

### **VALUATION OF INNOVATIONS IN AIR ENTERPRISES' INTANGIBLE ASSETS**

*We have investigated the status and structure of the market of air transportation in Ukraine Through the further development proposed innovate in intangible assets. Recommended assessment methods for planning, financing and further introduction innovate.*

*Keywords: intangible assets, air transport enterprises, evaluation, approaches to evaluation.*

**Statement of the problem.** *Despite of the crisis state of world economics, volumes of passengers transportation grows permanently, which means that air transport becomes not luxury, but massive. Due to increase of passenger traffic, competition in this field both in domestic and international markets grows accordingly.*

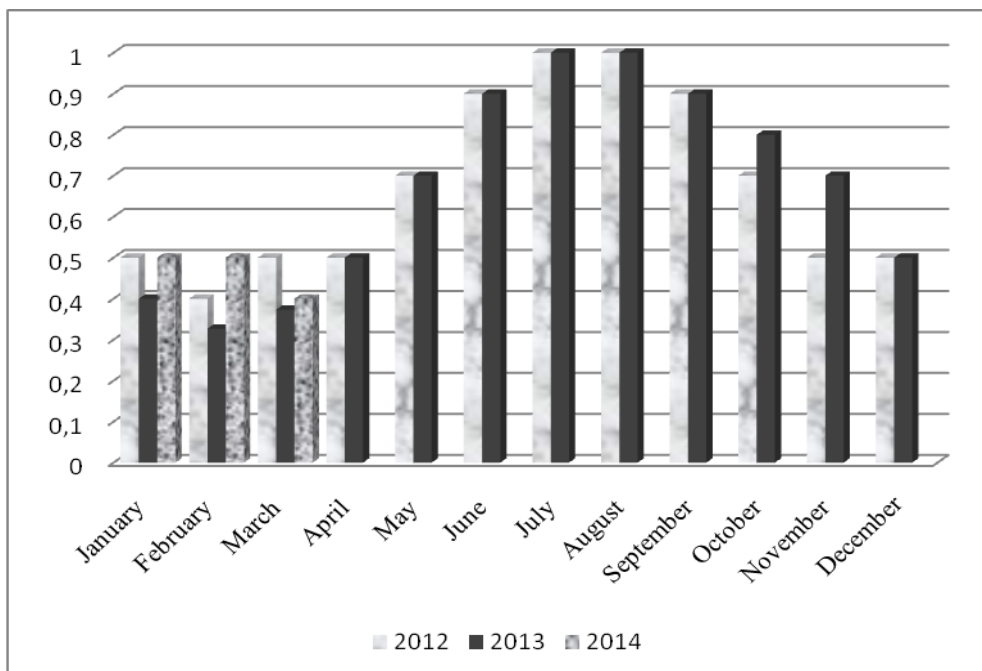
*One of the greatest advantages in conditions of development of cognitive and network economic is introduction of innovative technologies, which leads to additional research of strategic assets of aviation companies. Issues which arise during such researches force companies to improve its assessment methods. It is obvious that quality and intangible assets of any enterprise influence its financial health, market value and reputation. Efficient exploitation of intellectual property today provides competitive advantages and fundament for grows in future. Cost of progressive technologies causes larger capitalization, which exceeds the carrying value of companies. As an example we can name such business giants as Microsoft, Apple, so as Boeing, Airbus, Lufthansa, Air France-KLM SA in aviation field. Besides above mentioned issues one of the most critical point still is aviation safety, and nowadays specially for Ukrainian carriers solution of this problem completely depends on implementation of innovative technologies. Considering conditions of current economical tendencies the important question becomes the assessment of carrying values of aviation enterprises of Ukraine.*

**Research and publication analysis.** *Significant contribution to research of analysis methods of utility of intangible assets for domestic means was made by O.Bondarenko [5], I.Boiarko [6], N.Kuzyk [7], N.Mamontova [8], V.Manakin [9], M.Martyianova [10], and others. Accounting and management of intangible assets of aviation enterprises was studied by Zhavoronkova G.V., Borysiuk I.O., Kylvivnyk I.S. [12-14], and others. Nevertheless, the question of assessment of intangible value of Ukrainian companies in aviation field remains poorly understood. In addition, absence of common method of assessment of such objects leads to occurrence of serious problems with accounting and setting on balance.*

**Statement of the problem.** *The purpose of this article is to research the methods of assessment of intangible values of aviation enterprises and development of unified and common manner of realization of this procedure.*

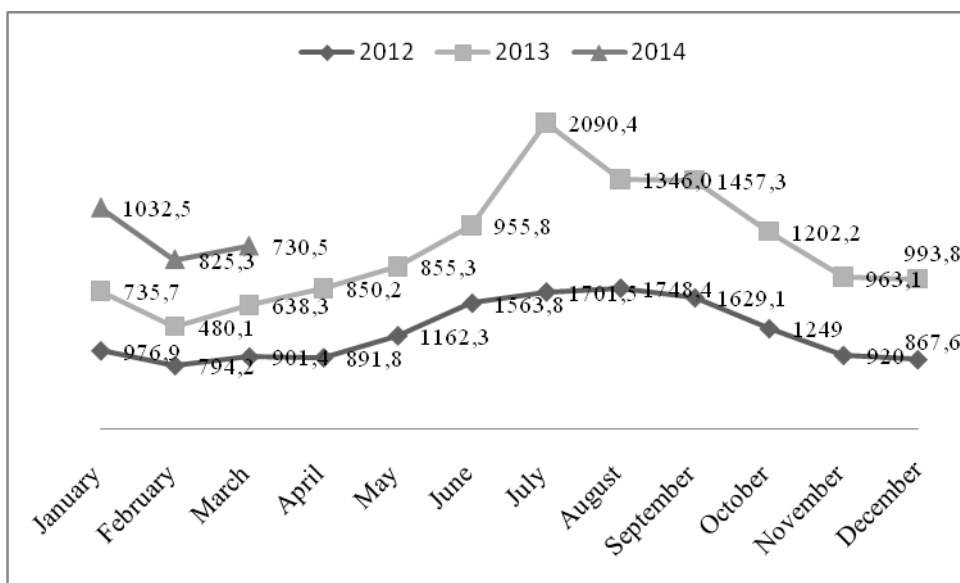
*According to stated purpose the tasks are designated: to understand the current state and issues of air transport branch; to determine the main tendencies of development for aviation companies in new economic conditions; to develop recommendations about application of optimal methods of assessment of intangible values of air transport enterprises of Ukraine.*

**Presentation of basic material.** *After analyzing the market of aviation transportation in Ukraine such statistics should be mentioned: relatively to 2012, the amount of passengers in 2013 has not changed (Fig. 1). But during the last 3 month of 2014 it has grown relatively to 2013 by 0,3 million and remained unchanged relatively to 2012.*



**Fig.1. Amount of passengers transported by Ukrainian aviation companies [in 11]**

Considering Ukrainian aviation transport passenger traffic, there is an increase comparing to 2013 and decrease comparing to 2012. (Fig.2).



**Fig.2. Ukrainian aviation transport passenger traffic [in 11]**

*In return, Ukrainian cargo traffic rapidly decreased: in January-March of 2014 15,8 thous.t. of cargo were transported, which is 44,9% less than during 3 month in 2013. Cargo traffic of aviation transport was 37,4 mln tkm, which is 57,9% fewer than during January-March of 2013 [11], which is predetermined by unstable political situation and decrease of export-import operation of state. Situation on market is tangling also because of increase of rivalry and increase of cost of aviation transportation. In such conditions improvement of competitive advantages and involving of new customers by introduction of innovative technologies in management and flight operation would be quite expedient.*

*Nowadays amount of tangible assets is not an advantage in market race anymore, so proper handling of intangible assets along with tangible may considerably improve the financial position and assure the stable and even leading positions on market.*

*In conditions of modern globalization, along with goods, services and works the rights for intellectual property (intellectual property as a part of intangible asset of the company) form the "fourth basket". Market structure in conditions of transition to new 6<sup>th</sup> technological class and aggravation of competition has stable tendency for changes in 2015 in favor of increasing of market part of intellectual property. Intellectual property especially in science and technology sphere plays an important role as a mechanism of creation of surplus value (part of intellectual property in sold good is 10 to 15%), as a mean of capitalization of company's assets (through intangible assets) and as an investment source (when on bail of intellectual property credits, loans and bank guarantees may be received).*

*According to statistics of Ukrainian companies, only 2-5% of overall assets occupy intangible assets. In return, in leading companies of the world the amount of intangible assets have 30-40%, and in knowledge-intensive companies this part is 70-80% [15].*

*Quality and structure of aviation company assets in many ways predetermines its ability to compete on international levels of air transportation. And such intangible goods as goodwill influence company's reputation and its capital.*

*In order to estimate intangible assets and include it to the total cost of aviation company assets it is necessary to classify it.*

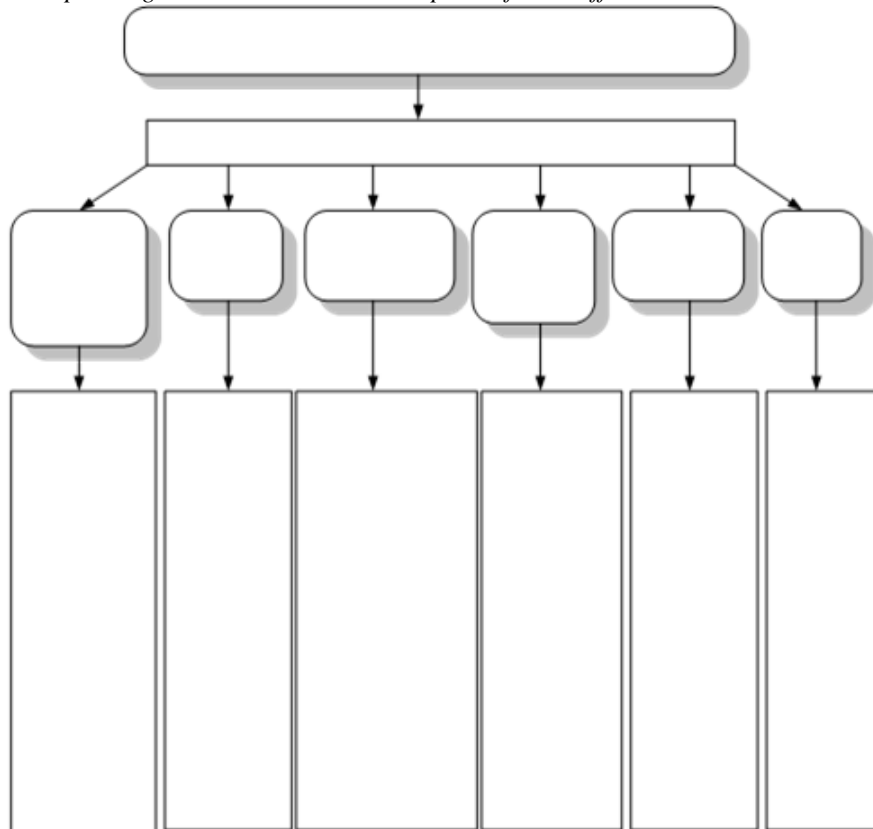
*Determining the classification of intangible assets the term "intangible asset" is interpreted in different ways in normative acts. The result is impossibility to create a unified method of classification. In researches of O.V.Poberezhec there are definitions of intangible assets relatively to norms (standards) of accounting (П(С)БО) 1, (П(С)БО) 8 ma (П(С)БО) 19, which is acceptable. Intangible assets are the assets that do not have material form, which are controlled by the company at the time of purchase as a result of past events, utilization of which, as it is expected, will lead to economical income in future. [16].*

*According to this definition, (П(С)БО) 8 and Civil Code of Ukraine [3] all intangible assets can be divided into the following groups (Fig 3): rights for use of natural resources and property; rights for means of individualization; patent law; copyright and related rights; right for untraditional intangible assets; right for other intangible assets.*

*Huge part in air transport company's intangible rights structure occupy: rights for use of natural resources; right for conducting flights, carrying of passengers and transporting cargo; right for computer programs; right for collected data; right for slots; right for exploitation of flights; quotes for carrying capacity.*

*For example, such airplanes of new generation as Boeing 787 or Airbus A350XWB, only during one transatlantic flight generate around 500 Gb of information based on which the whole flight and technical condition of aircraft can be analyzed. As it is expected, the total*

number of air passengers of civil aviation this year will be more than 3 billion [17]. All these passengers also generate information which can be used by the company in its further work. Actually, all this data arrays received during flights, are the intangible assets of companies and airports, which can be used for prediction of amounts of air transportation, study the pattern of customers and their preferences. Other important intangible asset (IA) right is the right to trade slots. As experience shows, despite the fact the IATA is against such practices, but such deals are periodically conducted. Outwardly it looks like simple trade, but Aviation Company not just gives up useless slot, but often receives certain money for it. Some small airlines aspire to get a slot in overloaded airports of its unofficial markets.



**Fig.3. Classification of intangible assets of air transport enterprises of Ukraine.**

According to given classification the proper approach should be developed for easy implementation of assessment method of own intangible assets value for aviation companies.

Traditional economic theory suggests 3 main approaches for intangible assets determining. There are designated by revenue, expenses or comparing.

Approach by expenses is a method of determining the value of object of assessment based on calculating the expenses necessary for restoration of object of assessment considering its demolition;

Comparative approach is a set of methods of evaluation of object's value by comparing the assessing object with analogical objects about which the information about costs of agreement exists;

Approach by revenue is set of methods of evaluation of object's value based on prediction of expected cost from the object of assessment.

Each of approaches has a row of methods. Approach by revenue or financial approach underlines the method of economic effect, royalty method, cash flow discounting, capitalization, method of commercial weight and method by profit. The most widespread are method of profit capitalization, royalty method and method of cash flow discounting.

Approach by expenses or investment approach includes the following methods: actual expenses; planned expenses; replacement cost; replacement cost; coefficients. The most often used are method of replacement cost and method of actual expenses.

Applying the comparative or analog approach such methods are considered: method of comparative sales, method of intangible assets market, method of branch coefficients and method of expert evaluation.

The main method of cost establishment for IA rights is revenue method in wide understanding. Method of comparative sales and method of profit can complement the revenue method. Aviation enterprises have their own peculiarities which determine the peculiarities of implementation of these methods in assessment of IA objects and other intangible assets.

Data which the company eagers to receive also determine the restriction of utility of these methods.

Methods recommended for use in aviation enterprises using the classification listed above are shown in table 1.

Table 1

**Recommended advantage which is efficient to use while choosing the evaluation approach for aviation agencies.**

| №<br>3/n | Type of intangible asset of aviation enterprise           | Recommended method |                |                  |
|----------|---|--------------------|----------------|------------------|
|          |   | Used primarily     | Used secondary | Auxiliary method |
| 1        | Rights for exploitation of natural resources and property | revenue            | market         | expenses         |
| 2        | Rights for individualization means                        | revenue            | market         | expenses         |
| 3        | Patent right  | revenue            | market         | expenses         |
| 4        | Copyright and related rights                              | expenses           | market         | revenue          |
| 5        | Right for untraditional IA                                | expenses           | revenue        | market           |
| 6        | Right for other IA  | revenue            | market         | expenses         |

According to the mentioned above table it is recommended to use approach by revenue, then market approach and only after that approach by expenses. But there are exclusions. For example during evaluation of copyrights and related rights it will be quite difficult to predict future cash flows from exploitation of data bases or computer programs, but assessing its value according to expenses made for its creation would be more effective. It is also recommended to calculate the value of untraditional objects according to the approach by expenses, because these objects as a rule do not have analogs on market and the profits from its exploitation can be calculated only after the beginning of this process.

**Conclusions and prospects for further researches.** Considering the general tendencies of economic development and market of aviation transport the heading vector of aviation enterprises should become the innovations and investments in intangible assets with the purpose: restructuring aviation enterprises assets considering the innovative developments;

optimization of structure by implementation of new schemes and structures of human resources management, perfecting of remote flight control, innovative developments in navigation sphere etc; customer surplus in sphere of passenger transportation by focusing on specific customer and improvement of his security; enlargement of intangible assets part in total structure of assets of aviation company, which will increase the supplement cost, and allow improvement of liquidity indicators so as financial stability, will give a chance to attract investors; involvement of partners in branch of informational technologies for development of client base of aviation company, which will allow to establish two-way dialog in virtual space.

These suggestions are impossible to implement without the previous evaluation of intangible assets value which is better to provide according to mentioned above classification. Herewith, it is recommended to use the approach by revenue as a priority, taking into consideration the exclusions mentioned above, which will allow to compare future cash flows profits from exploitation of intangible assets and expenses for its implementation, acquisition of property rights as a result of restructuring of aviation agency or acquisition.

Perspective of further researches in given sphere is a development of unified order of evaluation of intangible assets cost of aviation enterprises and research of influence of existing methods on object's cost.

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