

International investment activities in aviation by examples of countries and airlines in Europe and North America

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Abstract: *Description of the state of foreign economic prospects of international aviation. The main problems and their solutions, the role of aviation in the international market, investment projects. Control and management of investments, regulatory framework. Investment activities on the part of the state and private enterprises. Determination of the most effective way of financing from the state. Characteristics of the process of international investment in the global aviation industry.*

Keywords: international aviation, aviation industry, investment activity, government investment, investment in the field of air transport.

1. Introduction

The globalization trends of modern sectors of the international economy dictate the rules for the formation and functioning of most spheres of human activity. The development of infrastructure, ensuring sustainable progress in the creation of new transport routes, servicing international connections between countries was the main task of the world aviation. Air transport is a key factor of correction and creation of economic space in the conditions of internationalization of the markets, which is the proof to consider aviation industry as one of the leading in the development of national economies of the states.

Strict control of all airspace, requirements for airline companies, thorough inspection of all aircrafts formed the prospects for the development of the economic aviation market, because this industry has become the safest and one of the most popular types of transportation among passengers. The next impetus is the development of logistics, the benefits of non-price factors in the development of international transport infrastructure, its investment attractiveness in the growth of prospects in the aviation market, which led to the use of airspace and its systems in the development of economic relations among states, as well as business consolidation and increased efficiency and financial stability of airlines

The main purpose of this article is to determine the importance and necessity of investment projects in the aviation industry, largely dependent on commercial activities; to determine the most effective way of financing projects by the government of countries; to characterize the system of management of international investment in the aviation industry.

2. Presentation of the main material:

The current realities of the world economy in the context of a progressive period of labor division and the growth of international economic and cultural ties between nations testify to the increasing role of air transport in the world economy. Aviation has become an integral part of national

economies and is among the most dynamic industries, because efficient air transportation contributes to an increase in the level of economic feasibility of the transfer carried out by increasing the trade quantity of goods. Recent configurations in the global foreign policy environment have led to significant attention being paid to the aviation industry.

The air transport industry is characterized by high innovation activity and global scale in the national economies of countries, and despite this, the aviation complex is characterized by a number of problems, which include:

- lack of own financial resources in the aviation market, necessary for its development;
- Insufficient development of credit mechanisms to finance production;
- implementation of cash leasing of aviation equipment;
- crisis in the domestic market of the global aviation equipment, which is associated with the lack of necessary financial resources for the renovation of the air transport base.

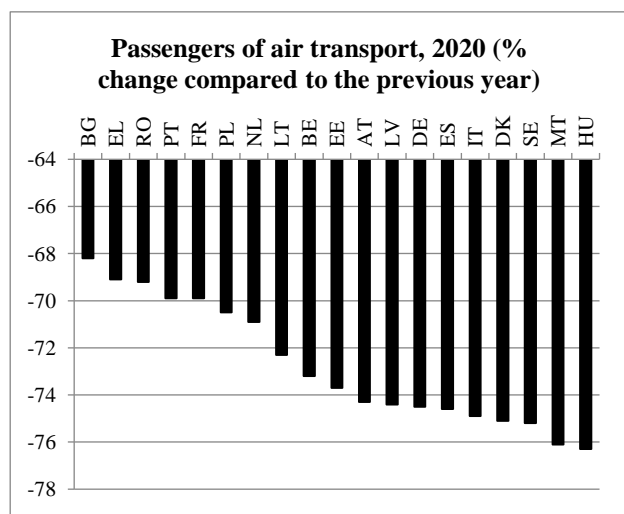
In other words, for the aviation industry to operate effectively, the technical armament of production and the experimental-testing base must be fully provided. Underfunding leads to reduction and shortage of qualified personnel, delayed development of this industry and reduction of scientific potential. In order to solve these financial problems and increase the level of functioning of the aviation economy, innovative investment activities aimed at restoring and reforming technical equipment, its innovativeness and performance become a significant development factor.

Widespread economic benefits associated with a large number of technological developments in the field of air transport are positive external factors for attracting investment. The trends of post-industrial society have given impetus to the introduction of innovation to airline technology, which has led to increased attention by aviation to environmental issues, i.e. improved communication and anticipation of consumer needs.

This has resulted in increased attention from private investors, because most states are not able to fully fund their own country's aviation system, which has led to 75% control of the air transport industry by companies and their invested capital, which contributes to significant progress in the economy and international languages.

Analyzing the current state of the world economy and the aviation industry, one can feel the significant impact from the COVID-19 pandemic and serious problems. Since the beginning of quarantine restrictions, there was a risk of complete destruction and bankruptcy of this industry due to lack of liquidity, but thanks to the efforts of the government and public investment, deposits and by issuing shares, this threat was avoided. That is, the national leadership of countries is actively raising funds to maintain the state of aviation, which in turn contributes to a significant increase in GDP and the state of the world economy. However, today the main problem in the field of air transport is the introduction of the next quarantine restrictions, which will lead to a total reduction in the number of flights and passengers, which in turn hinders the recovery and development of the aviation industry.

Considering the statistics of air transportation among European countries, shown in Fig.1, we can conclude that the pandemic situation has seriously affected the economic stability of the aviation industry and requires immediate investment solutions from the state support.(2).



Pic.1. Statistics of air transportation among European countries

The airline industry quickly adapted to the fact of active vaccination of citizens and the introduction of vaccination passports for passengers, but the problem proved to be the compulsory vaccination for airlines. This was especially true in the U.S., where, for example, Delta Air Lines and Southwest refused mandatory vaccines for passengers. This decision subsequently led to rapid flight cancellations, overcrowded planes, and ever-increasing ticket and flight prices due to staff shortages that were being laid off because of the pandemic. Despite this, most airlines have retained the flexibility to

change flights at short notice, so the airline industry is still stable and profitable for investors.

Through the fact of active vaccination of citizens, we can conclude that aviation will come out of the total crisis only with a stable development of the international economy. This is confirmed by the growth of demand for flights, i.e. air transport will be able to operate even under quarantine restrictions. If we consider investment activity, the pandemic creates a long-term perspective for potential investors because of the decline in shares of the aviation industry. It is an economic fact that the post-recession economy is influenced by the growth of cyclical sectors, which includes aviation. This sector offers various types of services that are financially profitable for shareholders: transporting passengers and cargo, and fulfilling additional moving needs. The volume of these services is large enough to be taken into account in estimating potential market demand.

However, avoiding a pandemic situation does not affect macroeconomic problems, i.e. airlines operate under conditions of increased risks. The heads of air transport enterprises most often make operational decisions without taking into account the global economic situation, which in turn leads to political and economic instability, a relatively high level of inflation, loss of resources to manage economic processes, tight tax policy. Air transport market has a complex structure and is an open system affecting the functioning with the world processes, therefore, in spite of significant economic risks, aviation industry will and remains one of the most promising investment areas from the spheres of international economic system.

Macroeconomic aspects of the global economy of air transport to a certain extent affect the management of investment potential and activation of investment processes, which relies on the study of problems of development of the aviation industry, the formation of investment policy and the formulation of theoretical issues concerning the economic justification of investment. Direct investment management is the result of analysis and planning of alternative strategies for the production of aircraft, improving the mechanism of state influence and creating certain obligations of the aviation industry, contributing to the recovery of the air transport industry from financial crises. Further development of the experimental and methodological aspects of this problem led to the fact of the investment strategy of airlines, constituting a global economy and based on international trends in globalization processes. This system of measures determines the volume, flows, structure and directions of investments and provides effective use of funds by developing a plan of money concentration, formation of priority tasks.

The powerful scientific and technical potential of air transport, overcoming of natural obstacles in the sky, the possibility of high-speed transportation of passengers and cargo has led to the fact that the production of air transport has a mobile innovative development and plays a large role in the

sector of the world economy, which creates stability in the investment market. The problem of activation of investment processes in the aviation industry is directly related to a set of engineering, technological and scientific-organizational issues that need priority actions on the part of business structures, national state governments and institutions of society.

The main tool on the basis of post-industrial society in the management and improvement of the structure of investment and innovation activities of aviation enterprises are information technology, such as e-commerce, that is, any business agreements concluded through the use of IT. In accordance with the principles of information analysis, the investment industry of air transport enterprises should be analyzed only using economic space and international market data. The objects of airspace management as an economic sector are considered to be the buyer, the merchant and the product.

The main obstacles to the full implementation of aviation investment activities for international companies are considered to be:

- high level of corruption among air transport managers;
- impossibility of long-term and accurate forecasting of investment projects;
- the complexity of the mechanism of funds at the state levels.

These factors influence the increase of investment risks in the global market, so, given the current economic situation, only state support from the countries will be able to radically change the situation of the airspace, i.e. the development of technological projects of aviation

The air transport industry in recent years is characterized by the migration of aircraft from the civilian sector to the military or vice versa, so the role of the military power of the country is considered one of the main components in characterizing the state of development of national security, which contributes to increased attention from investors in this industry. The development of national military industries directly depends on the quality of air transport products, the overall level of the aviation industry, the technical condition and scientific potential of enterprises, and the competitiveness of aviation enterprises, which increases government attention to the development of this area of the economy.

Investment control at the government level is usually carried out by international committees. Taking the example of the U.S. Foreign Investment Committee, which is charged with reviewing any contributions and receipts to the state budget, including all sectors of the economy from thermal energy to transportation networks. The committee's work consists of a reasonable review of investments falling under its purview (usually lasting 30-45 days). The purpose of such committees is to protect foreign investments from political passions and risks of economic pyramids. Foreign investments

in aviation companies are reviewed by states on a case-by-case basis, protecting public policy interests.

State investment support for the aviation industry is to provide organizations with long-term sums with minimal losses, i.e., to carry out the financing of projects or programs to create technological products of engineering production with the country, which improves the financing structure of projects. Investment for companies in the air industry can come through different types of monetary transactions: concessional, government, and borrowing. Investment activities by the national government can come in the form of direct financing, using grants or research and development contracts, rarely through military procurement.

European Union countries (France, Germany, Spain) are engaged in the development of new systems for air technologies to support Airbus programs, using reverse budget financing, which is also taken into account when aircraft corporations apply new technologies in the production of airborne units. This form of investment involves a separate legal act to fix the legal parameters of the elements of the investment agreement. These include the selection process (description of the procedure, requirements and criteria, final terms) and financing conditions (volumes, minimum share, interest rate).

The main advantage of state investment in the field of air transportation is the reduction of the burden on the national budget in the medium term.

Leasing is considered one of the most effective methods of state financing of aviation structures. Its economic characteristics are formed on the basis of certain factors: the size of savings on tax payments, the level of credit interest rates, the scheme of leasing payments. The main problem of this method is expressed in the choice of the most profitable and effective option of leasing foreign-made aircraft.

The process of conclusion of leasing mechanisms is formed on tripartite agreement between the recipient and the seller of aircrafts, through which the scheme of property-money relations is realized:

- a certain percentage of the value of the aircraft is allocated from the state budget and transferred to the owner of the aircraft;
- then the amount is transferred to the lessor, who attaches credit funds from a commercial or state bank to the money from the state budget of the country, which is considered an advance payment before the final payment for the aircraft;
- after the funds have been received, the aircraft is thoroughly inspected and then handed over to the recipient, taking into account the terms of the leasing agreement;
- the aircraft is placed on the state register, which helps the recipient to relieve the burden from their own budget through the national budget;

Worldwide Airline Industry	2019	2020	2021
Industry ROIC, % invested capital	5,8	-19,3	-10,4
North America, %	9,9	-15,0	-3,8
Europe, %	7,0	-17,4	-12,2
Asia Pacific, %	3,5	-11,3	-6,9
Latin America, %	3,9	-44,2	-31,0
Margin, %	5,2	-29,7	-11,4
Net post-tax profits, \$ billion	26,4	-137,7	-51,8
% revenues	3,1	-37,0	-11,0
\$ per passenger	5,8	-76,2	-22,7

- for the duration of the contract, the recipient pays a certain percentage of the estimated rate to the national budget;

- at the end of the contract all rights to the aircraft are transferred to the recipient.

In order to effectively control the investment activities of world aviation by states, evaluating their role in supporting the development of this industry, it is first necessary to create direct implementation tasks to fulfill related problems to determine the role and feasibility of financing for only one task in the field of air transportation. With regard to private enterprises, this investment activity should focus primarily on the development of projects and ready-made solutions that can begin to function immediately. Particular attention should be paid to state control, with the aim of stimulating, discouraging and editing investments at the legislative level by legal and regulatory methods.

Despite the many global economic problems, the demand for air transport is growing every year, as predicted by air transport experts. In an effort to make a profit and increase the demand for airliners, companies are actively placing orders for air transport, which is attracting the attention of many countries around the world. However, despite numerous profits of aviation companies, potential investors receive 1-5% of annual profits, so they have to decrease their risky assets beforehand in order to insure themselves against possible economic crises and risks.

Financial and leasing companies cooperating with air transport own 35-40% of the commercial fleet, but the employees of these companies have a great responsibility to constantly check the technical condition of the aircraft. Careless and negligent maintenance of air transport and

improper servicing leads to aircraft accidents and multimillion losses.

The economic situation of investing in the aviation industry has long been one in which debt providers have been rewarded with equity invested in collateralized mobile assets. Statistically, during previous business cycles, the air transport industry generated sufficient income to pay suppliers' bills and its own debt. However, even in a pandemic situation, investors are not immune to risk and are not compensated for their investments because they must calculate a return no lower than that generated by assets with the same degree of risk themselves. Because of vigorous competitive activity, airline revenues have generally fallen short of the cost of capital, which has subsequently prevented cost increases from being reflected; an act that has spread to every continent of the world. As a result, the decline in operating margins, traceable in Table 1. (1)

Table 1: The state of investment in the aviation industry as exemplified by different parts of the world

When forming an investment agreement, potential investors choose different strategies, taking into account all possible risks, but in the implementation of the financing agreement should also include the risks in the choice of their own partner.

The main goal of investors in private companies is to achieve a high internal rate of return on equity. For example, Apollo Global Management has provided a cumulative internal rate of return of 39% since 2009, which results in potential opportunities for investors. (3) Private equity funds usually do not compete with traditional investors, i.e. banks or capital markets, due to differences in targeting strategies, which provides the same stable returns.

To encourage and attract private investors, airlines usually pledge their valuable assets (aircraft fleets), renew credit lines and issue bonds. This leaves certain unsecured assets (intellectual property, the value of equity in aircraft, airport takeoff and landing package, passenger programs, inventory and equipment) on the balance sheet of airlines. For private equity funds, this allows bailout financing secured by a specific asset or all of an airline's assets.

Private equity funds are able to make investments through stocks and actively participate in their management. The strategies of such funds are to improve the company's business model, further raise capital, and improve operational efficiency. As a result, private equity funds are often exposed to the risks and benefits of private equity and debt investments in the aviation industry.

Humanity's global environmental concerns do not hinder investment, but rather attract attention. This is because aircraft manufacturers continue to innovate to meet the critical need to address the carbon footprint of travel, so specialized expertise in this area and a global aviation asset management network

allow investors to ensure that existing fleets are responsibly managed. In addition, throughout the asset cycle, investors have access to environmentally friendly advanced technologies for building air transport, preventing the sector from losing its average life span.

Airline investment alternatives play an important role in the portfolios of global institutional investors. Despite global economic challenges such as inflation and the hunt for profitability and diversification, the outlook for aircraft investments remains one of the most promising among potential investors.

3. Conclusions:

Currently, the aviation industry is considered one of the most powerful global processes of influence on the international economy, which, if properly organized investment activities will contribute to the economic recovery of countries and address their national security issues.

Changes in the structure of the world economy and economic crises, as well as the effects of the pandemic, are considered the main problems of the aviation market, which contributes to serious issues of reducing the demand for air transport and attracting potential investors. However, if certain rules and conditions are observed, this problem can be solved, due to the significant coverage of the share of the areas of replenishment of the state budget by the aviation industry.

Strong scientific and technological development and the introduction of innovation in the world market is the main advantage of investment in the aviation industry by the state government and private firms and enterprises. All investment procedures are carried out according to regulations, contracts and conditions, which ensures the control of this activity and the formation of statistics of profitable revenues to the economic sector of the industry.

Despite the problems and risks discussed in the article, the aviation industry remains one of the most profitable areas of international economic activity.

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