

## THE ESSENCE, METHODS AND RESULTS OF ASSESSING PROFITABILITY OF A NON-PUBLIC UNIVERSITY

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### Abstract

The aim of the study is to present the meaning, structure and principles of financing higher education in Poland. The division into public and non-public higher education is presented and the authors focused on the sources of financing non-public higher education, which does not benefit from budget subsidies. The most important sources of financing activities of non-public higher education were indicated. Another objective of the paper is to characterize the role, essence and importance of the financial controlling department in the management of economic entities including non-public higher education institutions. The authors' interests is also focused on financial documents, which provide data to evaluate the financial situation of an economic entity as well as financial measures used during the analysis. Finally, an assessment of the level of profitability of a non-public higher education institution is made with a detailed division into full-time, extramural and postgraduate studies. The revenue structure of the studied entity was also compared to the market of non-public higher education institutions in Poland.

The essence of functioning of the financial controlling department in a company and the tasks and role of a financial controller are additionally presented in the paper.

The methodology used in the submitted article is a financial analysis of non-public university's financial statement based on profitability ratios.

The article deals with the occasional subject of evaluation of non-public university functioning by the Financial Controlling Department in terms of income generated, costs incurred and profitability level achieved.

The functioning of higher education in Poland should be divided into two areas: state universities, which benefit from budget subsidies for students studying on a full-time basis, and non-public higher education institutions, which may or may not benefit from such subsidies. Their primary source of income is fees paid by students in various forms, mainly in the form of tuition fees.

Non-public sector of higher education in Poland doesn't use public budget grants so the importance of Financial Controlling Departments is essential in calculating incomes and costs.

The data used in the analyses came from a private institution in the higher education sector. The owner of the company did not agree to provide its name and the detailed figures based on which the financial ratios were calculated.

**Keywords:** financial statement, financial ratios, profitability, private university, financial controlling, non-public higher education.

**JEL Class:** G01, G11, G21, G23, G30.

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## INTRODUCTION

Higher education is one of the most important areas in the development of each country, both in terms of human capital development and in economic terms (e.g. GDP growth).

The functioning of higher education in Poland should be divided into two areas: state universities that use budget subsidies for students who study in a full-time mode, and private higher education institutions, which may or may not use such grants. Their basic source of income is fees paid by students in various forms, mainly in the form of tuition fees.

In the case of the second group of institutions, their managers face an important challenge of managing finances of the institution, which will enable the generation of income from fees of full-time and extramural students at a level that will allow for financing the company's operating costs and generating a net financial profit.

Cost control and regular assessment of the profitability level of non-public higher education institutions necessitate the functioning of Financial Controlling Departments, which regularly provide the authorities with reports on revenues, costs, a number of students, recommendations of the tuition and profitability level.

The aim of the study is to present the meaning, structure and principles of financing higher education in Poland. The division into public and non-public higher education is made. The authors' interest focused on the sources of financing non-public higher education, which does not benefit from budget subsidies. The most important sources of financing activities of non-public higher education were presented. Another objective is to characterize the role, essence and importance of the financial controlling department in the management of economic entities including non-public higher education institutions. The authors additionally focused on financial documents, which provide data to evaluate the financial situation of the economic entity, financial measures used during the analysis, and finally, the assessment of the level of profitability of non-public higher education institution was made with a detailed division into full-time, extramural and postgraduate studies.

The formulated research hypothesis stipulates that thanks to the activities of the financial controlling department in the field of revenue optimization and cost control, the level of profitability of the university improves every year.

The analysis period is not conducted for calendar years, but for academic years. The academic year begins in October and ends in September of the following year. The beginning of the time series used for the analysis is October 1, 2016.

Therefore, the last data for the analysis is from September 2020. In subsequent studies, the time series of the analysis will be systematically extended.

## 1. LITERATURE REVIEW

There is a lot of literature on the issue of assessing the level of profitability and the application of financial controlling in management decisions in companies. In the case of profitability assessment, there are two main streams. The classic trend, which is based on financial indicators, can be distinguished here by the following authors: Brealey, Myers and Allen (2020), Brigham and Gapenski (1996), Ross, Westerfield and Jordan (2018). The second approach, critical of classical indicator analysis, is based on the concept of residual profit and economic value added (EVA). The first authors to introduce the EVA concept into the literature were Bennett Stewart (1991) and Stern, Hutchinson (2013). Studies on the use of financial controlling in management decisions by Vollmuth (2001), Bragg (2012) are widely used in business theory and practice in companies. Entrepreneurs frequently mention Richard Cantillon. He claimed that he fulfils the essential functions of the production organizer, whereas Schumpeter (1949) considers an entrepreneur to be a company that introduces technical innovations and new products.

## 2. THE ESSENCE OF RUNNING COMMERCIAL BUSINESS

The reflection on the analysis of an enterprise should start from the definition itself. What is business? What are its goals and what rights is it based on? Running a business in Poland is based on numerous legal forms that regulate these issues, and they primarily include:

- Civil Code (civil partnership, individual entrepreneur) (The Act of 23 September 1964 Civil Code, Journal of Laws No. 16, item 93 as amended);
- Commercial Companies Code (partnerships, capital companies' commercial law) (The Act of 15 September 2000, The Commercial Companies Code, Journal of Laws No. 94, item 1037 as amended);
- Freedom of economic activity (sole proprietorship) (The Act of 2 July 2004 on the freedom of economic activity, Journal of Laws 2004 No. 173, item 1807 as amended);
- Cooperative law (applicable to cooperatives) (The Act of 16 September 1982 on Cooperative Law, Journal of Laws 1982. No. 30, item 210 as amended).

Economic activity can be discussed in several categories: organizational, legal, economic one.

Mentioning the organizational category, economic activity took shape during the period of capitalism, when there was a complete separation of household work from paid work. In this respect, the enterprise is defined as a team of persons systematically engaged in gainful activity (Lichtarski, 2007: 46). In legal aspects,

in order to talk about an enterprise, it is necessary to have a technical-production, organizational separation and a separate record of expenditures and results in monetary units. This is called legal personality, which gives the company an opportunity to act as a civil trader with the right to conclude contracts and incur liabilities. Legal personality is not the only requirement to exist as an economic activity. The core of the problem is the relationship between the functions of the entrepreneur and the functions of the owner of the means of production. In economic terms, an enterprise, as a company, is closely related to the entrepreneurial category of the capitalist economy, i.e. having the resources needed to conduct a given type of business, which should be carried out with the help of employees on its own account and its own risk.

If we want to think about an enterprise, we should first talk about the entrepreneur as the beginning of everything.

Entrepreneur should prioritize gaining new markets and beneficial combination of products.

The role and functions of the entrepreneur are variously defined. An entrepreneur should have sense, discover and stimulate human needs, put new means of satisfying old needs at his disposal, and he/she should be a pioneer and conqueror who combines risk with caution in a proper relationship. He/she should be a good organizer who can acquire the right people and provide them with necessary and appropriate material resources; he/she should direct the entire business in such a way as to result in a surplus (pure income, excess, profit).

In the capitalist system, entrepreneurs and constructors were often individuals who dealt with all aspects of the enterprise themselves. A good example could be, for example, Thomas Edison in the telephone industry or Adam Opel in the automobile sector.

According to R.W. Griffin, it is not the entrepreneur of an enterprise that assigns power to a selected person with appropriate qualifications and predispositions. This person takes over all rights and obligations of the entrepreneur, depriving the owner of them. In this way, the manager becomes a conditionally active entrepreneur. Then, the owner does not drive production, does not set the company's goals (Griffin, 2000: 430).

If the property rights concern the state institutions, the entrepreneur's characteristics are not clearly defined.

Along with the economic development, the enterprises have developed and grown, which resulted in a management revolution. The companies have grown to form joint-stock companies in which the entrepreneur's position also changes its location. The large dispersion of property has led to the separation of property from management. The power was transferred to professional managers, and the shareholders-owners retained the rights to profits and the sale of their shares.

In such enterprises, it is difficult to define a clear entrepreneur. There are numerous opinions and views on this subject. It is often mentioned about a new type of entrepreneurs that are managers. They perform the function of a collective entrepreneur, who cares for all aspects of the enterprise (Domańska, 1986: 168).

Proper management of the company over time has begun to require the manager of high predispositions, experience and cunningness. Therefore, the owners, not having them, left it to the professionals, entrusting employees with the performance of responsible tasks.

However, one can also find the concepts that only the owner should be considered an entrepreneur. There are many arguments in favour of this assumption:

- only the owner places the highest priority of the company's value and the investment profit in its development,
- the owner bears the highest risk of loss if the project fails,
- even as a minority owner has an indirect impact on the company's management discharge (profit-sharing decisions, possible capital increase, selection of the supervisory board).

The law imposes rights on the subject, but also obligations that result from the willingness to undertake entrepreneurial activity. When starting a business activity, one can independently choose an organizational and legal form of the company, subject to separate regulations, which may possibly exclude a given a legal form for a particular type of business, e.g. banking facilities.

Running a business in Poland in terms of business entities can be divided into (Podstawka, 2010: 572):

- natural persons (these are individual entrepreneurs, as well as partners in civil companies),
- legal entities (limited liability company, joint-stock company, cooperatives, and other entities with legal personality),
- organizational units without legal personality (partnership company, general partnership company, limited partnership company, limited joint-stock partnership company).

In order to better understand the essence of the above division, particular types of business entities should be characterized in detail, starting with the basis of a natural person.

A natural person is any person who is subject to rights and obligations that lie within the scope of civil law. In terms of economic activities, a natural person is an individual entrepreneur conducting such an activity, signing it with his/her own name and on his/her own account.

The act also states that an entrepreneur is a natural person, legal entity and an entity without legal personality, or a commercial law company, which professionally, independently under its own name undertakes, maintains and

performs economic activity (The Act of 23 September 1964 Civil Code, Journal of Laws No. 16, item 93 as amended).

Entrepreneurs may also be partners of civil lawsuits in the scope of a performed activity. The legal aspects of business are the same for everyone. All economic operators are equal before the law. The legal person has maximum legal capacity (including litigation and legal capacity). The activities of a legal entity are based on its bodies. The ways of their functioning are regulated by the statute and the statute is passed by the unit. The bodies of the legal person have full responsibility for the actions taken in the scope specified by the regulations. The most common bodies in the Commercial Code entities are management board, supervisory board, general meeting of shareholders (The Act of 15 September 2000 The Code of Commercial Companies, Journal of Laws 2000 No. 94, item 1037 as amended). Special examples of legal entities are, among others, the State Treasury, municipalities, self-government voivodships or churches, as well as various religious associations.

Organizational units without legal personality are entities with a limited legal scope. With the help of its bodies, they can act as representatives of natural or legal persons, whose property is managed in the form of separate assets. Such an entity is treated as a subject of rights and obligations in the circuit of business.

In fact, it is necessary to discuss the targeted aspect of business operations. The goal is the point of access to which the company seeks its actions. This is the future situation that the company wants to achieve.

The company's goal is an economic variable (or economic variables) referring to its activity, which is of main interest to its management and thus constitutes the main criterion for choosing the type and direction of action (Sudoł, 2006: 64).

One of the basic goals of the company, especially in the time of crisis, is its very survival whose condition is the continuity of the company's profitability and financial liquidity. Another objective of the company may be its continuous development, both quantitative and qualitative (financial and non-financial, or social goals).

In case of a dynamic and competitive economy with many newly emerging and dynamically growing enterprises, the issue of development becomes the basic element of survival, i.e., the implementation of the primary goal.

Lack of competition on the market causes stagnation and inertia. For most entrepreneurs, the only basic goal is not only to survive, but more importantly to generate the highest possible profit by obtaining surplus revenues over costs, losses, and burdens, which are taxes for the state, and in the long-term, horizon increases in the market value of the enterprise.

Pursuing profit at any price, ignoring the good and comfort of employees, co-operators and clients may cause deterioration of the company's situation. That is

why proper actions in the area of corporate social responsibility are very important, which results in positive relations of the company with the internal and external environment.

Regardless of the nature of the activity (economic, social political etc.), an enterprise recognizes the impact of intra-company interests and factors surrounding its business (Lichtarski, 2007: 54). At this point, the concept of the organization's environment and its impact on its operation should be brought closer.

The organization's environment is all the conditions and impacts of various organizations, institutions that influence the behaviour of individual enterprises (Borowiecki and Siuta-Tokarska, 2008: 72).

The environment is also those factors that are independent of the business entity itself (further environment, i.e., economic, monetary, and fiscal policy). It is an external environment, the whole of processes and phenomena or development opportunities. These are also all the elements that are not a part of the organizational system but have a significant impact on it.

Therefore, the environment of the organization is all factors lying inside and outside of the organizations that affect it, to which the subject both has some, or has no influence.

Surroundings closer to direct otherwise contain all the systems which constitute a direct relationship with the company. They include contractors, lenders, market competitors and customers, as well as the processes and the relationships within the company, where the decisive factor is the human capital of the organization.

And indirect surroundings – here are mainly found systems that create indirect relations with the company, for example, the political system or demography of the area or the legal system (Webber, 1996: 85).

In times of uncertainty, the organization's environment puts a lot of threats to the company, but also opportunities of fast development. The company must adapt to constant changes, which is a condition for its survival. At the same time, this volatility creates a great chance for a company if it can change faster than its competitors (Pakulska, 2012: 115).

### **3. THE ESSENCE AND APPLICATION OF FINANCIAL CONTROLLING IN MANAGEMENT DECISIONS IN THE ECONOMIC ENTITIES**

Controlling in organizations serves to eliminate potential dangers early on. The activities are organized in such a way that information about the risk reaches the people responsible for its prevention as soon as possible. The essence of controlling is to prevent the occurrence of consequences that hinder the

achievement of expected results (Mann and Mayer, 1996: 9). It is a system directed at thinking about the future. This is done on the basis of a reliable analysis of past mistakes in order to avoid them when making subsequent key decisions. The information that has been carefully considered is of great value, thanks to which companies are able to react when needed. To ensure this, certain areas of the organization remain under constant observation. Lessons learned from this are intended to help managers apply certain actions. Continuous control and monitoring of selected company segments prove to be helpful, especially in showing information about the size of the actual situation. With reliable data, the company can compare the values received with the planned state and thus determine the resulting deviation (Vollmuth, 2001: 15).

The direct objectives include an informational aspect, providing management with data on methods or diagrams to help them run the unit, and a coordination aspect to control the entire process. Both objectives are linked by a certain degree of interdependence, as they complement each other. The information objective facilitates the collection of relevant information for the planning and control processes, specifying their timeliness and reliability. The data prepared in this way is an excellent basis for the next steps. The coordination goal, on the other hand, verifies it by monitoring the correctness of the processes and the entire system. Considering the further division of direct objectives, one can distinguish (Nesterak, 2004: 35):

- information-oriented goals;
- planning and control objectives;
- management system-oriented objectives.

The whole system of controlling includes a set of interconnected elements, creating directions, tasks, organization, as well as controlling instruments. Tasks in this system consist of all activities initiated by an appropriate party (i.e. controlling cell), aimed at achieving the objectives set in controlling. They can be classified according to the following criteria (Janik and Paździor, 2012: 123):

- controlling goal – includes tasks in strategic and operational terms;
- execution – the undertaken tasks are directed to the construction and bonding of the system;
- subject – the tasks undertaken are related to the basic management functions, i.e. planning, monitoring and transferring information to the system.

The organization of the system covers the broadly understood issues of the structure and processes in the field of controlling. Instruments, on the other hand, serve as the means which mainly favours the collection, evaluation, and storage of information. The controlling system should have a specific vision, because during its creation, companies may encounter various situations in which a specific philosophy is often a helpful source of motivation. Every enterprise wishing to implement a controlling system in its area must consider the form of



the guided activity as well as conditions in the external environment. Instruments, including management techniques and resources, should be selected according to the individual needs of each unit. The most important procedures include (Marciniak, 2008: 53–55):

- the purposefulness and relevance of the chosen technique;
- adapting the technique to the nature of the process or phenomenon under investigation;
- paying attention to the nature of the subject of the study (by e.g. indicating the dependencies occurring during the comparison of facts, it is possible to determine the complexity of a given phenomenon);
- estimation of the test time and form of visualization/demonstration of results.

The management of a company consists mainly in the concretization of its objectives, which at a later stage requires constant decision making, leading in effect to the achievement of expected objectives. An important instrument in the process of organization management is budgeting, which has its reference in the financial area. Budgeting includes a set of guidelines, i.e. principles and methods which form the whole of the procedures adopted in the organization. It has become particularly important due to (Nowak and Nita, 2007: 39):

- increasing complexity of processes taking place in the company;
- increased dynamics of changes in the surrounding external conditions;
- increasing the possibility of using new alternatives;
- increase in the risk of making a mistake and, consequently, in the costs incurred.

When talking about the budget, it should be defined as a short-term plan, presenting the organization's goals and ways to achieve them. The data is presented in terms of value, i.e. income and costs, revenues and expenses and financial performance. The budget is called a tool that makes it easier to control the employees responsible for performing the tasks set out in it. Its implementation is carried out according to the following three phases (Świdarska, 2003: 11–12):

- creating a budget;
- budget implementation;
- budget control.

#### **4. SOURCE OF INCOMES AND THE METHODOLOGY OF NON-PUBLIC UNIVERSITY'S ASSESSMENT IN TERMS OF PROFITABILITY**

The Act regulating the accounting and reporting system in Poland is the Accounting Act, effective from January 1, 1995 (Accounting Act of 29 September 1994, Journal of Laws 1994 nr. 129 item 559 as amended).

Pursuant to the provisions of the Act, the annual financial report of economic entity consists of the following documents (Bednarski, 2007: 33):

- balance statement;
- profit and loss account;
- additional information;
- statement of cash flows;
- statement of changes in equity;
- statement of comprehensive income of the entity.

In practice, during analyses carried out by the Financial Controlling Departments, data from the first two documents and detailed reports prepared in the agencies and departments of the university in terms of income from tuition, other income, costs of didactic activity and the number of hours and students are used.

Thanks to this data, a comprehensive assessment of the functioning of the entire university and its individual departments and agencies in terms of profitability is possible, as well as such indicators as the number of hours per student, income per student and cost per student.

Pursuant to the Higher Education Act, in Poland, there are two possible modes of higher education: full-time and extramural, bachelor's level (1<sup>st</sup> degree), supplementary master's level (2<sup>nd</sup> degree) and for selected fields of study at the uniform level of the Master's degree (The Act of 20 July 2018 Law on Higher Education and Science, Journal of Laws 2018 item 1668).

The basic sources of income of state-owned universities are subsidies from the state budget to full-time students, the amount of which is specified in the regulation of the Minister of Science and Higher Education. The second source of income for higher education institutions is paid tuition fees by extramural students (Regulation of the Minister of Science and Higher Education of December 7, 2016, amending the ordinance on the method of distribution of subsidies from the state budget for public and non-public higher education institutions, Journal of Laws 2016, item 216).

Non-public universities also have the right to use budget subsidies for full-time students, but not all institutions use this form of financing, which means that the main source of their income at the operational level are all full-time and extramural university fees, mainly in the tuition form and additional incomes are paid statutory fees.

A popular form of increasing the number of students and incomes in non-public universities is the post-graduate studies offer. According to article 8 sec. 1 of the Act of 22 July 2018 – Law on Higher Education (Journal of Laws of 2018, item 1668), the university conducts post-graduate studies around education with which at least one field of study is run by the University.

This means that the university can provide education at post-graduate studies throughout the country in any field and discipline in which it has the license to conduct undergraduate or graduate studies.

Revenues from post-graduate studies constitute, in smaller departments and agencies, a significant source of income, which significantly affects the increase of their profitability level.

Needless to say, before starting a given field of post-graduate studies, a calculation is made by their manager in the department in terms of the tuition level, the required number of students, remuneration rates per hour for lecturers and other administrative and organizational costs.

The creation of a planned study budget, which ensures the level of profitability required by the university authorities, is always the basis for a positive decision regarding the launch of the post-graduate program in each faculty.

The costs of functioning of non-public universities are divided into direct and indirect ones. Direct costs for a given didactic unit (faculty, course, and mode) are costs related to didactic hours performed in the unit.

Intermediate costs include university-wide costs that cannot be directly assigned to a specific university faculty (for example, administrative costs in the university centre).

In the case of full-time employees who implement a teaching pace in several university units, the costs are distributed per unit, in proportion to the number of hours completed in them.

The same applies to the situation when a full-time employee works more hours during the academic year than his/her teaching level. Additional costs in the form of overtime hours are settled in the centres in which they work, in proportion to the number of hours completed in them.

All other costs are treated as indirect (university-wide). They are most often added to each teaching unit, using load keys in proportion to the number of hours in it, in relation to the number of teaching hours, implemented in the entire university in the academic year under review. They are most often added to each teaching unit, using load keys in proportion to the number of hours in it, in relation to the number of teaching hours, implemented in the entire university in the academic year under review.

After obtaining information about the level of the net financial result for the whole university, it is possible to calculate profitability ratios for the whole university, individual departments and in the most precise way for each field of study and mode. These analyses are most often carried out at the end of the winter semester and after the summer semester for the entire academic year by the financial controlling department.

Profitability ratios are considered the most synthetic measures to assess the entity's business. Their level is influenced by all the phenomena and economic processes taking place in the company.

The group of profitability measures includes (Wypych, 2007: 184):

- return on sales ratio (ROS),
- return on equity ratio (ROE),
- return on assets ratio (ROA).

**Return on sales (ROS)** – The ratio allows for determining what part of sales revenue remains in the company in the form of net profit (Marcinkowska, 2007: 321).

$$ROS = \frac{NP}{SR} \times 100\%$$

where:

**NP** – Net Profit,

**SR** – Revenue of Sales.

**Return on equity (ROE)** – allows for determining the profitability of equity, i.e. the rate of return (Marcinkowska, 2007: 322).

$$ROE = \frac{NP}{E} \times 100\%$$

where:

**NP** – Net Profit,

**E** – Equity.

**Return on assets (ROA)** – The ratio indicates the rate of return on assets being the measure of operating efficiency that allows for assessing the profit-earning capacity of assets held by the company (Marcinkowska, 2007: 323).

$$ROA = \frac{NP}{A} \times 100\%$$

where:

**NP** – Net Profit

**A** – Assets.

Thanks to this, it is possible to monitor unprofitable fields of studies and modes, thanks to which it is possible to carry out corrective actions consisting in optimizing the number of dean's office groups and adjusting the tuition level.

It is also important to establish the limit number of students admitted to the first semester of study in each field, at which a decision will be taken to start the course.

## 5. ASSESSMENT OF PROFITABILITY OF A NON-PUBLIC UNIVERSITY IN THE 2016–2020 YEARS

**Option I** – Revenues include only payments in the form of tuition fees paid by students to the University.

Table 1. Value of ROS, ROE and ROA ratios in 2016–2020 years

Year/Ratio	ROS	ROE	ROA
2016–2017	1,18%	0,82%	0,71%
2017–2018	1,35%	0,92%	0,75%
2018–2019	1,39%	0,97%	0,79%
2019–2020	1,58%	1,07%	0,86%

Source: The authors' calculations.

The data in the table shows clearly a very low level of profitability if only revenues from tuition are considered. In this variant, the profitability ratios are at the level of about 1% or even less, which in the case of ROS ratio means that costs are almost 99% in 1 zloty of revenues.

Table 2. Value of ROS ratio in 2016–2020 years with division into full time, extramural and post-graduate programs

Year/Program	Full time	Extramural	Post-graduate
2016–2017	-127,06%	24,11%	36,14%
2017–2018	-103,81%	27,32%	38,24%
2018–2019	-92,13%	29,67%	40,12%
2019–2020	-76,52%	31,18%	41,05%

Source: The authors' calculations.

The above data clearly indicates which is the main source of funding for a private university that does not benefit from budget subsidies. To every PLN of revenue from tuition from full time students the university adds from PLN 0.77 to 1.27 of its revenue from tuition fees from part-time and post-graduate students to finance the cost of education in full time mode. In case of part-time studies from every PLN of revenue from tuition there is from PLN 0.24 to 0.31 of net profit for the University, which allows for covering the deficit for the full-time studies and the development of minimum profitability. It is supported by tuition fees paid by post-graduate students and it is only possible thanks to a favourable structure of the students, where more than 80% are taught in extramural and post-graduate modes. Data presented in the figure below.

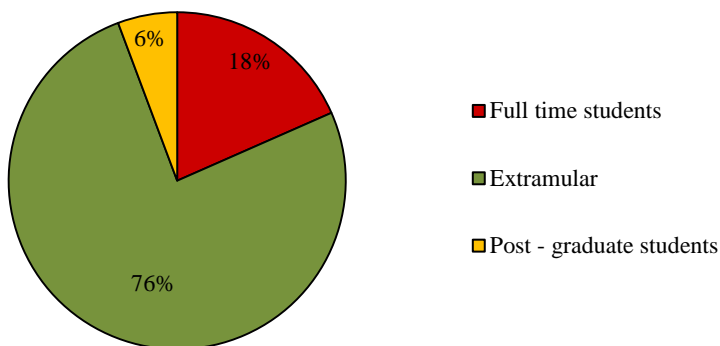


Figure 1. Structure of the university students in the academic year 2019–2020 – type of studies

Source: The authors' calculations.

An important element in the finances of the university is the geographical structure of its students. The level of tuition fees in the home institution and in the capital is higher than in smaller towns. The structure is effective for the university's profitability. The structure is presented in the following figure.

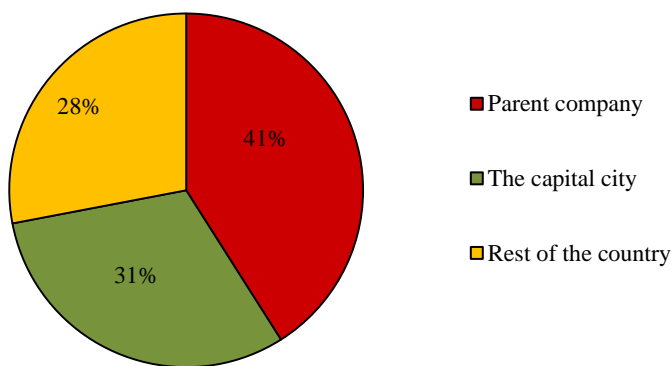


Figure 2. Structure of the university students in the academic year 2019–2020 – place of studies

Source: The authors' calculations.

**Option II** – All incomes from the operational activity of the university.

Table 3. Value of ROS, ROE and ROA ratios in 2016–2020 years

Year/Ratio	ROS	ROE	ROA
2016–2017	6,45%	4,77%	4,13%
2017–2018	6,83%	4,98%	4,49%
2018–2019	7,04%	5,46%	4,83%
2019–2020	7,82%	5,79%	5,02%

Source: The authors' calculations.

Table 4. Value of ROS ratio in 2016–2020 years with division into full time, extramural and post-graduate programs

Year/Program	Full time	Extramural	Post-graduate
2016–2017	-114,94%	28,15%	37,49%
2017–2018	-91,2%	31,12%	39,62%
2018–2019	-79,3%	33,76%	41,19%
2019–2020	-64,8%	35,82%	43,07%

Source: The authors' calculations.

The results of the analyses in the option II are more optimistic. Considering all fees paid by students to the university, level of profitability is significantly higher, the value of the ratios in 2016–2020 years ranged from 4% to nearly 8%. In this variant, costs accounted for less than 93% of revenue, which allowed keeping nearly 0,08 PLN from 1 PLN revenues in the form of a net profit in 2020. On the one hand, this is the result of an increase in the number of students, an increase in the level of tuition fees, as well as optimization processes in terms of the costs of operation of the studied entity.

This does not change the fact that full-time students are in a significant minority, but the level of losses, as evidenced by the ROS index, has dropped by more than 50 p.p. The level of profitability of extramural studies in the analysed variant increased by more than 7 p.p., while that of post-graduate studies by nearly 6 p.p., which allowed the university to develop a higher financial surplus.

The comparison of the structure of students and income of the analysed entity with the market of non-public higher education institutions in Poland showed great similarities. The dominant category of students are extramural students, followed by full-time and postgraduate students, and the least numerous groups are doctoral students. The dominant category of income is tuition fees paid by students, followed by funds for projects financed by the National Centre for

Research and Development, funds for projects financed by the National Science Centre, and grants and subsidies from the state and local government budgets, which are the least important in the income structure (www1).

## CONCLUSIONS

The objective set in the introduction was fully achieved. The following issues were presented: the essence of conducting business activity, the meaning of financial control department in the management of economic entities, forms of its financing, indicators used to assess the level of profitability, as well as in the empirical part an analysis of the profitability of a non-public university in the academic years 2016–2020 was conducted.

The formulated research hypothesis has been positively verified. The effects of activities of the financial controlling department in the scope of revenue optimization, establishing the level of tuition fees and cost control bring the intended effects in the form of an annual, regular growth of the profitability level.

An important element is the geographical criterion of the university's students. In the parent company and in the capital city the tuition fees are higher than in smaller centres. Students from the home institution and the capital city account for 72% of all students, thanks to which the university has a higher level of income from tuition fees.

Full-time studies without budget subsidies are in deficit, and the main source of income, which makes it possible to cover the above-mentioned deficit and generate a financial surplus for the university, are all fees paid by extramural students (mainly in the form of tuition fees) and post-graduate students.

The tuition fees paid by full-time students cannot cover the costs of these studies for the university, however, the fact that the analysed institution has students in this mode ensures its added value in the form of the possibility to apply for funds from the European Union budget for programmes supporting full-time students in various ways.

Most of the EU Programmes are intended to cover and target students who study on a full-time basis, so despite the deficit in operating income, this form of education benefits the university in other areas of income, and has a significant impact on the final level of the net financial result of the audited institution.

This study is part of a project aimed at regular analysis of the financial condition of a non-public university, which in the future will be conducted for longer time series (subsequent academic years).



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