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K.G. Sadvakassova[1*], D. Jamshidi[2], A.Z. Nurmagambetova[1], G.E. Kassenova[1]

[1]Al-Farabi Kazakh National University, Kazakhstan, Almaty
[2]University of Nizwa, Nizwa, Oman
*e-mail: Kamilla.Sadvakassova@gmail.com

EFFICIENCY OF AVIATION COMPANIES' FINANCING AND FORMATION OF ITS INVESTMENT ATTRACTIVENESS

The article discusses the concept and the choice of sources of financing for the investment activities of aviation companies. The choice of financing instruments for aviation companies, as well as the optimal capital structure, is an important and necessary stage for conducting effective activities aimed at achieving the financial stability of the airline company. Especially the problem of choosing sources of financing becomes relevant in the context of the spread of COVID-19. The object of the article is to study the modeling of investment attractiveness on the example of airlines. Based on the research of investment attractiveness in airlines, recommendations were formulated in the field of investment project evaluation. Scientific and practical significance of the work is that Aviation is one of the fastest growing sectors in the world, combining technology, innovation, entrepreneurship, economic development, infrastructure support, demographic growth, and contribution to globalization. Progress in this sector is impressive in its speed and diversity in nature. Based on the analysis of the investment activity of the Kazakh company, it was revealed that outdated methods of evaluating the effectiveness of investment projects are used and it was proposed to use quantitative risk analysis and break-even assessment of the airline's investment projects for this purpose. In accordance with the research subject, the methods of scientific knowledge, induction, deduction, comparison, statistics, comparability, financial analysis, mathematical modeling, analysis and forecasting were used.

Key words: aviation company, investment, financing, investment company, sources of financing.

К.Г. Садвакасова[1*], Д. Джамшиди[2], А.З. Нурмагамбетова[1], Г.Е. Касенова[1]

[1] Әл-Фараби атындағы Қазақ ұлттық университеті, Қазақстан, Алматы қ.
[2] Низва университеті, Оман, Низва қ.
*e-mail: Kamilla.Sadvakassova@gmail.com

Авиациялық компанияларды қаржыландырудың тиімділігі және олардың инвестициялық тартымдылығын қалыптастыру

Мақалада авиациялық компаниялардың инвестициялық қызметін қаржыландыру көздерін таңдау және тұжырымдамасы қарастырылады. Авиациялық компанияларды қаржыландыру құралдарын, сондай-ақ капиталдың оңтайлы құрылымын таңдау – авиакомпанияның қаржылық тұрақтылығына қол жеткізуге бағытталған тиімді іс-шараларды жүргізудің маңызды және қажетті кезеңі. Әсіресе қаржыландыру көздерін таңдау мәселесі COVID-19 індеті таралуы жағдайында өзекті болып отыр. Мақаланың мақсаты – авиакомпаниялар мысалында инвестициялық тартымдылықты модельдеуді зерттеу. Авиакомпаниялардағы инвестициялық тартымдылықты зерттеу негізінде инвестициялық жобаларды бағалау саласында ұсыныстар тұжырымдалды. Жұмыстың ғылыми-тәжірибелік маңыздылығы – авиация технологияны, инновацияны, кәсіпкерлікті, экономиканы дамытуды, инфрақұрылымды қолдауды, демографиялық өсуді, жаһандануға қосқан үлесін біріктіретін әлемдегі ең қарқынды дамып келе жатқан салалардың бірі. Бұл сектордағы ілгерілеу өзінің жылдамдығымен және табиғатындағы әртүрлілігімен таңғалдырады. Қазақстандық компанияның инвестициялық қызметін талдау негізінде инвестициялық жобалардың тиімділігін бағалаудың ескірген әдістері қолданылып жатқаны анықталды және осы мақсатта тәуекелдердің сандық талдауын және авиакомпанияның инвестициялық жобаларының залалсыздығын бағалауды қолдану ұсынылды. Зерттеу пәніне сәйкес ғылыми таным, индукция, дедукция, салыстыру, статистика, салыстырмалылық, қаржылық талдау, математикалық модельдеу, талдау және болжау әдістері қолданылды.

Түйін сөздер: авиациялық компания, инвестициялар, қаржыландыру, инвестициялық компания, қаржыландыру көздері.

К.Г. Садвакасова[1*], Д. Джамшиди[2], А.З. Нурмагамбетова[1], Г.Е. Касенова[1]
[1]Казахский национальный университет им. аль-Фараби, Казахстан, г. Алматы
[2] Университет Низвы, Оман, г. Низва
*e-mail: Kamilla.Sadvakassova@gmail.com

Эффективность финансирования авиационных компаний и формирование их инвестиционной привлекательности

В статье рассматривается понятие и выбор источников финансирования инвестиционной деятельности авиапредприятий. Выбор инструментов финансирования авиационных компаний, а также оптимальной структуры капитала является важным и необходимым этапом для ведения эффективной деятельности, направленной на достижение финансовой устойчивости авиакомпании. Особенно проблема выбора источников финансирования становится актуальной в условиях распространения COVID-19. Целью статьи является исследование моделирования инвестиционной привлекательности на примере авиакомпаний. На основе исследования инвестиционной привлекательности авиакомпаний сформулированы рекомендации в области оценки инвестиционных проектов. Научная и практическая значимость работы заключается в том, что авиация является одним из самых быстрорастущих секторов в мире, сочетающим в себе технологии, инновации, предпринимательство, экономическое развитие, поддержку инфраструктуры, демографический рост и вклад в глобализацию. Прогресс в этом секторе впечатляет своей скоростью и разнообразием характера. На основе анализа инвестиционной деятельности казахстанской компании выявлено, что используются устаревшие методы оценки эффективности инвестиционных проектов и предложено использовать для этих целей количественный анализ рисков и оценку безубыточности инвестиционных проектов авиакомпании. В соответствии с предметом исследования использовались методы научного познания, индукции, дедукции, сравнения, статистики, сопоставимости, финансового анализа, математического моделирования, анализа и прогнозирования.

Ключевые слова: авиационная компания, инвестиции, финансирование, инвестиционная компания, источники финансирования.

Introduction

Airlines are well acquainted with debt financing markets: they are used to using aircraft and other assets as collateral for loans. But in 2020, for the first time, American carriers used future cash flows under their loyalty programs as collateral — and attracted billions of credits for them. United was the first to take this step: in June 2020, they raised $6.8 billion. They were soon followed by Spirit and Delta ($850 million and $9 billion, respectively). And in March 2021, American Airlines set a new record for the amount of financing in the entire history of the industry: the company received a total of $10 billion secured by intellectual property and cash receipts under the AAdvantage program.

These deals (as well as increasingly detailed reporting on loyalty programs) have lifted the veil over the enormous value of airline loyalty programs. Thus, the estimated cost of the AAdvantage and MileagePlus programs turns out to be significantly higher than the current market capitalization of the respective airlines (American and United).

The aviation industry is a strategically important industry that ensures the creation of a large number of jobs, determines the country's defense capability and its economic development. More than 1,500 enterprises are involved in the production and creation of aerospace equipment: mechanical engineering, metallurgy, radio engineering and other related industries. The development of the aviation industry is a strategically important task of the state. Thus, air transport carries out more than a third of passenger traffic and requires fleet renewal due to the development of technical resources, more than 70% of aircraft are in the final stage of operation.

Investments are needed for the technical re-equipment of domestic enterprises of the aerospace industry, the development of production, the development of new technologies, and the increase in the innovativeness of products.

It should also be noted that the loan attraction period is short and ranges from 12 to 60 months. This creates difficulties in the implementation of long-term projects. So at aviation enterprises, the average cycle of testing new technical solutions is 5-7 years for the aircraft and for the flight and navigation complex and 8-10 years for the engine. At the moment, the main investor of aviation enterprises is the state, but it cannot cover all financial needs. The current trend in the development of

strategic enterprises and industries is the creation of a private sector in the capital of state-owned enterprises, where the degree of freedom of private capital is determined by its share in the equity (Flivbjorg, 2019:108).

Materials and methods

As a methodological basis, the general scientific principles of cognition of economic phenomena were used – dialectical, concrete – historical, systemic and other approaches that allowed us to consider the studied phenomena and processes in development, identify contradictions, correlate the essential characteristics and forms of their manifestation. The study was also based on the developments of ICAO, methodological approaches in the annual analytical reports of Airbus, Boeing, Embraer concerns; system reports of Japan Aircraft Development Corporation, Flight Global- Flight Ascend Consultancy; based on the study of the interrelationships and measures of dependence of the transparent cyclical development of the economy and the aviation industry, primarily aviation, graphical interpretation of these dependencies; methodological approaches to aviation as an integral part of the global economy, as well as methodological approaches to prudential risks associated with the assets of aviation companies.

The research used methods of a systematic approach, logical and comparative analysis, comparison, grouping and generalization, analogy and quantitative analysis, as well as other analytical and predictive methods.

Literature Review

According to V.F. Protasov, the main purpose of public ratings is to provide potential investors and other interested parties with information on the basis of which they determine their investment policy: establish an acceptable level and volume of investment investments. In other words, the rating score is a characteristic of the risk and future profitability of the enterprise, and represents the probability of returning the amount of invested funds.

So public ratings are assigned by various rating agencies, among them can be distinguished such as: Standard&Poor's Rating Group, Moody's Investor Service, Fitch Investment, Expert RA, AK&M, NRA, etc. It can be noted that these rating agencies are intermediaries between enterprises and investors and allow reducing the cost of attracted capital for the enterprise and reducing costs for investors when conducting their own risk assessment of the enterprise. Many scientists note the increasing role of rating agencies in the investment process due to the current trends in the globalization of world markets and capital markets.

There are many different public ratings, such as: ratings of financial stability, corporate governance, quality of risk management, support rating, individual ratings, long-term and short-term credit ratings. But the most popular among investors and lenders is only one rating – credit. It should be noted that for an investor, the credit rating of international rating agencies is an assessment of financial reliability, bankruptcy risk, solvency, etc.

The recognition of the rating assessment by investors and creditors is reflected in their investment decisions. So, the higher the company's rating, the lower the interest rate investors provide borrowed capital. Many institutional investors use the rating in their own regulations to establish the level of risks when investing in the company's securities. The analysis of the regulations of various investors allowed us to make a structurally logical scheme of the attractiveness of the enterprise for different rating levels, depending on the value of the credit rating (Basovsky, 2018:96).

Results and discussion

It is worth noting that project financing over the past quarter of a century has become more characterized by new features, following along with innovative business technologies, the emergence of new markets, and a fundamental change in the paradigm of consumer demand. In General, for purely educational purposes, sources of investment financing can be divided into two categories: external and internal (Makhovikova, 2017:45).

Below we provide a short list of sources of financing for aviation companies and their characteristics:

1. Internal or proprietary resources. Own sources of financing are represented by material, financial or intellectual resources that belong to the investor's company (organization) on the right of ownership, operational management or economic management.

2. External investment resources. They are mainly represented by assets through which the company's

investment project will receive funding from organizations that are not related to its business in any way. Such resources have a mandatory repayment character or they contain conditions of a specific encumbrance: credit resources, including commodity loans, which take the form of leasing contracts (Krapchatova, 2018:106).

Let's compare the current liquidity indicators of Russian and Kazakh companies – Figure 1.

As you can see, the current liquidity is higher for Kazakhstani airlines, the leader is SCAT (2.2), Air Astana (1.91). Next, it is necessary to note Ural Airlines (1.4) and S7 (1.3).

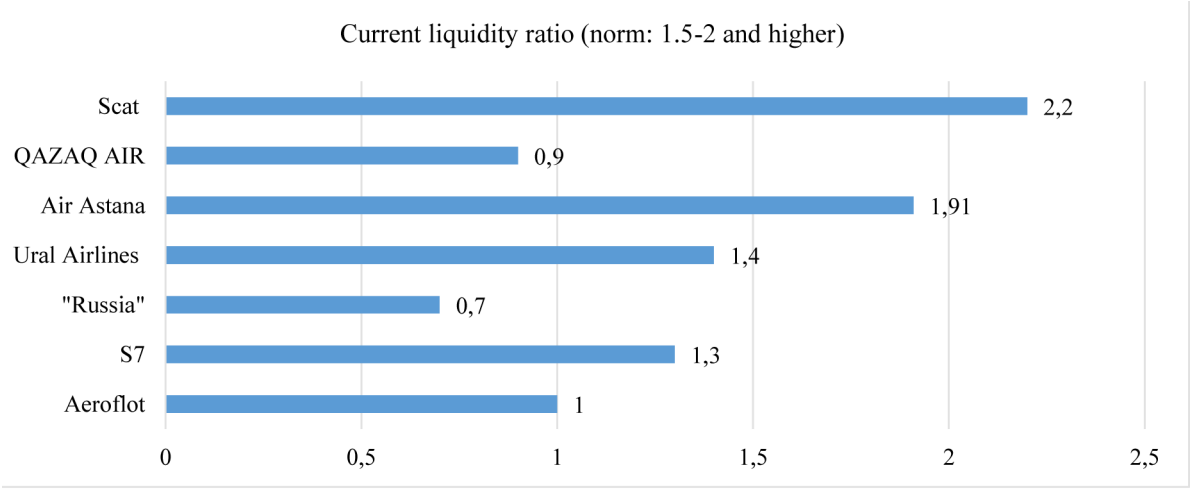

Figure 1 – Airline current liquidity ratios in 2019

Note: Compiled by the author based on the source of Annual reports Scat, Qazaq Air, Air Astana, Ural Airlines, "Russia", S7 and Aeroflot

According to the forecast of the International Air Transport Association (IATA), a full recovery in demand for air transportation will occur only in 2024, but on the horizon of the next year, we can expect an increase in United Airlines quotes due to the flexibility of its business and the high probability of receiving state support by air carriers.

Lufthansa shares on the Frankfurt Stock Exchange have lost 54% since the beginning of the year. As of October 27, the cost of one paper was 7.72 euros per piece.

According to preliminary data, adjusted earnings before interest and taxes (EBIT) in the third quarter amounted to -1.262 billion euros against 1.297 billion euros a year earlier. The operating loss amounted to 4.161 billion euros. As of the end of September, the group had 10.1 billion euros of liquid funds. This amount includes assistance packages from the governments of Germany, Switzerland, Austria and Belgium in the amount of 6.3 billion euros. In the fourth quarter, the carrier plans to operate at the level of 25% of its last year's capacity.

Shares of Air France-KLM Group on the Euronext exchange in Paris have fallen by 68% since the beginning of the year, to 3.09 euros apiece.

The company has not yet released the results of the third quarter. At the end of the second quarter, the group reported losses of 2.6 billion euros. The loss for six months, taking into account these results, amounted to 4.4 billion euros. If you look at the individual components of the group, Air France and its subsidiaries lost more than 1 billion euros, while KLM reported 493 million euros in losses. Transavia's loss for the second quarter amounted to 111 million euros. The group's liquidity reserves at the end of June amounted to 14.2 billion euros, mainly due to the assistance of the governments of France and the Netherlands in the amount of 10.4 billion euros (Khomkin, 2019).

The capitalization of the largest airlines is shown in Figure 2 below.

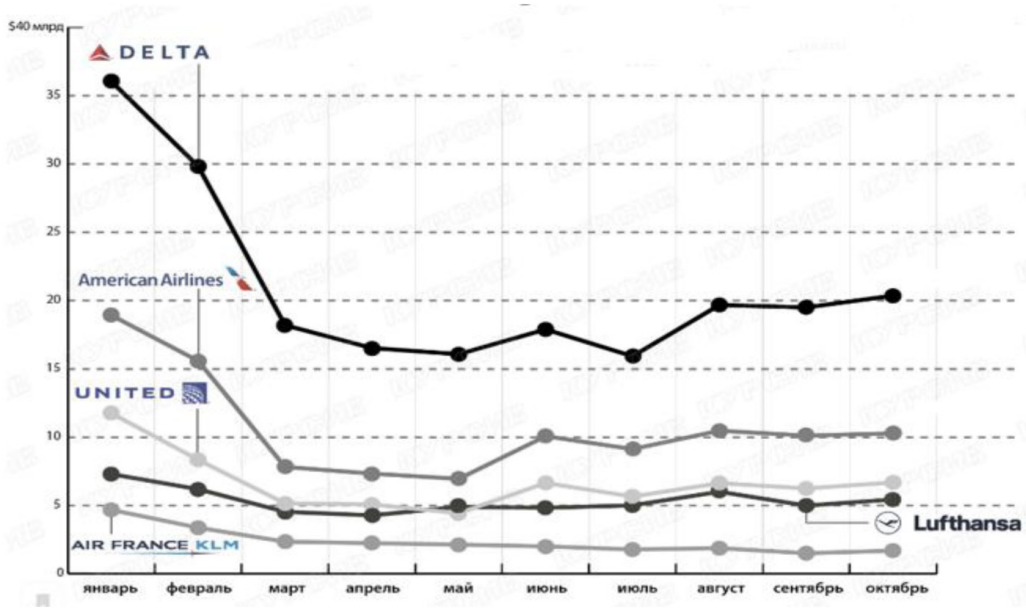

Figure 2 – Capitalization of the world's largest airlines in 2020, USD billion

Note: Compiled by the author based on the source (Passenger air transportation)

In 2020, the industry may lose up to 314 billion US dollars (55%) of total revenue from passenger transportation, amid travel restrictions and the effect of declining confidence, exacerbated by the global recession.

The final financial data of the airlines for the 4th quarter of 2019 indicate a modest improvement in profitability across the industry ahead of global disruptions due to COVID-19. Based on our latest assessment of the impact of the epidemic, we believe that in 2020 the industry could lose up to US$ 314 billion (55%) of total passenger revenue, amid travel restrictions and the effect of declining confidence, exacerbated by the global recession.

Airline stocks fell sharply again in March 2020 amid the pandemic crisis – Table 1.

Table 1 – Airline stock indicators in 2020, USD

Indicator	MAR Index	Growth rates, %		
		For the month	For the year	Since the beginning of the year
In the whole world	68,2	-34,7	-46,1	-49,6
Asia-Pacific Airlines	66,5	-23,7	-44,2	-39,5
European airlines	54,4	-36,4	-44,7	-51,9
Airlines of North America	82,8	-36,3	-46,9	-50,7
FTSE	113,1	-13,8	-13	-21,8
Note: Compiled by the author (Air transportation of passengers by the end of 2020)				

The global airline stock price index fell 35% year-on-year. Compared to the previous month, in March there was a significant decline in the global stock market (-14%). The biggest decline occurred in the first three weeks of the month due to COVID-19-related travel restrictions, including a travel ban between the US and Europe. At the end of March this year, the index began to recover as governments began to take measures to mitigate the impact of the virus.

The stock indices of European and North American airlines fell significantly faster (-36%) than the

decline in airline stocks in the Asia-Pacific region. The "best" indicators of the Asia-Pacific region can be partially explained by the preliminary signs of recovery observed in the Chinese market (Katasonov, 2016).

The final financial data for the 4th quarter of 2019 confirm that industry-wide profitability was improving before the global disruptions with COVID-19 began. The industry-wide EBIT indicator was at the level of 7% of revenue, up to 1 percentage point compared to Q4 2018. All regions posted higher EBIT profit results compared to last year (Table 2).

Table 2 – Financial results of the world's airlines in 2018-2019

Airline number in the rating	Region	2018		2019	
		EBIT margin, %	Net profit after tax, USD million	EBIT margin, %	Net profit after tax, USD million
14	North America	9,5	2777	10	3423
26	Asia-Pacific Airlines	4,7	919	5,6	1187
15	Europe	2,5	-304	3,7	463
7	Latin America	6,1	393	11,3	32
3	Other	7,5	-319	13,4	58
65	General	5,9	3466	7	5163
Note: Compiled by the author based on the source (Air transportation of passengers by the end of 2020)					

Looking ahead, we can say that the first quarter of 2020 will bring us a completely different picture. Based on our latest impact assessment, we believe that losses in 2020 will amount to US$ 314 million (a decrease of 55% compared to the previous year). The decline will occur as a result of travel restrictions and loss of confidence due to COVID-19, exacerbated by the expected global economic recession.

Airlines face the risk of a liquidity crisis.

Table 3 – Airline liquidity indicators in 2018-2019

Airline number in the rating	Region	2018, growth rates, %			2019, growth rates, %		
		Net cash flow, %	Capital expenditures, %	Free cash flow, %	Net cash flow, %	Capital expenditures, %	Free cash flow, %
14	North America	11,6	13,5	-1,9	9,6	11,3	-1,7
9	Asia-Pacific Airlines	5,9	14,8	-8,9	16	16,7	-0,7
10	Europe	2,3	14,7	-12,4	6,1	16,5	-10,4
6	Latin America	15,9	9,6	6,3	22,7	19,9	2,8
2	Other	5,6	19,5	-13,9	41,1	15,3	5,7
41	General	8,5	13,7	-5,3	10,3	14,1	-3,9
Note: Compiled by the author based on the source (Air transportation of passengers by the end of 2020)							

An expanded sample of 41 airlines this month shows a modest improvement in industry-wide cash flow in the 4th quarter of 2019 against the 4th quarter of 2018 (an increase of 1.8 percentage points to 10.3%) and, in general, capital expenditures have stabilized (14%). As a result, the industry's free cash flow (FCF) remained negative, at -3.9% of revenue.

Since then, airlines have been taking urgent measures to preserve cash amid the COVID-19 crisis. 50% of them had a fleet of aircraft grounded, which helped carriers reduce costs and variable costs. Depending on the hedging mechanisms, jet fuel prices provided little support.

Despite this, the liquidity of airlines remains under threat due to a large share of fixed and semi-fixed

costs (49% of total costs) and accumulated liabilities from tickets sold. Premium income growth has outpaced the economy in all but one key market. In the first two months of 2020, premium class passengers accounted for another 5.0% of global international departure-destination traffic, unchanged compared to the full year 2019 and slightly lower than the same period last year (5.2%). But as for income, income from premium seats corresponded to 30.9% of the International total in the year to February 2020, which is 0.7 percentage points more than in the same period of 2019. In January-February 2020, the growth of premium passenger traffic was stronger than its economic counterpart in large markets. the transatlantic market, as well as several smaller markets. Premium income growth was higher than economic growth in all markets, with the exception of Europe-Middle East – an improvement compared to January, when three premium markets showed low performance compared to the economy.

Passenger demand is falling sharply, and freight traffic is only slightly more stable. A significant decline in demand for air passengers continued in March, when global revenue in passenger kilometers fell by an unprecedented 52.9%. COVID-19 continued to spread rapidly around the world during the month, prompting countries to introduce lockdowns and travel restrictions.

In March, the general industrial passenger traffic ratio decreased by 21.4 percentage points to 60.6%. Although airlines cut flights and grounded planes, it wasn't enough to meet the evaporating demand. North America and the Asia-Pacific region were the most affected regions.

Consider the Muslim airline companies Malaysia Airlines, Air Arabia, Emirates.

Emirates Group has announced the results of the first half of the 2019-2020 financial year. During the reporting period, Emirates Group's revenue amounted to US$ 14.5 billion and decreased by 2% from US$ 14.8 billion in the same period a year earlier. This slight decrease in revenue was mainly due to the planned reduction in carrying capacity during the 45-day closure of the southern runway of Dubai International Airport (DXB) and unfavorable currency fluctuations in Europe, Australia, South Africa, India and Pakistan. This is reported by the Emirates press service.

The following table 4 shows the financial companies of Muslim airlines in 2019.

Table 4 – Financial indicators of Muslim airlines in 2019

Indicator	Malaysia Airlines	Air Arabia	Emirates
Revenue, billion US dollars	17,51	3,61	17,41
Market capitalization, billion US dollars	3,07	4,99	59,94
EPS, the ratio of the company's net profit available for distribution to the average annual number of ordinary shares	-0,13	0,11	1,18
Note: Compiled by the author based on the source of Annual reports of Malaysia Airlines, Air Arabia and Emirates			

Malaysia Airlines and Emirates have a predominance in revenue. Emirates Airline has the largest market capitalization Figure 3.

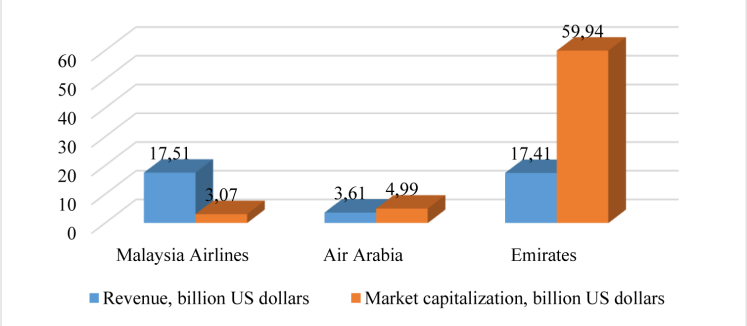

Figure 3 – Financial indicators of Muslim airlines in 2019

Note: Compiled by the author based on the source of Annual reports of Malaysia Airlines, Air Arabia and Emirates.

The decrease in revenue was the result of the COVID-19 pandemic in the last quarter, as well as the planned 45-day closure and reconstruction of the Southern Runway at Dubai International Airport (DXB) in the first quarter, where Emirates had to operate a reduced flight program, and the operations of the UAE airport dnata similarly reduced traffic to DXB. In 2019-20, the group continued to increase its potential with investments totaling 11.7 billion dirhams UAE in new facilities, aircraft and technologies. Emirates Group's diverse workforce has always been a key component of success, and continues to invest in employees through various training and professional development programs. The culmination of this year was the launch of Sehaty, a group health and well-being program aimed at developing a culture of health throughout our organization (Fedotova, 2017).

The best value of airline stocks is airline stocks with the lowest 12-month trailing price-to-earnings ratio (P/E). Since profits can be returned to shareholders in the form of dividends and share repurchases, a low P/E ratio shows that you pay less for every dollar of profit received (Table 5).

Table 5 – Best Airline Stock Price

Company	Price ($)	Market Capitalization ($B)	12-Month Trailing P / E Ratio
Chorus Aviation Inc. (CHR.TO)	About $ 2,53	About $ 0,4	5.6
SkyWest Inc. (SKYW)	34.58	1.7	10.5
Exchange Income Corp. (EIF.TO)	About $ 32,67	About $1.1	22.2
Note: Compiled by the author based on the source of Annual reports of Chorus Aviation Inc, Sky West Inc, Exchange Income Corp.			

Chorus Aviation Inc.: Chorus Aviation is a Canadian holding company that offers aviation services, including scheduled passenger transportation, through subsidiaries Chorus Aviation Capital, Jazz Aviation and Voyageur Aviation. The company offers contract flights, aircraft leasing and maintenance. Chorus reported a 25.1% decrease in net profit as operating revenue fell 44.6% in the second quarter of 2020, which ended June 30, 2020. The company stated that the drop in net profit was caused by the global impact of COVID-19, which was only partially offset by a change in unrealized foreign exchange.

SkyWest is a holding company that manages regional airlines offering scheduled passenger services to destinations in the United States, Canada, Mexico and the Caribbean. The company reported a net loss of $25.7 million as total operating revenue fell 53.0% in the second quarter of 2020, which ended June 30, 2020.3SkyWest said its lower results compared to last year's quarter were due to reduced flight schedules and reduced demand as a result of the COVID-19 pandemic.

Exchange Income is a Canadian diversified company specializing in aviation and manufacturing. It provides scheduled airline and charter services, as well as emergency medical services in select regions across Canada. The company also offers products for metal production and related services. In early August, Exchange Income announced the completion of the acquisition of Window Installation Specialists Inc., a private company for $45 million.

The airline stocks with the lowest profit decline are the airline stocks with the lowest decrease in earnings per share on an annualized basis (EPS) for the last quarter. All other airline stocks that we reviewed reported losses in the last quarter. A company's ability to maintain profitability in a complex business environment can be a sign of good management and/or a strong business model (Table 6).

Table 6 – Airline stocks with the lowest profit decline

Company	Price ($)	Market Capitalization ($B)	EPS Growth (%)
Chorus Aviation Inc. (CHR.TO)	About $ 2,53	About $ 0,4	-25.0
Exchange Income Corp. (EIF.TO)	About $ 32,67	CA$1.1	-89.2
Note: Compiled by the author based on the source of Annual reports of Chorus Aviation Inc, Exchange Income Corp.			

The stocks of the airlines with the best performance are the stocks of the airlines that had the best profitability or the smallest decrease in total profitability over the past 12 months of all the companies that we considered (Table 7).

Table 7 – Airline stocks with the best performance

Company	Price ($)	Market Capitalization ($B)	12-Month Trailing Total Return (%)
Ryanair Holdings PLC (RYAAY)	85.83	19.3	35.3
Allegiant Travel Co. (ALGT)	138.47	2.2	-6.9
Exchange Income Corp. (EIF.TO)	About $ 32,67	CA$1.1	-7.4
Russell 1000	N/A	N/A	15.9
U. S. Global Jets ETF (aircraft)	N/A	N/A	-37.3
Note: Compiled by the author based on the source of Annual reports of Ryanair Holdings PLC, Allegiant Travel Co., Exchange Income Corp., Russell 1000, US Global Jets ETF.			

Ryanair is an Irish airline offering low-fare passenger air transportation to destinations in Europe. The company also offers additional services related to the basic service of air passengers, such as unscheduled scheduled flights. Ryanair reported a net loss as total operating revenue fell 94.6% in the first quarter of fiscal year 2021 (FY), which ended June 30, 2020. The company said the first quarter was its "most challenging" quarter in its 35-year history due to the pandemic.

Allegiant Travel offers travel services, including flight transportation, hotel reservations, car rental, travel management and other related services. The company serves customers all over the world. Allegiant presented a traffic report for August, which indicated that its monthly revenue decreased by 48.4% compared to August 2019. Its load factor, an indicator measuring the percentage of empty seats filled with passengers, decreased by 41.1 percentage points to 44.1% compared to the same month last year.

Let's compare the revenue of Aeroflot, Lufthansa Group, and Air Astana (Table 8).

Table 8 – Revenue for the last 3 years, in million tng.

Company	2017	2018	2019
Aeroflot	2664670	3057850	3389405
Lufthansa Group	177895	177710	182120
Air Astana	241536	279336	315750
Note: Compiled by the author based on the source of Annual Reports of Aeroflot, Lufthansa and Air Astana			

Air Astana is in second place after Aeroflot in terms of revenue. Lufthansa Group also showed revenue growth during the study period, with the exception of 2018. The maximum annual growth is in 2015 and is 7%. The percentage of revenue growth of the German carrier is lower than the Russian one. This is due to the significant competition in this industry in the European market (Figure 4).

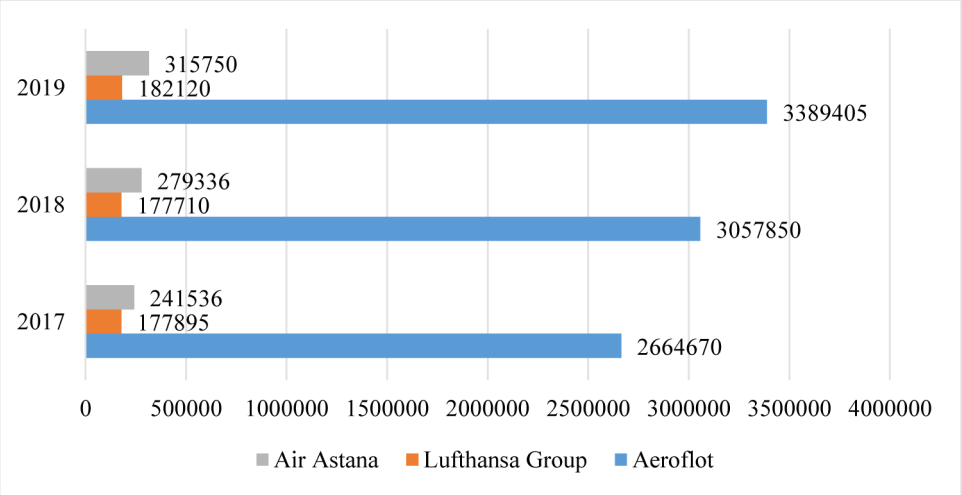

Figure 4 – Revenue for the last 3 years, in million tng.

Note – Compiled by the author based on the source of Annual Reports of Aeroflot, Lufthansa and Air Astana.

In addition, it is worth paying attention to the consequences of the pandemic for the aviation industry. As a result of the COVID-19 crisis, the top 50 most valuable airline brands may lose up to 20% of the brand value, which is $22 billion. In an unprecedented three months, this sector has almost come to a standstill, as travel restrictions make it impossible for airlines to operate. Even the fall in oil prices – which would be good news for carriers in normal times – practically does not change anything in this difficult situation.

During the financial crisis of 2008, this sector also faced a serious reduction in demand. It was only in 2016 that intra-European flights recovered to the previous level. The severity of the current crisis indicates a recovery in the medium and long term with noticeable changes in the structure of the market.

Conclusion

The aviation sector is one of the most severely affected by the COVID-19 pandemic, suffering from a sharp decline in demand following global travel restrictions. But it's not the hardest-hit sector in the world, with oil and gas, leisure and tourism, and insurance brands likely to be hit harder. This is partly due to favorable oil prices, which strengthened the aviation sector last year.

With a quarter of the world's population blocked as of March 2020, British Airways and Virgin Atlantic have also banned 75% and 80% of their flights respectively – a measure that leaves them tied to vital money. This is further compounded by the shutdown of Boeing production in March 2020, which will undoubtedly lead to a disruption in the supply of new aircraft, including spare parts needed for maintenance.

Airlines will need some form of government support if they want to survive this pandemic. IATA said that airlines may need government support in the amount of 200 billion US dollars. Even one of the richest airlines in the world, American Airlines, has announced its intentions to apply for a loan of $ 12 billion. Many governments around the world have announced their commitment to support their national carriers, including Australia, the UK, the UAE, the USA and countries across the EU. However, Governments that do not have the means to provide this level of support, or any support at all, may witness its decline.

The COVID-19 crisis poses a dangerous threat to airlines, which may lose 20% of the total brand value and may struggle with ever-decreasing demand in the face of global travel restrictions.

Management of non-current assets of the enterprise allows to increase the values of such coefficients as the coefficient of provision of stocks and costs with own working capital, the coefficient of financial stability, the coefficient of the real value of the property. The increase in non-current assets can occur due to an increase in production volume, an expansion of the product range, quality improvement, and the introduction of innovative technologies. The management of non-current assets directly

includes the following stages: analysis and accounting of the direction of movement and volumes of non-current assets, analysis of the state and efficiency of their use, optimization of their composition, formation of sources of financing of non-current assets of the enterprise. To increase non-current assets, the company needs to increase its production potential.

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