UDC: 657.6:657.424(477+438)



Liubov Gutsalenko
D.Sc. (Economics), Professor,
Head of the Department of
Audit and State Control,
Vinnytsia National Agrarian University
3 Soniachna Str.,
Vinnytsia, 21008, Ukraine
lyboffv@gmail.com
ORCID ID:
https://orcid.org/0000-0001-5181-8652



Miroslaw Wasilewski
PhD (Economics), Associate Professor,
Head of the Department of Finance,
Warsaw University of Life Sciences - SGGW
(WULS-SGGW)
166 Nowoursynowska Str.,
Warsaw, 02-787, Poland
miroslaw\_wasilewski@sggw.pl
ORCID:
https://orcid.org/0000-0001-6791-5713



Tetiana Mulyk
PhD (Economics), Associate Professor,
Head of the Department of
Analysis and Statistics,
Vinnytsia National Agrarian University
3 Soniachna Str.,
Vinnytsia, 21008, Ukraine
mulyk\_t\_o@ukr.net
ORCID ID:
https://orcid.org/0000-0003-1109-2265



Uliana Marchuk
PhD (Economics), Associate Professor,
Department of Accounting and Taxation,
Kyiv National Economic University named after Vadym Hetman
54/1Peremohy Ave., Kyiv, 21008, Ukraine
mar4ukuliana@gmail.com
ORCID ID: https://orcid.org/0000-0003-0971-1303

Yaroslavna Mulyk
PhD (Economics), Senior Lecturer,
Department of Audit and State Control,
Vinnytsia National Agrarian University
3 Soniachna Str., Vinnytsia, 21008, Ukraine
mulyk.yaroslavna@ukr.net
ORCID ID: https://orcid.org/0000-0002-8166-2481



# Accounting control of capital investment management: realities of Ukraine and Poland

## **Abstract**

The authors overview macroeconomic indicators of Ukraine and Poland. Being the basis of capital investment, they facilitate further increase in agricultural output in the system of strategic agricultural management. The article compares the indicators of Ukraine and Poland and researches the countries' agricultural prospective. It has been found that capital investment is required by business entities in order to realise their potential. The authors have identified regulatory tools ensuring control and accounting of capital investment in the international media and the accounting systems of Ukraine and Poland and carried out a comparison of the regulatory tools for accounting of capital investment in the international accounting system (International Accounting Standard 16 «Fixed Assets»), Ukrainian accounting system (Accounting Standard 7 «Fixed Assets») and Polish accounting system (National Accounting Standard 11 «Fixed Assets»). The article describes both common and distinctive features of certain parts of the abovementioned regulations and proves that the regulatory tools are to provide local and international investors with a legal framework with regard to changes in fixed assets in order to avoid and reduce investment risks. For instance, the comparison of the notion «fixed assets» in the International Accounting Standards and the National Accounting Standards of Ukraine and Poland proves their similarity. However, differences should be considered as well. The difference between the Polish Standard and IFRS in the valuation of a fixed asset on a balance day lies in the fact that according to IFRS fixed assets are evaluated at fair market prices, whereas the Polish Standard allows asset revaluation by a historic price (expenditure on construction or purchase). The Polish Standard only allows the revaluation of the fixed asset based on a particular regulation.

The article investigates the dynamics of capital investment financing in both Ukraine and Poland, and identifies the total share of the countries' capital investment, including government funding in agriculture, forestry and fishery. In particular, the authors of the article have researched international accounting and control standards ensuring the functions of control over controlling bodies and capital investment.

The authors have developed a model of informational tools and impact factor management in the process of investing in agricultural business. Consequently, relationships between different parts of the model, namely informational tools (accounting, control and analysis), investments (internal and external), parties involved (investors, manufacturers, etc.) and risks at micro- and macro levels have been identified. It has been proved that taking these parts into consideration will contribute to the investment attractiveness of businesses in Ukraine and Poland.

**Keywords:** Accounting; Control; International Standards; Investment; Capital Investment; Management; Financing; Agriculture; Risks; Tools; Information

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### Гуцаленко Л. В.

доктор економічних наук, професор, завідувач кафедри аудиту та державного контролю,

Вінницький національний аграрний університет, Вінниця, Україна

#### Василевский М.

кандидат економічних наук, доцент, завідувач кафедри фінансів, Варшавський університет наук про життя, Варшава, Польща **Мулик Т. О.** 

кандидат економічних наук, доцент, завідувач кафедри аналізу та статистики,

Вінницький національний аграрний університет, Вінниця, Україна

#### Марчук У. О.

кандидат економічних наук, доцент кафедри обліку і оподаткування,

Київський національний економічний університет імені Вадима Гетьмана, Київ, Україна

#### Мулик Я. І.

кандидат економічних наук, старший викладач кафедри аудиту та державного контролю,

Вінницький національний аграрний університет, Вінниця, Україна

Обліково-контрольне забезпечення управління капітальними інвестиціями: реалії сьогодення України та Польщі

Анотація. У статті здійснено оцінку макроекономічних показників України та Польщі, які є основою стратегії капітального інвестування як стабілізатора подальшого нарощування обсягів сільськогосподарського виробництва в системі стратегічного управління діяльністю аграрного сектору. Проведено порівняльну оцінку даних показників двох держав — України та Польщі. Досліджено аграрний потенціал України та Польщі. Визначено потребу самореалізації господарюючих суб'єктів країн за допомогою капітальних інвестицій. Виокремлено нормативно-правовий інструментарій, що формує обліково-контрольне забезпечення капітальних інвестицій у міжнародному інформаційному середовищі та облікових системах України та Польщі. Здійснено порівняльну оцінку нормативного інструментарію облікового забезпечення капітальних інвестицій у міжнародних облікових системах (Міжнародний стандарт бухгалтерського обліку 16 «Основні засоби») та Польщі (Національний стандарт бухгалтерського обліку 11 «Основні засоби»). Доведено, що нормативний інструментарій має забезпечувати правову основу змін у складі основних засобів, а також надавати достовірну інформацію потенційним внутрішнім і зовнішнім інвестиціями.

Досліджено динаміку фінансування капітальних інвестицій України та Польщі та визначено частку освоєних (використаних) капітальних інвестицій у сільське господарство, лісове та рибне господарство усього та в тому числі за рахунок коштів державного бюджету. Виокремлено міжнародні стандарти у сфері контролю та аудиту, що забезпечують контрольні функції об'єктів контролю та капітальних інвестицій зокрема.

Сформовано модель управління інформаційними інструментами та факторами впливу в процесі інвестування аграрного бізнесу. Визначено взаємозалежність між складовими сформованої моделі, зокрема інформаційними інструментами, інвестиціями, зацікавленими сторонами та ризиками. Доведено, що врахування даних складових дозволить створити сприятливі умови для забезпечення інвестиційної привабливості суб'єктів господарювання України та Польщі.

**Ключові слова:** облік; контроль; міжнародні стандарти; інвестиційна діяльність; капітальні інвестиції; управління; фінансування; сільське господарство; ризики; інструменти; інформація.

## Гуцаленко Л. В.

доктор экономических наук, професор, заведующая кафедрой аудита и государственного контроля,

Винницкий национальный аграрный университет, Винница, Украина

### Василевский М.

кандидат экономических наук, доцент, заведующий кафедрой финансов, Варшавский университет наук о жизни, Варшава, Польша **Мулык Т. А.** 

кандидат экономических наук, доцент, заведующая кафедрой анализа и статистики,

Винницкий национальный аграрный университет, Винница, Украина

## Марчук У. А.

кандидат экономических наук, доцент кафедры учета и налогообложения,

Киевский национальный экономический университет имени Вадима Гетьмана, Киев, Украина

## Мулык Я. И.

кандидат экономических наук, старший преподаватель кафедры аудита и государственного контроля,

Винницкий национальный аграрный университет, Винница, Украина

Учетно-контрольное обеспечение управления капитальными инвестициями - сегодняшние реалии Украины и Польши Аннотация. В статье осуществлена оценка макроэкономических показателей Украины и Польши, которые являются основой стратегии капитального инвестирования в качестве стабилизатора дальнейшего наращивания объемов сельскохозяйственного производства в системе стратегического управления деятельностью аграрного сектора. Исследован аграрный потенциал Украины и Польши. Выделен нормативно-правовой инструментарий, формующий учетно-контрольное обеспечение капитальных инвестиций в международной информационной среде и учетных системах Украины и Польши. Дана сравнительная оценка нормативного инструментария учетного обеспечения капитальных инвестиций в международных учетных системах (Международный стандарт финансовой отчетности 16 «Основные средства»), системе Украины (Положение (стандарт) бухгалтерского учета 7 «Основные средства») и системе Польши (Национальный стандарт бухгалтерского учета 11 «Основные средства»). Доказано, что нормативный инструментарий должен обеспечивать правовую основу изменений в составе основных средств, а также предоставлять достоверную информацию потенциальным внутренним и внешним инвесторам с целью избежания либо снижения рисков по вложенным капитальным инвестициям. Исследована динамика финансирования капитальных инвестиций Украины и Польши и определена доля освоенных (использованных) капитальных инвестиций в сельское хозяйство, лесное и рыбное хозяйство всего и в том числе за счет средств государственного бюджета. Выделены международные стандарты в сфере контроля и аудита, обеспечивающие контрольные функции как объектов контроля в целом, так и капитальных инвестиций в частности. Сформирована модель управления информационными инструментами и факторами влияния в процессе инвестирования аграрного бизнеса. Определены взаимозависимость между составляющими сложившейся модели, в частности информационными инструментами, инвестициями, заинтересованными сторонами и рисками. Доказано, что учет данных составляющих позволит создать благоприятные условия для обеспечения инвестиционной привлекательности субъектов хозяйствования Украины и Польши.

**Ключевые слова:** учет; контроль; Международные стандарты; инвестиционная деятельность; капитальные инвестиции; управление; финансирование; сельское хозяйство; риски; инструменты; информация.

#### 1. Introduction

Globalisation processes have resulted in further challenges in the area of accounting and control. Particularly, a number of discrepancies in accounting regulations in different countries have emerged causing difficulties in communication processes between companies and investors in international agricultural business.

Intensification of the European integration processes in Ukraine, deepening international cooperation of economic entities at the national level, increasing capital flows in financial markets, the need to strengthen the competitiveness of enterprises in foreign markets cause a necessity to carry out further reforms in the national system of accounting and reporting [1]. The process of adaptation to the requirements of the International Accounting Standards and EU legislation in Ukraine puts forward further requirements to reporting and information trustworthiness control, which are crucial for management decision-making and increase in investment, aiming at enhancing agricultural business attractiveness.

The International Accounting Standards, being a tool for the economic policy implementation, have to ensure transparency and comprehensibility of the information on business operations to build a trustworthy base in order to manage and control companies' capital investment and to take control measures to facilitate investment activities of both businesses and the country as a whole.

#### 2. Brief Literature Review

The informational basis of the research on accounting and control relating to capital investment, as well as various studies of both the international accounting standards and the national accounting Standards of Ukraine and Poland involves scientific works not only by researchers from Ukraine and Poland but also from all over the world.

Theoretical and practical issues of investment activity, and capital investments in particular, were researched by scientists such as N. Chirik (2008), T. V. Mayorova (2015), J. Alexander (2018), A. Goujard and P. Guérin (2018) [2] P. S. Bezrukykh, M. D. Bilyk, I. A Blank, E. Brigham, O. V. Velichko, J. Galbraith, R. Anthony, A. A. Peresada, I. Yu. Chumakova, U. Sharp and O. Sheremet, who studied the essence of investment activity, types of investments and factors impacting them, as well as other related problems.

A significant contribution to the study of problems of accounting control of investment activity was made by L. V. Gutsalenko (2017), S. Kafka (2017), R. Venkata Subramani (2009), Yan Sun (2016), U. Marchuk, V. Fabiianska (2017), R. Lambert, C. Leuz, and R. Verrecchia (2007), R. H. Chenhall, and F. Moers (2015) [3], M. T. Bilukha, A. M. Gerasimovich, N. I. Dorosh, G. G. Kirezev, A. M. Kuzminsky, V. V. Sopko, R. Adams, R. Dodge, J. Lobbeck, O. Rayleigh, J. Foster, K. Drury and others. They have investigated the organization of the accounting process and control methodology, as well as accounting control of investment activity.

The development of the agrarian sector and the attraction of investments in this area were studied by A. Jezierska-Thöle, M. Gwiaździńska-Goraj and Ł. Wiśniewski (2017) [4], A. Yermolaiev (2015), F. Zhuravka (2017), B. Apostolou (2017) [5], R. Pastusiak, M. Bolek, M, Jasiniak M. and J. Keller (2018), etc. Nevertheless, the issue of accounting control in capital investment management of agricultural enterprises is underexplored and requires further rationale and improvement.

**3.** The purpose of the article is to study accounting control of capital investment in the management system of agricultural companies and to evaluate the tools and impact factors which determine management methods for reducing business risks of capital investment in agricultural business.

### 4. Results

The current economic conditions cause serious problems concerning effective operation of agricultural enterprises. Inflation processes, a sharp increase in prices and crisis phenomena stimulate agricultural companies to strengthen their market positions.

The study indicates the existence of economic conditions under which the special economic zones will provide the optimal results to the host country. It can be specified in a more detail way, with the disposal of three stages of economic development, indicating growing, transforming and developed economies. It has to be defined what factors support economic growth. Owing to the fact that for most developing economies in transition it is the export and the inflow of funds into the economy, these economies will be the most sensitive to the inflow of new investments [6].

In order to tackle the crisis phenomena, agricultural businesses have to actively borrow funds, both internal and external. The company development is improved directly through acquisition and modernisation of basic production and non-production assets, their reconstruction and technical re-equipment.

Capital investment is a driving factor empowering enterprises, which stimulates company development and its economy as a whole. Capital decisions are generally defined as relatively large investments that will have an economic life of several years. We will define capital investments broadly, including purchases of equipment, new product development projects, acquiring a product line or a company and many others [7].

The use of outdated fixed assets and production technology leads to low quality, hence non-competitive goods manufacturing, therefore, reducing investment attractiveness of the agricultural sector.

Capital investment is expenditures on construction and assembly works, reconstruction, extension, technical reequipment of the current production facilities and purchase of fixed assets [8].

Prior to making investment decision, external investors are to obtain the information on financial standing of the company and ensure reasonable allocation of investment outlay, consequently reducing the risks of capital productivity.

Therefore, before the implementation of investment projects, it is essential to use diagnostic methods, revealing company strengths and weaknesses and identifying the opportunities for financial growth regardless of internal and external crisis phenomena [9].

Z. V. Hutsaylyuk points out that «the risk as an economic category and an element of business activity is present in the informational system of accounting», and that «the problem of risk is much more complicated and primarily related to clarifying the concept of accounting due to the development of world information economy leading to the change in economic relationships» [10].

One of the primary goals and components of agricultural strategic management is the development of capital investment strategy with the aim of stabilisation and further increase in agricultural production and employment rate. In order to make effective decisions on capital investment, the company has to perform system evaluation of investment feasibility.

To make sure that our research is well-grounded, we find it necessary to compare macroeconomic indicators of the two countries, namely Ukraine and Poland (Table 1).

The evaluation of the indicators from Table 1 shows that the Ukrainian area is nearly twice as large as Polish, while the level of population density in Poland is almost twice as high. The Gross Domestic Product of Ukraine is considerably lower, compared not only to that of Poland but also to other neighbouring countries, since according to the historic events, the Soviet planned economy was the major principle when managing the national economy.

Poland is the seventh biggest agricultural country in the EU and the fifth by the number of cultivated lands. Rural regions account for 93% of Polish area, and the country's rural

Tab. 1: The Macroeconomic Indicators of Ukraine and Poland, 2017

Indicators	Ukraine	Poland	
1	2	3	
Area, km <sup>2</sup>	579,320	306,230	
Population, people	44,222,947	38,170,712	
Urban population, %	70.2	60.7	
Rural population, %	29.8	39.3	
Gross Domestic Product, billion USD	112.0	524.5	
Population density, people per km <sup>2</sup>	76	124	
Gross Domestic Product per capita, USD	2,992	15,751	

Source: Complied by the authors based on [11-14]

population makes up nearly 40%. The agricultural sector is a major component of the economic potential of the country, as it amounts to almost 8% of the total gross added value. The agriculture contributes over 2% to GDP of Poland and provides employment for one sixth of the labour force, which is the evidence of low productivity of workforce [12].

Poland's productivity has grown significantly over the past two decades. However, the public and private capital stock is weak, and investment remains focused on the adoption of existing technologies, which weighs on future productivity gains and innovation. Many microenterprises have low productivity, and structural bottlenecks reduce start-ups' growth and their chances of survival [2].

Although the level of development of Ukraine is lower, agriculture has been one of the few sectors of the economy that showed active growth in 2017. The evidence is a great number of agricultural companies set up in Ukraine and the scope of land banks under their management. The top ten companies control 150-670 thousand hectares of farmland. In addition, a total of 7.5% of farmland is under the management of 10 biggest Ukrainian agricultural holding companies [15].

Using the data from Table 2, we will compare the agricultural potential of these countries.

The analysis of agricultural economic conditions of agricultural manufacturing in Ukraine and Poland (Table 2) shows that the farmland area of Ukraine is 2.6 times bigger than that of Poland and constitutes 11% of Europe's total area. However, only 27 out of 32 million hectares of arable lands are cultivated. The number of labour resources employed in the Ukrainian agriculture is 1.5 times higher than in Poland, consequently their share is bigger. All the above proves that Ukraine has far more powerful agricultural potential compared to Poland.

According to the statistical data, Ukraine has not become an object of direct investment from overseas countries yet. It is suggested by the decrease of direct investment in the Ukrainian economy which shrank from USD 38,992.9 million in 2010 to USD 36,154.5 million in 2016. The same trend can be seen for direct investment in agriculture, forestry and fishery, which declined from USD 669.2 million to USD 502.2 million.

This situation has stimulated agricultural producers to search out local resources. Apparently, capital investment is an internal and effective source of self-fulfilment of any economic entity, as it ensures the implementation of strategic decisions and guarantees the production of competitive agricultural produce in market environment. The statistical data [11] show that the share of the capital investment financed at the expense of internal funds of agricultural producers constitutes on average 65% in Ukraine.

The process of attraction of investment resources to the Ukrainian economy is slow due to the influence of political and economic crises. As a result, the inflation processes have been activated, the investment potential of the state budget has declined, the financial standing of enterprises has deteriorated, the outflow of bank deposits has taken off, the number of loss-making financial and credit institutions increased, the scope of bank lending to businesses has decreased, and the investment activity of foreign investors has declined [16].

The state has to ensure the regulation of investment process and take responsibility for its organisation, support and contribute to the development of companies in the market environment. In Poland, the International Financial Reporting Standards (IFRS) are only used by joint stock companies listed on stock exchange, as well as by banks. Agricultural

Tab. 2: Comparative analysis of the agricultural potential, 2017

Indicators	Ukraine	Poland
1	2	3
Farmland area, million hectares	42.7	16.2
Share of farmlands in total area, %		52.0
Labour resources employed in agriculture, thousand people	2,860.7	5,393.3
Share of labour resources employed in agriculture, %		14
Gross added value of agricultural sector, %		8.0
Share of agriculture in Gross Domestic Product, %	10.2	4.0
Gross agricultural output, %	56.4	9.0

Source: Compiled by the authors based on [11-12]

enterprises are not obliged to use International Financial Reporting Standards, except listed companies.

The comparison of the notion «fixed assets» in the International Accounting Standards and the National Accounting Standards of Ukraine and Poland proves their similarity. However, differences should be considered as well. The difference between the Polish Standard and IFRS in the valuation of a fixed asset on a balance day lies in the fact that according to IFRS fixed assets are evaluated at fair market prices, whereas the Polish Standard allows asset revaluation by a historic price (expenditure on construction or purchase). The Polish Standard only allows the revaluation of the fixed asset based on a particular regulation (the latest one was issued in 1995 due to the high inflation level). For example, in the IFRS 16 [17-18] specific objects recognised as fixed assets are not defined, in contrast to the Generally Accepted Accounting Principles (GAAP) 7 [19], where the object recognised as a fixed asset can be divided into separate parts.

Both in the IFRS 16 and the GAAP 7 «Fixed Assets» (Ukraine) refers to the primary value of the fixed assets as the total amount charged to expenses for a certain asset on the day of its purchase. Similarly, the primary value of the fixed assets is defined in the Republic of Poland.

Due to the amendments to the Ukrainian legislation, particularly the Law of Ukraine on "Accounting Standards and Financial Reporting in Ukraine", which stipulates the formation of financial statements according to the requirements of the IFRS (as of 01 January 2018) and the obligation to adopt taxonomy, starting from 2019, the need to eliminate of discrepancies in certain provisions of these regulations, which ensure recognition of the capital investment in the accounting, arose. This would facilitate the investment attractiveness of Ukraine in the international market.

The dynamics of the capital investment financing in Ukraine and Poland (Figure 1) shows that the budget funds and internal funds of enterprises are the main sources of its financing.

Thus, in 2017 this share constituted 71.9% in Ukraine and 91.4% in Poland, which is 5.6% and 37.6% respectively higher if compared to the year 2010. Basically, the capital investment financing in Ukraine is realised through internal funds of enterprises. The sources of capital investment financing (budget funds and enterprises) in Poland have remained unchanged in recent years. Figure 1 illustrates a decrease in the idle capital share, with 17.4% in Ukraine and 8.2% in Poland, which is 16% and 38% respectively lower if compared to the year 2010.

Virtually, the whole augmentation of disbursed capital investment is due to the investment in the agricultural sector, where the main sources are external and internal funds of agricultural companies available for investment. Foreign investors, however, have not displayed active attitude so far. Figure 2 shows that the share of the capital investment disbursed in agriculture, forestry and fishery in 2017 was much higher in Ukraine, at 14.0%, whereas in Poland it accounted for just 2.7% in 2017.

The assessment of the capital investment of Ukraine and Poland, in particular, brings about new opportunities for regional diversification of domestic and foreign investors, increases assurance of the effectiveness of investment activities.

We suggest that Ukraine can become one of the world leaders in manufacturing sustainable products, which, undoubtedly, will facilitate financial performance of both economic entities and the agricultural sector of Ukraine.

The assessment of investment efficiency is carried out by means of cost indicators that need to be taken into account by accounting and financial reporting, since the correct reflection of the sources of funding in the accounting is of prime importance for the effective renovation of company production capacity [20].

Accounting for investments is a complex exercise in view of the varied kinds of instruments that have emerged in the market recently. The flow of funds across the borders in the form of financial instruments is ever increasing in the global scenario [21].

A large number of studies into financial security of agrarian enterprises, including changes in accounting and taxation, formation or mergers of joint ventures, innovations in land matters, aimed at increasing investment attractiveness, necessitate the use of analytical procedures through the system of

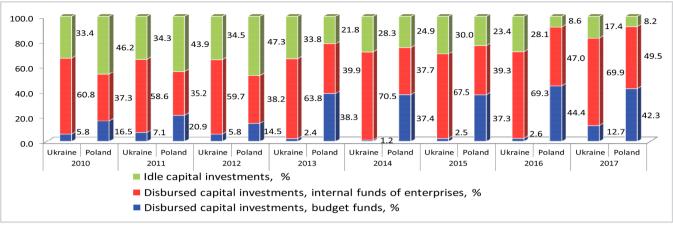


Fig. 1: Dynamics of capital investment financing in Ukraine and Poland in 2010-2017, % Source: Compiled by the authors based on [11-12]

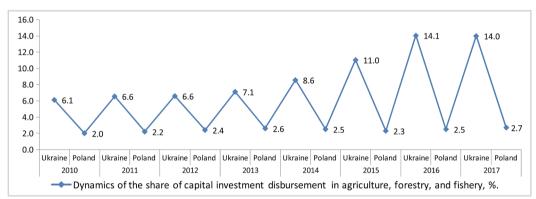


Fig. 2: Dynamics of the share of capital investment disbursement in agriculture, forestry, and fishery in 2010-2017, %

Source: Compiled by the authors based on [11-12]

internal control, which will contribute to the reliability of information presentation in the financial reporting according to international standards.

Lambert, Leuz and Verrecchia (2007) [22] developed an economy model which is based on material security and shows that a low-quality system of disclosure of the information on financing, as well as internal control over accounting, increase companies' information security risk. Thus, when comparing cash flow dispersion of a company with that of other companies, investors note that this leads to lower investment in the company, despite its proven track record [23, 278].

The aim of the organisation of the internal control system, including capital investment, depends largely on the legal form, organisational structure of a company, type of business activity, the necessity of controlling certain processes taking place in the company.

The summary and assessment of the regulations of the principal regulatory acts on internal control suggest that foreign countries with a developed market economy are particularly concerned with the introduction of effective control mechanisms which define particular operation principles, categories, elements, responsibilities and authorities of the subjects and facilitate the creation of flexible control models aimed at meeting the needs of managerial staff.

In order to reflect reliable information in financial statements with regard to European demands and international standards of financial reporting, accounting control, as well as to analyse management tools and those reducing business risks in terms of agricultural business investment, their impact factors should be investigated. To do this, let us turn to Figure 3, which illustrates the factors affecting investment and the dependent variables affecting its promotion at each level, in particular risks, parties involved and investment tools.

According to Figure 3, all the factors affecting the implementation of investment processes in the agrarian sector can be presented the following way:

- 1. There is a correlation and dependence between an investment activities and information resources of a company (I→N), namely between accounting, control and analysis. The information system of a company is to ensure proper reflection and input of information on operations related to investment activity from its initial input to the financial statements. It is necessary to carry out constant control over expenses and incomes related to investment activity, conduct analytical assessment of investment attractiveness of the company, effectiveness of investment activity, etc.
- 2. There is a correlation between risks and investment tools (R↔N). The link between risks and investment tools can be positive, because if an agrarian company increases its risks, the need for tools will also rise, in particular accounting tools (due to the workload of an accountant and accounting service), control tools (due to control procedures related to the production process, management decision making on the changes occurring in the company based on the results of the antirecessionary financial control and risk control), and analysis tools (due to research and analytical procedures related to forecasted production and elimination of the prospect of bankruptcy through early warning):
- 3. There is a major correlation between the type of risk and the parties involved (R↔S). An increase in the types of risk will increase the need to regulate the relationship between the parties involved. On the other hand, in the manufacturing process the parties involved will suffer losses due to a decrease in the number of consumers, their spending power, price rises and require more support in terms of pricing. In addition, at the level of public sector, if there is no transparency of rules and no support of agriculture investors, this will lead to a low level of awareness and information support and real changes in legislation.
- 4. There is a principal link between the tools and investment promotion (N↔I). This link depends on the type of investment and the purpose of its promotion (capital construction, purchase (production) of fixed assets, purchase (production) of other fixed tangible assets, purchase (production) of

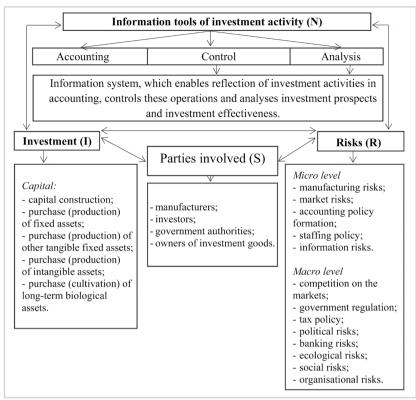


Fig. 3: Model of management of information tools and impact factors in the process of agrarian business investment

Source: Developed by the authors

intangible assets, purchase (cultivation) of long-term biological assets), which are provided by peculiar features and procedures of constituent investment tools (accounting, control and analysis).

5. There is a significant correlation between the parties involved and investment (S↔I). This correlation develops under the influence of various factors (whether investment is internal or external, who guarantees the investment process (government or commercial institutions), what results the parties involved obtain from the investment disbursement) and is directly dependent on the investment lead time and the payback period.

6. There is a significant link between the risk type and the encouragement of investment (R↔I). It is suggested that there is also a converse relation between the risk and investment promotion, the increase in the types of risks will raise the need for investment. Therefore, the type of risk is variable and can negatively affect the level of investment promotion. An increase in risks can make companies search out ways to overcome them through financing and technological change.

The abovementioned factors affecting the formation of capital investment processes in the agricultural sectors of Ukraine and Poland depend on the functions of information tools management and will allow creating required conditions for ensuring investment attractiveness of agricultural business companies and promoting their integration into the world economic space.

The company diagnostics has to be consistent, assess the current financial and economic conditions and work out the strategy for their future development with regard to the factors of internal and external environment, which will be ensured by risk management.

#### 5. Conclusions

In order to ensure proper management of capital investments in agricultural companies, it is necessary to reduce the discrepancies between the forms of financial reporting by maximising the implementation of IFRS or creating regulatory tools approaching international law standards and to use universal methodological

techniques and analytical procedures in order to diminish business risks and to forecast capital investment efficiency. Particular attention should be paid to the factors affecting the implementation of investment processes in the agricultural sector, in particular informational tools (accounting, control and analysis), investments (internal, external), parties involved (investors, manufacturers, etc.), risks (at micro and macro levels). We believe that taking into account these components will create favourable conditions for ensuring investment attractiveness of business entities in both Ukraine and Poland.

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