
EBIT	78 699	-69 314	94 160		329 815,7
% Margin	8,8%	-17,3%	12,4%		
Taxes	11 763	-22 703	8 831		
Capex	443 541,0	188 954,0	137 920,0		
% Sales	49,4%	47,2%	18,1%	38,2%	

The aforementioned financial information is relevant to the income statement of the Air Astana Group. Furthermore, to estimate the free cash flows include working capital data, which is summarized in the following Table 9.

Table 9: Historical Working Capital Data of Air Astana Group 2019-2021.

Air Astana Summary Historical Working Capital Data					
(in 000 USD)	Fiscal Year Ending December 31			Average	
Working Capital data	2019	2020	2021	('19 - '21)	2022E
Current Assets					
Accounts Receivable	33 096	10 220	14 134		18 918
Days Sales Outstanding (DSO)	13,4	9,3	6,8	9,8	
Inventory	50 001	46 371	51 555		29 298
Days Inventory Held (DIH)	37,3	72,0	50,7	53,3	
Prepaid Expenses and Other	34 475	18 432	17 722		507,28
% Sales	3,8%	4,6%	2,3%	3,6%	
Total Current Assets	117 572,0	75 023,0	83 411,0		48 723
Current Liabilities					
Accounts Payable	92 924	39 331	62 989		35 212
Days Payable Outstanding (DPO)	69,2	61,1	61,9	64,1	
Accrued Liabilities	105 331	75 645	97 970		101 656
% Sales	11,7%	18,9%	12,9%	14,5%	
Other Current Liabilities	121 611	243 349	203 881		236 357
% Sales	13,5%	60,8%	26,8%	33,7%	
Total Current Liabilities	319 866,0	358 325,0	364 840,0		373 224,3
Net Working Capital	(202 294,0)	(283 302,0)	(281 429,0)		(324 500,9)
% Sales	-22,5%	-70,8%	-36,9%		
(Increase)/Decrease in NWC		(81 008,0)	1 873,0		(43 071,95)

Based on these measures further Free Cash Flows were developed for the five-year period.

Table 10: FCF Projection for Air Astana Group

Projection Period for Air Astana Operating Activity						
						Margin
(in 000 USD)	2022	2023	2024	2025	2026	%
Operating Data						
Sales	649 305	604 306	565 448	531 915	503 031	
% Growth	*-7,4%*	*-6,9%*	*-6,4%*	*-5,9%*	*-5,4%*	28,6%
Cost of Goods Sold	185 701	172 831	161 718	152 128	143 867	
% Sales	*28,6%*	*28,6%*	*28,6%*	*28,6%*	*28,6%*	
Gross Profit	463 604	431 475	403 730	379 788	359 164	71,4%
% Margin	*71,4%*	*71,4%*	*71,4%*	*71,4%*	*71,4%*	
Selling, General & Administrative	27 740	25 818	24 158	22 725	21 491	4,3%
% Sales	*4,3%*	*4,3%*	*4,3%*	*4,3%*	*4,3%*	
EBITDA	435 863	405 657	379 572	357 063	337 673	67,1%
% Margin	*67,1%*	*67,1%*	*67,1%*	*67,1%*	*67,1%*	
Depreciation & Amortization	130 554	121 506	113 693	106 951	101 143	20,1%
% Sales	*20,1%*	*20,1%*	*20,1%*	*20,1%*	*20,1%*	
EBIT	305 310	284 151	265 879	250 112	236 530	47,0%
% Margin	*47,0%*	*47,0%*	*47,0%*	*47,0%*	*47,0%*	
Taxes (29,7%)	7 527	7 005	6 555	6 166	5 831	1,2%
EBIAT	297 783	277 146	259 325	243 946	230 699	
Plus: D&A	130 554	121 506	113 693	106 951	101 143	
Less: Capex	248 171	230 972	216 120	203 303	192 263	
Less:ΔNWC	(331570)	(490)	(423)	(365)	(314)	
Free Cash Flow	344 937	629 134	588 714	553 835	523 791	

In addition, it is necessary to consider the development of the future Working Capital trends, which are demonstrated in the following Table 11:

Table 11: Project Working Capital of Air Astana Group

Projection Period for Air Astana Working Capital					
(in 000 USD)					
Working Capital data	**2019**	**2020**	**2021**	**2022**	**2023**
Current Assets					
Accounts Receivable	14 943	13 907	13 013	12 241	11 577
Days Sales Outstanding (DSO)	*8,4*	*8,4*	*8,4*	*8,4*	*8,4*
Inventory	4 274	3 977	3 722	3 501	3 311
Days Inventory Held (DIH)	*8,4*	*8,4*	*8,4*	*8,4*	*8,4*
Prepaid Expenses and Other	14 934	13 899	13 005	12 234	11 570
% Sales	*2,3%*	*2,3%*	*2,3%*	*2,3%*	*2,3%*
Total Current Assets	**34 151**	**31 784**	**29 740**	**27 976**	**26 457**
Current Liabilities					
Accounts Payable	25 133,2	23 391,4	21 887,3	20 589,3	19 471,3
Days Payable Outstanding (DPO)	*49,4*	*49,4*	*49,4*	*49,4*	*49,4*
Accrued Liabilities	1 298,6	1 208,6	1 130,9	1 063,8	1 006,1
% Sales	*0,2%*	*0,2%*	*0,2%*	*0,2%*	*0,2%*
Other Current Liabilities	649,3	604,3	565,4	531,9	503,0
% Sales	*0,1%*	*0,1%*	*0,1%*	*0,1%*	*0,1%*
Total Current Liabilities	**27 081,1**	**25 204,3**	**23 583,6**	**22 185,1**	**20 980,4**
Net Working Capital	**7 069,4**	**6 579,5**	**6 156,4**	**5 791,3**	**5 476,9**
% Sales	1,1%	1,1%	1,1%	1,1%	1,1%
(Increase)/Decrease in NWC	**(331570)**	**(490)**	**(423)**	**(365)**	**(314)**

While the cash flow estimations were made, the next step is to find the Weighted Average Cost of Capital. In doing so, the following information from the financial statements of Air Astana Group were used:

Table 12: Main Financial Information

(in thousands of USD)	Amount	% of total Capitalization	Maturity
Cash and Cash Equival	226 357		
Total Debt	789 179,00	64,70%	
Shareholders' Equity	63 974	35,30%	
Total Capitalization	853 153,00	100,00%	
Net Debt	562 822		

Based on the financial above, the weighted average Betas of the peer companies were developed:

Table 13: Comparable Companies Unlevered beta

Comparable Companies Unlevered Beta *in thousands USD*	Predicted Levereged Beta	Market Value of Debt	Market Value of Equity	Debt - to - Equity	Marginal Tax rate	Unlevered Beta
Aerflot	**0,744**	733 935,60	67 036,3	**113,20%**	**20,00%**	0,39
American Airlines	**1,54**	33 415,20	10 124	**108,96%**	**25,00%**	0,85
China Southern Airlines	**1,1**	134 271,00	574 213	**79,01%**	**25,00%**	0,69
Singapure Airlines	**0,834**	12 987,09	17 063	**53,15%**	**17,00%**	0,58
Turkish Airlines	**0,748**	12 987,09	189 888	**53,15%**	**23,00%**	0,53
Mean	**0,99**					0,61
Median	0,834					0,58
Target Company (Relevered beta)	**0,92**	64,70%	35,30%	64,70%	20,00%	0,61

The projected cost of equity was computed using the Capital Asset Pricing Model in the way shown below:

Table 14: Cost of Equity

Cost of Equity	
Risk-free rate	3,39%
Market Risk premium	9,23%
Levered Beta	0,92
Country risk premium	3,29%
Size Premium	0%
Cost of Equity	15,19%

The next, it the WACC was derived from the following inputs:

Table 15: WACC Calculation

WACC Calculation	
Target Capital Structure	
Debt-to-Total Cap	64,70%
Equity-to-Total Cap	35,30%
Cost of Debt	7,73%
Tax Rate	20,00%
After tax cost of Debt	6,18%
Cost of Equity	15,19%
WACC	9,4%

Furthermore, the next step was to calculate Exit Multiple Method and Perpetuity Growth Models, which are summarized on the following Table 16:

Table 16: Exit Multiple and Perpetuity Growth Model

Exit Multiple Method	
(in thousands USD)	
Terminal Value using EMM	
Terminal Year EBITDA (2026E)	**337 673**
Exit Multiple	8,43
Terminal Value	**2 845 422**
Implied Perpetuity Growth Rate	
Terminal Year FCF (2026E)	**523 791**
Discount Rate	9,4%
Terminal Value	**2 845 422**
Implied Growth Rate	**-7,64%**

Perpetuity Growth Model	
(in thousands USD)	
Calculation of Terminal Value using PGM	
Terminal Year FCF (2026E)	523791
WACC	9,4%
Perpetuity Growth Rate	-7,6%
Terminal Value	**2 845 422**
Implied Exit Multiple	
Terminal Value	**2 845 422**
Terminal Year EBITDA (2021E)	**337 673**
WACC	9,4%
Implied Exit Multiple	**8,43**

After calculation of the Exit Multiple Model and Perpetuity Growth model, the obtained information was used to measure the discounted cash flows:

Table 17: Present Value Estimation

Present Value and Determine Valuation						
(in thousands USD)						
		Projection Period				
		2022	**2023**	**2024**	**2025**	**2026**
Unlevered FCF		**344 937**	**629 134**	**588 714**	**553 835**	**523 791**
WACC	9,4%					
Discount Factor		0,91	0,84	0,76	0,70	0,64
Present Value of FCF		**315 405**	**526 018**	**450 081**	**387 164**	**334 812**
PV of Terminal Value (EMM)						**1 818 821**

Finally, the enterprise value as well as implied share prices were calculated by combining all the variables above:

Table 18: EV and Implied Equity Value and Share Price (in USD)

Enterprise Value	
PV of FCF	**2 013 480**
PV of TV	**1 818 821**
% of Enterprise Value	47,5%
Enterprise Value	**3 832 301**

Implied Equity Value and Share Price	
Enterprise Value	3 822 531
Less: Total Debt	**789 179**
Less: Preferred Securities	0
Less: Non-controlling Interest	0
Plus: Cash and Equivalent	226 357
Implied Equity Value	3 259 709
Number of shares outstanding	1 700 000
Implied share price	**$1,92**

According to the income-based valuation approach, the implied share price was way lower and equaled to 1.92 USD or 857.83 KZT per share. However, the application of the long-term FCFs based on the alternative forecasting method revealed that the implied share price of the company was equal to 22.15 USD or 9 896.39 KZT per share (1 USD= 446.79 KZT) (National Bank Currency, 06.04.2023). Therefore, it leads to the conclusion that the income-based valuation approach's effectiveness depends on the future cash flow forecasting assumptions as well as techniques used to measure the future inflows.

CONCLUSION

In conclusion, the current research work was intended to prepare the financial evaluation of the Air Astana Group and evaluate an enterprise value by applying income-based and market-based valuation approaches.

According to the findings, the market-based approach has provided with more benchmark-based results. There, the financial performance as well as enterprise value were derived from the evaluation of the peer companies including Singapore Airlines, Aeroflot, China Southern Company, American Airlines and Turkish Airlines representing various markets. Based on the

market-based valuation approach, the implied share price was equal to 7.05 USD or 3 149.86 KZT per share (1 USD= 446.79 KZT) (National Bank Currency, 06.04.2023).

On the other hand, income-based valuation approach was based on the future cash flows that were forecasted by direct linear methods and alternative approach based on the estimation of the revenue/passenger rates. The results were distinct. For instance, the implied share price based on the linear and short-term cash flows was equal to 1.92 USD per share. On the other hand, long-term future cash flows for ten-year period provided with the implied share price 22.15 USD or 9 896.39 KZT per share (1 USD= 446.79 KZT) (National Bank Currency, 06.04.2023).

Considering the obtained results on the price of Air Astana shares can be concluded that the price per share of 1.92 USD, is the closest to reality since the linear method in the income-based approach is more acceptable and has the least limitations and shortcomings. For example, the share price obtained by the market-based approach is less realistic, due to the fact that the selected companies for comparison exceed in cash turnover Air Astana. As for the long-term cash flow based on passenger traffic data, it is worth adding that Air Astana Group practices a system of flexible prices for flights, respectively, this makes the forecast less precise. Also, the aviation industry market is unpredictable and very sensitive to external factors, so a short-term forecast is more likely than a long-term forecast to coincide with real data in the future.

Based on all the results Air Astana JSC is worth investing in, as the company continues to develop and increases the number of flights, respectively, and the demand and the price per share will grow. Also, the company is just recovering from the covid period. In addition, referring to the words of the former chairman of Samruk-Kazyna, Satkaliev Almasadam Maidanovich, Air Astana is one of the most prepared subsidiaries of Samruk-Kazyna for the IPO (inform.kz, 2022).

POTENTIAL LIMITATIONS AND FUTURE RESEARCH IMPLICATIONS

Potential Limitations

The current research project focused on the application of the internationally accepted methods of an enterprise valuation. However, the work is not free from the potential limitations that have to be addressed by the research team. Therefore, the following are potential limitations as per authors' opinions and observations:

The market-based valuation approach considered the companies with turnover and operations several times higher than the target company. In other words, selected companies for developing market-based valuation were way larger than Air Astana, which influenced on the multiple indicators. The key challenge experienced in appropriate companies was finding the companies with similar size, nature of operations and fleet size as such companies are not quoted on the stock markets.

Second potential limitation was related to the retrospective nature of the cash flow projections made in income-based valuation approach. In fact, airline company is highly influenced by the international business environment and quite often retrospective forecasts may not be applicable to predict the future patterns of the financial performance of the Air Astana.

Thirdly, the industry specifics and characteristics had to be addressed in order to obtain more realistic picture of the risk-return tradeoff. Comprehensive analysis of industrial specifics would have provided with useful information about the additional sources of risks that have to be taken into account in discounting.

The limitations discussed above represent a ground for a series of further in detail research related to the topic of IPO experience within airline industry.

Future Research Implications

It is necessary to address the future research implications arising from current diploma project. The following implications are made:

1. The future research work should be based on the mixed research methodology to include not only financial valuation of a company, but also the analysis of IPO prospects, press releases as well as interviews from the top management in order to gain complete information.
2. Secondly, the future research works shall be based on the incorporation of the potential risks associated with IPO proceedings as well as benefits. The analysis of the potential risks will provide with the information about post-IPO performance outlook of the companies.
3. Thirdly, it would be quite interesting to incorporate information about the current landscape of IPO and financial market development, investment activities through comparison of the IPO processes in Kazakhstan with the ones conducted in developed markets such as the United States or United Kingdom. This would provide with beneficial information in determining the differences as well as challenges the companies experience by undertaking IPO.

REFERENCES

AirAstana.com (2021). *The Annual Report 2021*. https://airastana.com/Portals/2/About-Us/Corporate-Governance/Annual-Reports/2021%20annual%20report/Air%20Astana%20AR21_ENG_WEB.pdf?ver=2022-07-19-080227-910

AirAstana.com (2022). *The Annual Financial Statements 2022*. https://airastana.com/Portals/2/About-Us/Corporate-Governance/Financial-Statements/FS_AA_USD_2022_signed_with_remark%20(2).pdf

Bartlett P. (2022). *Kazakhstan's Air Astana flies above pandemic turbulence.* https://asia.nikkei.com/Editor-s-Picks/Interview/Kazakhstan-s-Air-Astana-flies-above-pandemic-turbulence

Business Information Centre kapital.kz (2022). *What is an IPO and how to make money from it?* https://kapital.kz/finance/109532/chto-takoye-ipo-i-kak-na-nem-zarabotat.html

DeCress A. (2021). Part 3: *Understanding Your Business Valuation – Approaches and Discounts*. https://www.marcumllp.com/insights/understanding-your-business-valuation-approaches-and-discounts#:~:text=There%20are%20three%20approaches%20to,employ%20in%20valuing%20the%20business.

Deev O. (2011). Methods of bank valuation: a critical overview. *Financial Assets and Investing*, pp.33-34.

Fernando J. (2020). Market Approach: *Definition and How It Works to Value anAsset.* https://www.investopedia.com/terms/m/market-approach.asp

Goh C. F., Rasli, A., Dziekonski K. & Khan S. U. R. (2015). Market-based Valuation Multiples: *Evidence from Agribusiness Sector. Pertanika Journal of Social Sciences & Humanities*, 23(1).

Gordon J. (2022). *Income-Based Valuation Methods-Explained.* https://thebusinessprofessor.com/en_US/business-personal-finance-valuation/income-based-valuation-approaches

Hayes A. (2023). Valuing a Company: *Business Valuation Defined with 6 methods.* https://www.investopedia.com/terms/b/business-valuation.asp

Holton G. A. (2004). Defining risk. *Financial analysts journal*, 60(6), pp.19-25.

IATA.org. (2023). *The Global Jet Fuel Price Outlook.* https://www.iata.org/en/publications/economics/fuel-monitor/

Kanbekova G. (2013). *Peculiarities of using the net asset method in business valuation.* https://scienceforum.ru/2013/article/2013007007

Kassymova A., (2022). *Air Astana's IPO postponed.* https://www.inform.kz/ru/vyhod-na-ipo-eyr-astany-perenositsya_a3949189/amp

Kiss A. (2015). *Implementation of corporate valuation techniques in practice.*
National Bank Currency (2023). Retrieved from April 6, 2023.

https://nationalbank.kz/ru/exchangerates/ezhednevnye-oficialnye-rynochnye-kursy-valyut/report?rates%5B%5D=5&beginDate=2023-03-01&endDate=2023-04-30

Sean R. Saari (2017). The Income Approach to Valuation – Discounted Cash Flow Method. https://www.marcumllp.com/insights/the-income-approach-to-valuation-discounted-cash-flow-method

Shrieves R. E. & Wachowicz Jr J. M. (2001). *Free cash flow (FCF), economic value added (EVA™) and net present value (NPV): a reconciliation of variations of discounted-cash-flow (DCF) valuation.* The engineering economist, 46(1), pp.33-52.

Schmidt J. (2023). *Three Financial Statements.* https://corporatefinanceinstitute.com/resources/accounting/three-financial-statements/

APPENDIX

APPENDIX 1

Air Astana Group Balance Sheet (airastana.com, 2021).

'000 USD	31.12.2017	31.12.2018	31.12.2019	31.12.2020	31.12.2021
ASSETS					
Non-current assets					
Property, plant and equipment	261 754,00	255 007,00	617 193,00	705 112,00	722 200,00
Intangible assets	2 939,00	2 164,00	1 695,00	1 646,00	1 528,00
Prepayments	8 086,00	14 654,00	12 069,00	12 353,00	16 299,00
Guarantee deposits	19 636,00	19 170,00	16 732,00	20 410,00	17 974,00
Deferred tax assets	0,00	0,00	0,00	8 771,00	2 711,00
Trade and other receivables	3 924,00	4 059,00	3 240,00	3 285,00	3 611,00
Total	296 339,00	295 054,00	650 929,00	751 577,00	764 323,00
Current assets					
Inventories	38 613,00	44 965,00	50 001,00	46 371,00	51 555,00
Prepayments	29 390,00	25 134,00	31 022,00	15 386,00	26 534,00
Income tax prepaid	738,00	1 336,00	895,00	3 266,00	2 630,00
Trade and other receivables	25 517,00	26 633,00	33 096,00	10 220,00	14 134,00
Other taxes prepaid	18 086,00	22 665,00	33 346,00	15 166,00	7 709,00
Guarantee deposits	34 874,00	31 839,00	16 629,00	5 814,00	1 568,00
Bank deposits	5,00	0,00	0,00	0,00	0,00
Cash and bank balances	148 181,00	132 826,00	176 442,00	201 354,00	226 357,00
Other financial assets	0,00	118,00	234,00	0,00	7 383,00
	295 404,00	285 516,00	341 665,00	297 577,00	337 870,00
Total assets	591 743,00	580 570,00	992 594,00	1 049 154,00	1 102 193,00
EQUITY AND LIABILITIES					
Equity					
Share capital	17 000,00	17 000,00	17 000,00	17 000,00	17 000,00
Share capital	-9 324,00	-9 324,00	-9 324,00	7 527,00	7 527,00
Additional paid-in capital				147,00	147,00
Functional currency transition reserve				-9 324,00	-9 324,00
Foreign currency translation reserve				0,00	0,00
Reserve on hedging instruments, n	-71 465,00	-62 770,00	-53 845,00	-44 686,00	-35 278,00
Retained earnings	150 552,00	143 746,00	149 350,00	55 417,00	91 576,00
Total equity	86 763,00	88 652,00	103 181,00	18 407,00	63 974,00
Non-current liabilities					
Loans	10 519,00	7 751,00	6 430,00	53 004,00	4 759,00
Lease liabilities	280 797,00	241 033,00	495 286,00	572 322,00	580 539,00
Deferred tax liabilities	11 021,00	16 455,00	12 763,00	0,00	0,00
Employee benefits		0,00	1 219,00	1 559,00	1 625,00
Provision for aircraft maintenance	60 510,00	38 623,00	53 849,00	45 537,00	86 456,00
Total Non-Current Liabilities	362 847,00	303 862,00	569 547,00	672 422,00	673 379,00
Current liabilities					
Loans	1 630,00	1 405,00	10 395,00	111 009,00	57 527,00
Lease liabilities	39 926,00	40 494,00	111 216,00	132 340,00	146 354,00
Deferred revenue	48 434,00	52 731,00	67 918,00	38 112,00	57 260,00
Provision for aircraft maintenance	13 260,00	48 613,00	37 413,00	37 533,00	40 710,00
Trade and other payables	38 883,00	44 813,00	92 924,00	39 331,00	62 989,00
Other financial liabilities	0,00	0,00	0,00	0,00	0,00
Total Current Liabilities	142 133,00	188 056,00	319 866,00	358 325,00	364 840,00

APPENDIX 2

Air Astana Group Income Statement (airastana.com, 2021)

'000 USD	2017	2018	2019	2020	2021
Revenue and other income					
Passenger revenue	718 178	808 176	824 952	358 413	715 794
Cargo and mail revenue	19 666	20 703	21 145	24 561	33 570
Other revenue	21 215	11 982	47 952	11 033	7 846
Gain from sale and leaseback transaction	8 478	-	4 680	6 257	4 628
Total revenue	767 537	840 861	898 729	400 264	761 838
Operating expenses					
Depreciation and amortisation	- 27 009	- 25 634	- 81 355	- 101 035	- 120 832
Fuel and oil costs	- 183 518	- 231 316	- 207 599	- 89 212	- 144 571
Employee costs	- 71 103	- 80 014	- 103 139	- 72 650	- 104 757
Handling, landing fees and route charges	- 103 164	- 112 251	- 109 402	- 47 225	- 70 097
Engineering and maintenance	- 69 173	- 86 278	- 94 407	- 43 198	- 94 582
Passenger service	- 86 635	- 91 016	- 91 527	- 36 565	- 60 894
Selling costs	- 40 461	- 40 742	- 42 360	- 17 093	- 25 075
Aircraft crew costs	- 30 250	- 35 209	- 35 327	- 14 872	- 12 448
Insurance	- 3 870	- 4 201	- 9 104	- 5 784	- 7 110
IT and communication costs	- 3 633	- 3 646	- 3 893	- 4 223	- 4 575
Taxes	- 2 403	- 2 519	- 1 718	- 4 158	- 2 501
Aircraft operating lease costs	- 61 413	- 71 413	- 13 760	- 3 401	- 3 662
Consultancy, legal and professional services	- 4 197	- 3 172	- 4 018	- 3 254	- 3 392
Property lease cost	- 5 029	- 5 596	- 2 485	- 2 425	- 2 641
Impairment loss on trade receivables	-	- 563	- 738	- 117	- 113
Other operating costs	- 12 424	- 10 785	- 19 198	- 24 366	- 10 428
Total operating expenses	- 704 282	- 804 355	- 820 030	- 469 578	- 667 678
Operating (loss)/profit	63 255	36 506	78 699	- 69 314	94 160
Finance income	7 293	2 934	2 221	1 427	10 418
Finance costs	- 11 118	- 10 547	- 26 376	- 36 076	- 47 066
Foreign exchange gain/loss, net	- 10 370	- 16 885	- 12 749	- 12 673	- 12 522
(Loss)/profit before tax	49 060	12 008	41 795	- 116 636	44 990
Income tax benefit/(expense)	- 9 742	- 6 656	- 11 763	22 703	- 8 831
(Loss)/profit for the year	39 318	5 352	30 032	- 93 933	36 159
Basic and diluted earnings per share (in USD)	2 312,82	314,84	1 767,00	- 5 525,00	2 127,00
EBITDA	90 264	62 140	160 054	31 721	214 992

APPENDIX 3

Key Financial Ratios

'000 USD	**2017**	**2018**	**2019**	**2020**	**2021**	**Average**
Revenue	767 537	840 861	898 729	400 264	761 838	733 846
EBITDA	90 264	62 140	160 054	31 721	214 992	111 834
Net Income	39 318	5 352	30 032	(93 933)	36 159	3 386
Profit Margin	5,12%	0,64%	3,34%	-23,47%	4,75%	-1,92%
Gross Profit	84%	89%	78%	81%	68%	79,89%
ROS	8,24%	4,34%	8,76%	-17,32%	12,36%	3,28%
ROA	6,64%	0,92%	3,03%	-8,95%	3,28%	0,98%
ROE	45,32%	6,04%	29,11%	-510,31%	56,52%	-74,67%
Current Ratio	2,08	1,52	1,07	0,83	0,93	1,28
Quick Ratio	1,81	1,28	0,91	0,70	0,78	1,10
Cash Ratio	1,04	0,71	0,55	0,56	0,62	0,70
NWC	153 271	97 460	21 799	-60 748	-26 970	36 962,40
Total Debt/Total Capital	0,85	0,85	0,90	0,98	0,94	0,90
Debt/Equity	5,82	5,55	8,62	56,00	16,23	18,44