

ANALYTICAL EVALUATION OF THE EFFECTIVENESS OF EQUITY MANAGEMENT IN AGRICULTURAL, FORESTRY AND FISHERY ENTERPRISES IN UKRAINE

Alla Lysenko¹, Vasylii Moskalenko²

Abstract. *The purpose* of the research is to generalize the theoretical and methodological aspects and implementation an analytical evaluation of the effectiveness of the management of equity of agricultural, forestry and fishery enterprises of Ukraine using the data of official statistics on large, medium and small enterprises for ten years (2013-2022) as a basis for directing analysis results for the further search for reserves to improve the efficiency of equity management. *Methodology.* The basis of the research methodology is a dialectical approach, an analysis of data on the composition and structure of equity capital of agricultural, forestry and fishing enterprises of Ukraine for the period from 2013 to 2022 with the division of enterprises into large, medium and small using official statistical information, published on the website of the State Statistics Service of Ukraine. *The results* of the research showed that in the period from 2013 until 2022, the largest increase in the equity capital of agricultural, forestry and fishing enterprises of Ukraine was observed at the end of 2015 compared to the end of 2014 due to the simultaneous increase in the value of the indicator at enterprises of different sizes. In the structure of equity capital, the share of retained earnings (uncovered loss) was the most significant. In the vast majority of the research years, at average and small enterprises, cash revenue exceeded the amount of equity capital, while at large enterprises, from 2016 to 2022, equity capital made less than one turnover per year. As the calculations showed, large enterprises in the field of agriculture, forestry and fisheries of Ukraine do not properly take advantage of the possibilities of the influence of the scale of production on the formation of indicators of the efficiency of the use of equity. *Practical implications.* The practical significance of the obtained results lies in their focus on confirming the expediency of the further search for reserves to increase the efficiency of the use of equity, first of all, by large enterprises in the field of agriculture, forestry and fisheries of Ukraine. *Value / Originality.* The results of the conducted research serve as the basis for further in-depth analysis and search for reserves to increase the efficiency of equity management at different sized of business entities.

Keywords: equity capital, management, analysis, efficiency, agricultural, forestry and fishery enterprises.

JEL Classification: M41, G32, Q12

1. Introduction

Equity is an important component of the sources of property formation, the financial stability and competitiveness of the enterprise depends on its effective management. In the structure of the equity capital of enterprises of all types of economic activity in Ukraine, there is a significant increase in the share of agricultural, forestry and fishing enterprises: from 8.04% in 2013 to

20.38% in 2022 (State Statistics Service of Ukraine, 2022). Since the agrarian sphere plays an important role in providing the country with food, and also has an export-oriented focus, increasing the amount of equity to achieve important strategic goals, increasing the efficiency of its management due to the optimization of the structure and directions of use with the involvement of analytical tools is an urgent

¹ Central Ukrainian National Technical University, Ukraine (*corresponding author*)

E-mail: lysenkoalla2010@ukr.net

ORCID: <https://orcid.org/0000-0001-8193-4267>

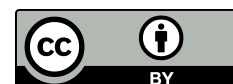
Researcher ID: AFP-8336-2022

² Central Ukrainian National Technical University, Ukraine

E-mail: moskalenko.vasil@ukr.net

ORCID: <https://orcid.org/0000-0003-1265-3546>

Researcher ID: <https://researchid.co/mtavari1979>



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problem that attracts the attention of scientists and practitioners.

The purpose of this research is to generalize the theoretical and methodological aspects and implementation of analytical evaluation of the effectiveness of the management of equity of agricultural, forestry and fishery enterprises of Ukraine using the data of official statistics on large, medium and small enterprises for ten years (2013-2022) as a basis for directing of the results of analysis to further search for reserves to improve the efficiency of equity management. To achieve the set goal, a list of key research tasks was formulated: systematization of the theoretical and methodological foundations of the formation of equity and its management; analysis of the composition and structure and evaluation of the effectiveness of the management of equity of agricultural, forestry and fishery enterprises of Ukraine for the period from 2013 to 2022.

The research methodology is based on a dialectical approach, an analysis of data on the composition and structure of equity capital of agricultural, forestry and fishing enterprises of Ukraine for the period from 2013 to 2022 with the division of enterprises into large, medium and small using official statistical information presented at website of the State Statistics Service of Ukraine.

2. Theoretical and Methodological Aspects of the Problem

Ukrainian and foreign scientists contributed to the research of the concept of equity capital, its importance in the formation of sources of coverage of the property of enterprises, as well as approaches to management and the implementation of analytical evaluation of the effectiveness of equity capital management. Thus, N. A. Dekhtyar and O. V. Deineka defined the concept of equity capital, investigated its role and significance in the financial and economic activity of the enterprise, and proposed the basic principles of forming a comprehensive equity management system. The system of equity capital management is considered by researchers from two positions: as a component of capital management of enterprises as a whole and as an element of the system of formation of financial resources (Dekhtyar, Deineka, 2015).

Y. P. Ishchenko and L. V. Galaida investigated the essence of equity capital, its components and

their purpose, the procedure for displaying equity capital in the forms of financial statements of enterprises. Scientists have defined equity as a set of economic goods in material, immaterial and monetary forms, which are involved in the process of the enterprise's activity without determining the term of return to the owners and are capable of generating income. In the structure of equity, scientists propose to distinguish between invested and accumulated capital (Ishchenko, Galaida, 2015).

V. E. Mishchuk and V. V. Mishchenko considered the peculiarities of the formation of the equity management system, highlighted the positive and negative features of the use of exclusively equity capital by enterprises. Scientists propose to introduce monitoring of the equity management system, by which they understand the process of systematic or continuous collection of information regarding the parameters of equity management. To evaluate the results of capital management, the researchers recommend using a system of indicators of the state and use of capital, the main of which, in their opinion, are: ratio of equity, borrowed and attracted capital, financial leverage ratio, normative of equity working capital ratio (Mishchuk, Mishchenko, 2015).

We consider it expedient to use algorithms based on taking into account a combination of interrelated financial indicators and proposed in the author's scientific publications (Lysenko, 2020; Lysenko, 2013) when calculating indicators of the state and use of equity capital.

G. V. Silakova and O. M. Petukhova considered the main components and methods of own capital management from the standpoint of ensuring its sufficiency. Among the main general principles management of equity capital, scientists singled out: adaptability; scientific validity; complexity; unity of elements; efficiency; security and reliability maintenance. The researchers attributed to the special principles of managing equity capital: taking into account the stage of the life cycle of the enterprise; formation of equity capital taking into account market conditions; ensuring the optimal structure of equity capital; correlation with the policy of attracting loan capital (Silakova, Petukhova, 2018).

The contribution of foreign scientists to the study of problems of equity capital management and the implementation of an analytical

assessment of the effectiveness of such management is significant. So, Brigham E. E., Ehrhardt M. C., Lee C. F., Cheng K. C., Finnerty J. E. comprehensively considered the general theoretical aspects of financial management, the role of equity capital in the functioning of firms, as well as the main concepts necessary for the development and implementation of effective financial strategies (Brigham, Ehrhardt, 2014; Lee, Cheng, Finnerty, 2020).

The systematization of the achievements of Ukrainian and foreign scientists in the field of analytical evaluation of the effectiveness of equity management showed that certain theoretical concepts and applied recommendations cannot

be used in practice, given the specifics of the influence of industry features on the formation and use of equity capital. In particular, due attention is not paid to the study of the problems of managing equity capital of agricultural, forestry and fishing enterprises. This indicates the need to expand scientific research within the framework of the outlined issues.

3. Volumes and Dynamics of Changes in the Equity Capital of Enterprises

Equity is the financial basis of the operation of the enterprise and, in accordance with the current national standards in the field of accounting regulation, represents the difference between the

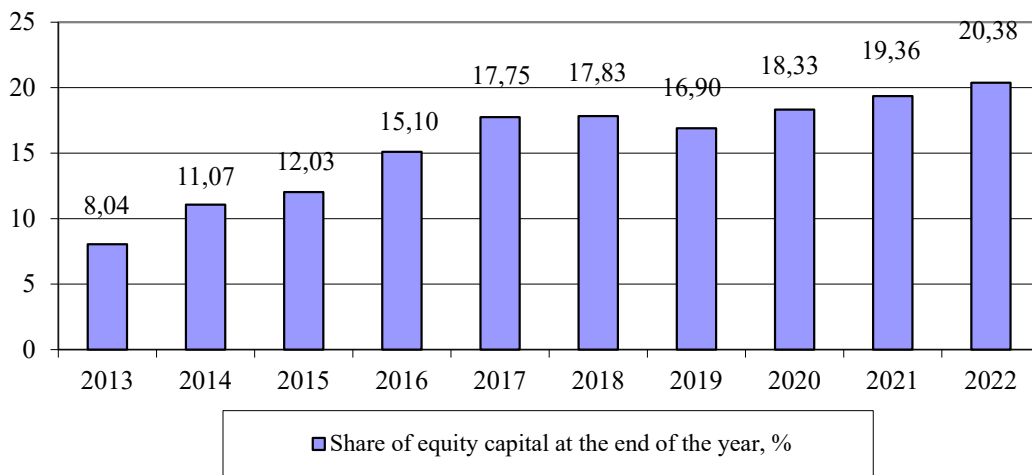


Figure 1. The share of equity capital of agricultural, forestry and fishery enterprises in the total equity capital of all enterprises of Ukraine at the end of 2013-2022

Source: created by authors based on the State Statistics Service of Ukraine

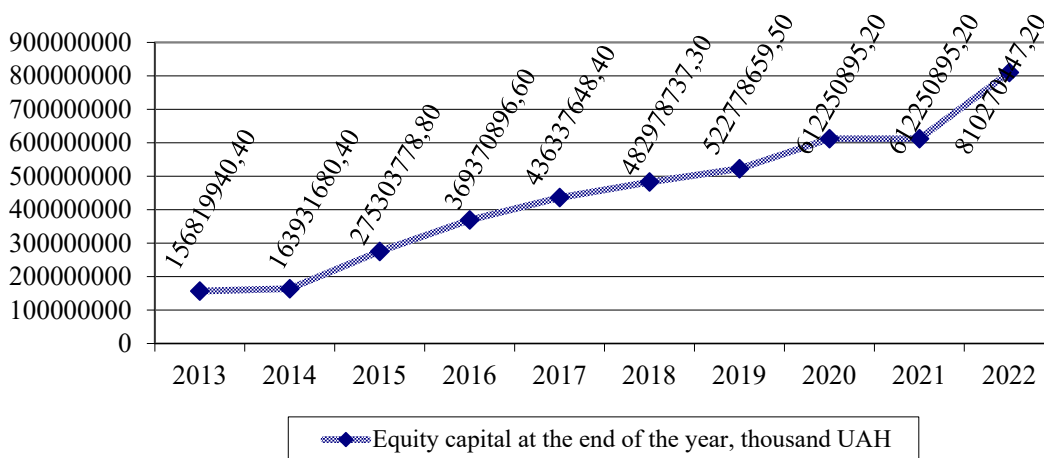


Figure 2. Volumes and dynamics of changes in equity capital of agricultural, forestry and fishing enterprises of Ukraine at the end of 2013-2022

Source: created by authors based on the State Statistics Service of Ukraine

assets and liabilities of the enterprise (National regulation (standard) of accounting 1, edition of 2018). Effective management of one's equity capital is not possible without possession of complete and reliable information about its volume, composition and structure.

When forming and using the equity capital of agricultural, forestry and fishing enterprises, it is necessary to take into account the specifics of the industry, first of all, the impact of seasonality on the activities of such enterprises, the specifics of the formation of costs, income, and financial results.

Information on the dynamics of changes in the specific weight of the equity capital of agricultural, forestry and fishery enterprises in the total amount of equity capital of all enterprises of Ukraine is presented in Figure 1.

The increase in the share of the equity capital of agricultural, forestry and fishery enterprises in the total amount of equity capital of all enterprises of Ukraine shows the importance and positive strategy in the development of this sphere of economic activity.

Information on the volumes and dynamics of changes in the equity capital of agricultural,

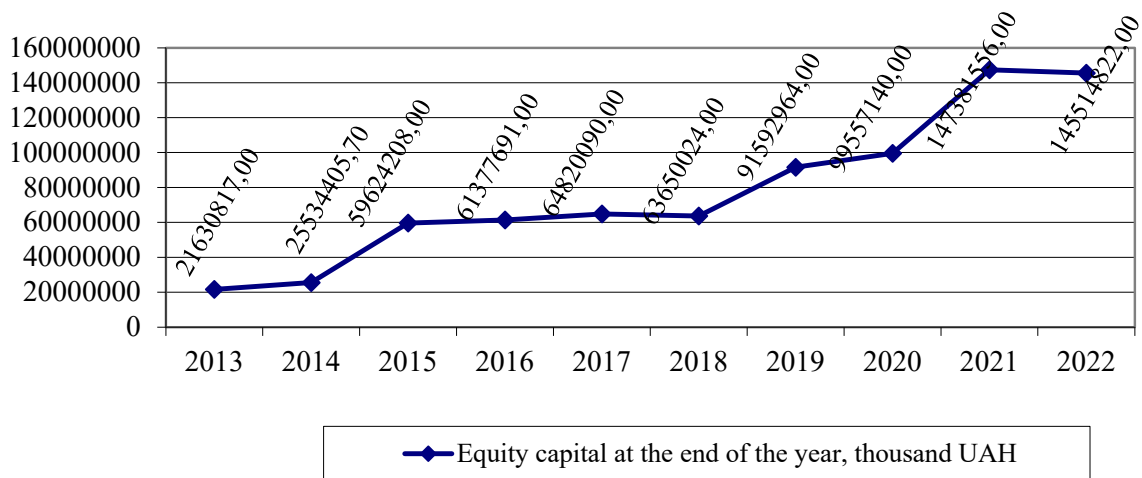


Figure 3. Volumes and dynamics of changes in equity capital at large enterprises in the field of agriculture, forestry and fisheries of Ukraine at the end of 2013-2022

Source: created by authors based on the State Statistics Service of Ukraine

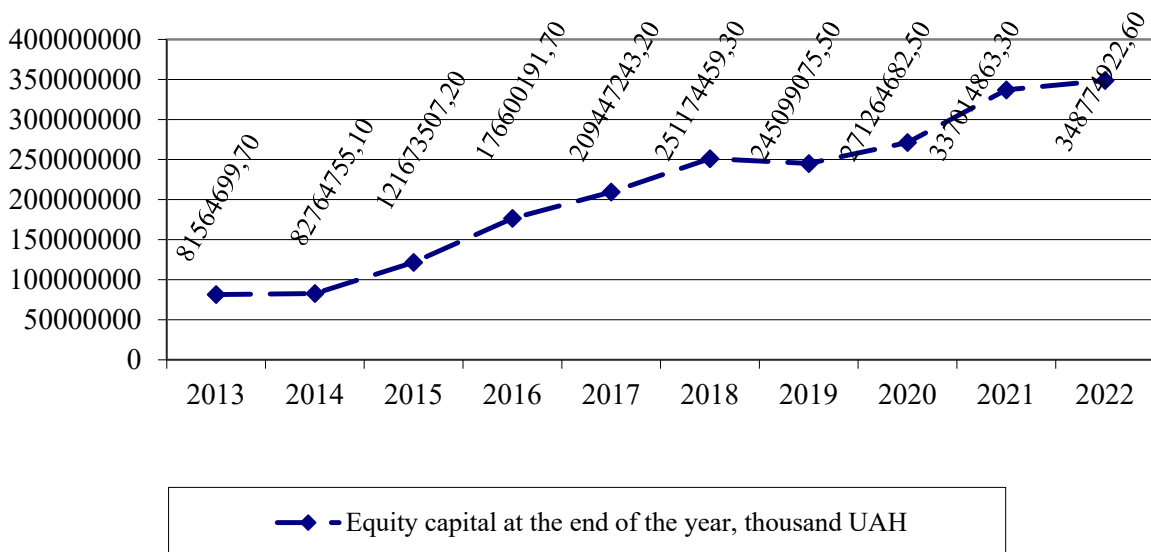


Figure 4. Volumes and dynamics of changes in equity at average enterprises in the sphere of agriculture, forestry and fisheries of Ukraine for 2013-2022

Source: created by authors based on the State Statistics Service of Ukraine

forestry, and fishery enterprises is summarized in Figure 2.

Since the end of 2013, there has been a gradual increase in the equity capital of agricultural, forestry and fishing enterprises of Ukraine, but at the end of 2020 and 2021, its value remained unchanged.

In this context, it is important to investigate the volume and dynamics of changes in equity capital with the division of agricultural, forestry, and fishery enterprises of Ukraine into large, medium, and small enterprises.

First of all, we examine the trends of equity capital changes in large enterprises of the specified sphere of activity, taking into account the importance of their role in the formation of the total amount of equity capital of all enterprises (Figure 3).

From the end of 2013 to the end of 2017, the amount of equity capital at large agricultural, forestry, and fishery enterprises of Ukraine

increased, at the end of 2018 they decreased somewhat, from the end of 2019 to the end of 2021 they increased again, but at the end of 2022 decreased (primarily due to the negative impact of the state of war on the development of large businesses located in the occupied and war-damaged territories).

The dynamics of changes in the amount of equity in average enterprises is shown in Figure 4.

At average agricultural, forestry, and fishery enterprises of Ukraine, the amount of equity increased from the end of 2013 to the end of 2018, as well as from the end of 2019 to the end of 2022, but at the end of 2021, they decreased.

To study the dynamics of changes in the amount of equity in small enterprises, we build Figure 5.

At small enterprises in the field of agriculture, forestry and fisheries of Ukraine, the amount of equity capital during the period under investigation was constantly growing.

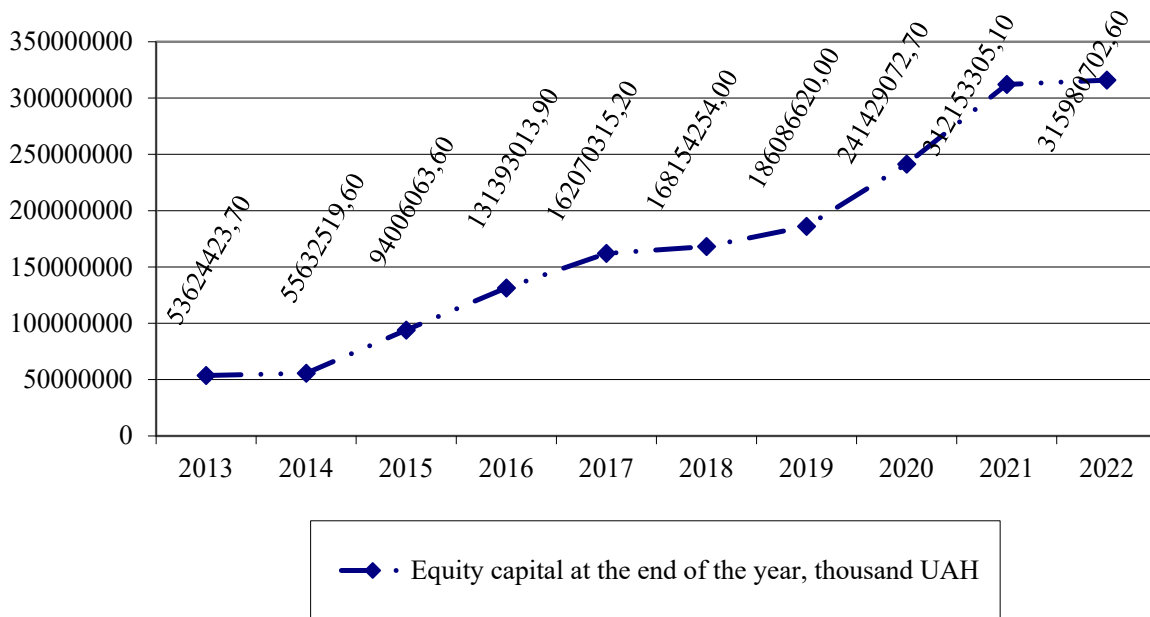


Figure 5. Volumes and dynamics of changes in equity capital at small enterprises in the sphere of agriculture, forestry and fisheries of Ukraine for 2013-2022

Source: created by authors based on the State Statistics Service of Ukraine

Table 1

Chain rates of growth (decrease) in equity capital of agricultural, forestry and fishery enterprises of Ukraine at the end of the year, %

Enterprises	2014 to 2013	2015 to 2014	2016 to 2015	2017 to 2016	2018 to 2017	2019 to 2018	2020 to 2019	2021 to 2020	2022 to 2021
Large	118,05	233,51	102,94	105,61	98,19	143,90	108,70	148,04	98,73
Average	101,47	147,01	145,14	118,60	119,92	97,58	110,68	124,24	103,49
Small	103,74	168,98	139,77	123,35	103,75	110,66	129,74	129,29	101,23

Source: created by authors based on the State Statistics Service of Ukraine

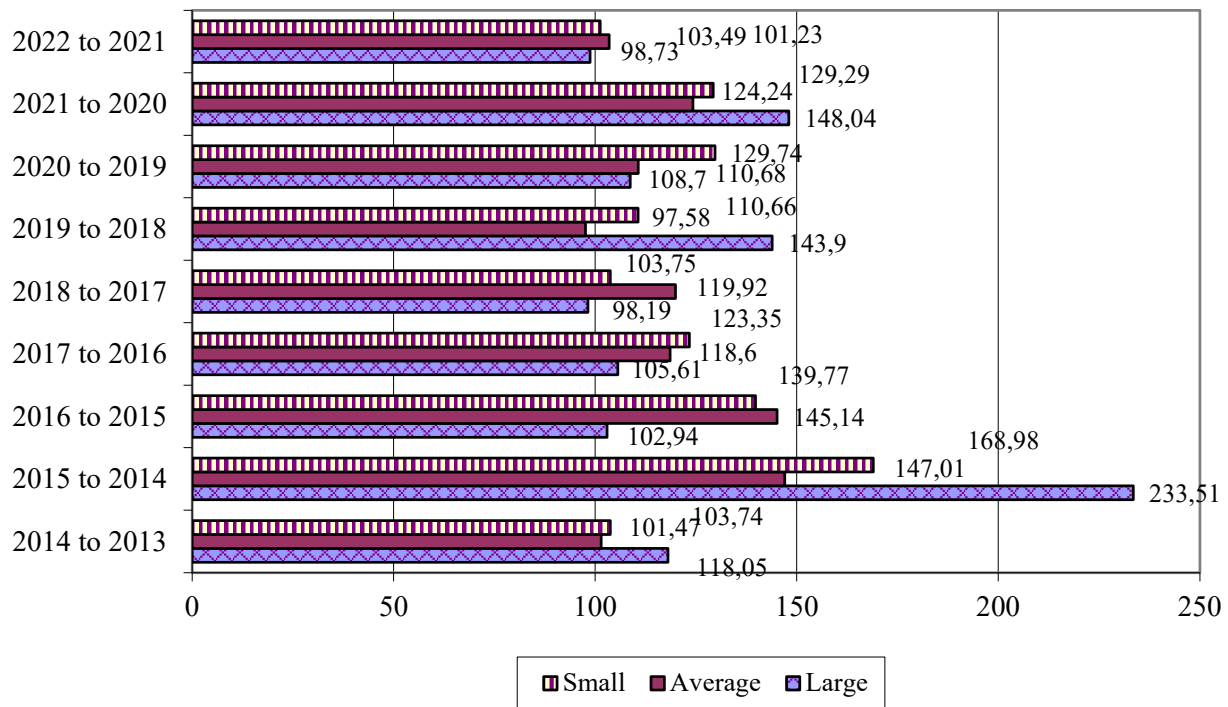


Figure 6. Chain rates of growth (decrease) in equity capital of agricultural, forestry and fishery enterprises of Ukraine at the end of the year, %

Source: created by authors based on the State Statistics Service of Ukraine

The dynamics of chain changes in the amount of equity capital for enterprises of different sizes in the studied area are shown in Table 1 and Figure 6.

The largest increase in the equity capital of agricultural, forestry and fishing enterprises of Ukraine was observed at the end of 2015 compared to the end of 2014 due to the simultaneous increase in the value of the indicator at enterprises of different sizes. At the same time, the amount of equity capital at large enterprises increased by 2,3 times.

4. Equity Structure

Information about the equity capital of enterprises of Ukraine is summarized by statistical authorities based on the data of accounting balances according to the following components: registered capital; capital in revaluations and additional capital; reserve capital and other reserves; retained earnings (uncovered loss); unpaid and withdrawn capital.

To develop conclusions about the impact of structural components on the formation of the total amount of equity capital of agricultural, forestry and fishery enterprises of Ukraine as of

the end of 2013-2022, it is important to calculate the specific weight of each component in the total amount of equity capital.

The structure of equity capital of agricultural, forestry and fishing enterprises of Ukraine at the end of 2013-2022 is shown in Figure 7.

As of the end of 2013-2022, the share of retained earnings (uncovered loss) is the most significant in the structure of the equity capital of agricultural, forestry and fishery enterprises of Ukraine – from 54,47% at the end of 2013 to 79,81% at the end of 2022. Other components had a much lower specific weight in the structure of equity.

5. Evaluation of the Efficiency of Equity Capital Management

Effective management of own capital is not possible without the development of a systemic vision of this process. Based on the generalization of the approaches of various scientists, we consider it expedient to single out the following components of the equity management system (Figure 8).

We use the following key indicators for an analytical assessment of the effectiveness of equity management: equity working capital at the end of the year; equity share in the currency

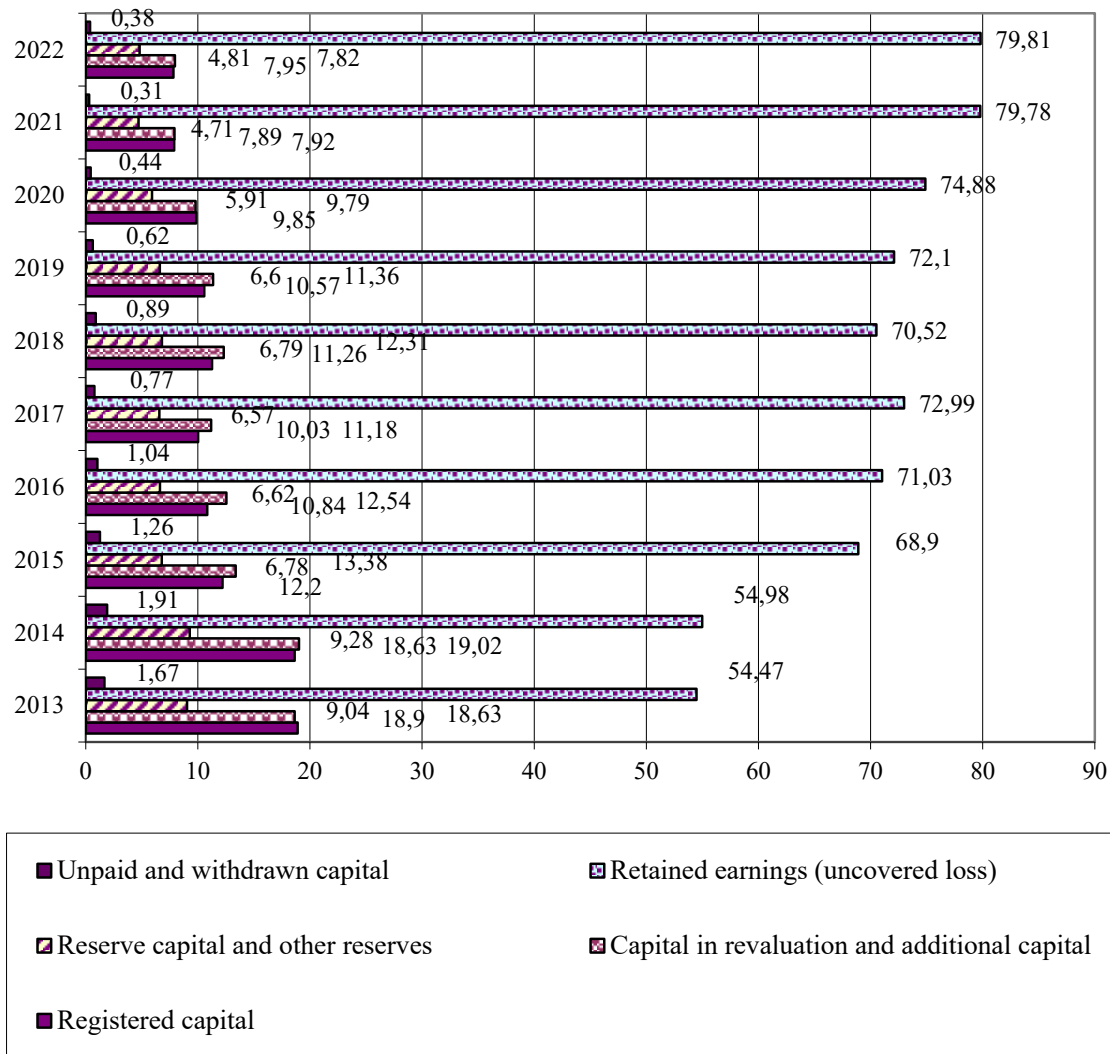


Figure 7. Equity structure of agricultural, forestry and fishery enterprises of Ukraine at the end of the year, %

Source: created by authors based on the State Statistics Service of Ukraine

of the balance at the end of the year; equity turnover ratio; net profit for UAH 1 equity capital.

Equity working capital is defined as the difference between the value of equity and non-current assets. At the end of 2013-2022, agricultural, forestry, and fishing enterprises of Ukraine had their own capital in circulation, but the dynamics of its changes varied (Table 2).

The share of equity capital in the currency of the balance sheet must exceed 50%. At large enterprises in the sphere of agriculture, forestry and fisheries of Ukraine, the share of equity in the currency of the balance sheet ranged from 40,99% at the end of 2016 to 59,08% at the end of 2021, at average enterprises – from 39,73% at the end 2016 to 59,97% by the end of 2021, at small enterprises – from 13,93% by the end of 2016 to

58,52% by the end of 2021. From 2020 to 2022, enterprises functioned mainly due to the use of own funds. The dynamics of the specific weight of equity capital in the currency of the balance of agricultural, forestry and fishing enterprises of Ukraine at the end of 2013-2022 is summarized in Table 3.

The dynamics of turnover ratios of equity capital and net profit per UAH 1. equity capital of agricultural, forestry and fishery enterprises of Ukraine for 2013-2022 is shown in Table 4.

In the vast majority of the studied years, at average and small enterprises, cash revenue exceeded the amount of equity capital, while at large enterprises, from 2016 to 2022, equity capital made less than one turnover per year. At small and average enterprises, in the vast majority of the

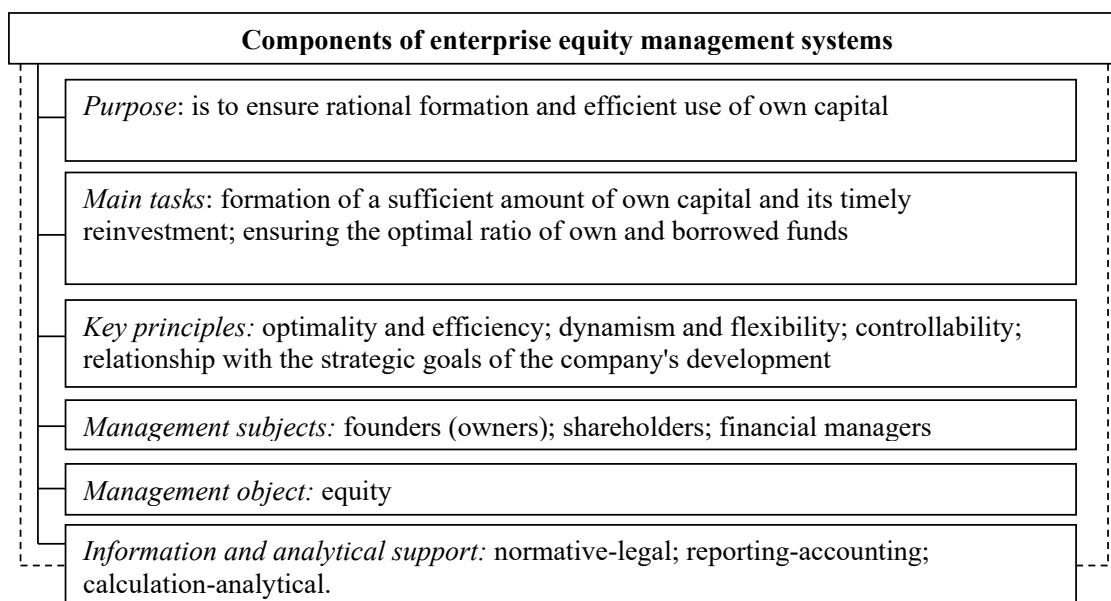


Figure 8. Components of enterprise equity management systems

Source: created by authors based on (Dekhtyar, Deineka, 2015; Ishchenko, Galaida, 2015; Mishchuk, Mishchenko, 2015; Silakova, Petukhova, 2018)

Table 2

Equity working capital of enterprises in the field of agriculture, forestry and fisheries of Ukraine at the end of 2013-2022, thousand UAH

Year	All enterprises	Including:		
		Large	Average	Small
2013	38877659,9	9372128,0	16176288,0	13329243,9
2014	40922902,6	12081729,0	14134126,2	14707047,4
2015	104156767,9	28351862,0	36848178,1	38956727,8
2016	150803129,5	29669259,0	65616687,9	55517182,6
2017	163823907,2	27701691,0	78353392,4	57768823,8
2018	153668040,6	12176054,0	96234419,8	45257566,8
2019	133533572,2	2994138,0	77748136,2	52791298,0
2020	193227937,3	1971003,0	101061886,0	90195048,3
2021	329423465,1	41449909,0	140326731,9	147646824,2
2022	344721585,0	42476405,0	154537145,0	147708035,0

Source: created by authors based on the State Statistics Service of Ukraine

Table 3

The share of equity capital in the currency of the balance sheet of agricultural, forestry and fishing enterprises of Ukraine at the end of 2013-2022, %

Enterprises	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Large	49,90	42,51	47,21	40,99	42,73	58,93	55,52	53,81	59,08	55,67
Average	48,53	41,46	40,75	39,73	50,49	53,60	53,54	57,20	59,97	58,16
Small	52,74	42,49	36,02	13,93	46,96	41,32	45,66	51,26	58,52	54,47
Total:	50,09	41,97	40,14	24,03	47,86	49,10	50,74	54,17	59,23	56,22

Source: created by authors based on the State Statistics Service of Ukraine

Table 4

Equity turnover ratio and net profit per 1 UAH of equity of enterprises in the sphere of agriculture, forestry and fisheries of Ukraine for 2013-2022

Enterprises	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Equity turnover ratio										
Large	1,08	1,24	1,03	0,86	0,60	0,86	0,81	0,78	0,78	0,77
Average	1,09	1,41	1,51	1,17	1,14	1,08	1,13	1,07	1,41	0,89
Small	0,91	1,17	1,25	1,10	1,10	1,18	1,11	0,99	1,06	0,82
Total:	1,03	1,30	1,32	1,09	1,04	1,09	1,06	0,99	1,15	0,84
Net profit for 1 UAH of equity capital, UAH										
Large	0,18	0,20	0,42	0,20	0,12	0,18	0,05	0,09	0,33	0,12
Average	0,09	0,11	0,36	0,24	0,17	0,15	0,28	0,15	0,30	0,11
Small	0,08	0,12	0,36	0,27	0,16	0,13	0,11	0,14	0,28	0,09
Total:	0,10	0,13	0,37	0,25	0,16	0,15	0,18	0,13	0,30	0,11

Source: created by authors based on the State Statistics Service of Ukraine

researched years, the share of net profit per 1 UAH of equity capital was lower than in average and small enterprises.

6. Conclusions

As the results of analytical calculations showed, average and small enterprises in the field of agriculture, forestry and fisheries of Ukraine in 2013-2022 managed their equity capital more

effectively than large business entities. That is, large enterprises did not take advantage of opportunities to ensure the positive influence of the effect of scale on the formation of indicators of the effectiveness of equity capital management. The results obtained in the research process can be used in the further development of ways to increase the efficiency of the management of equity capital of enterprises in the field of agriculture, forestry and fisheries of Ukraine.

References:

- Brigham, E. E., & Ehrhardt M. C. (2014). *Financial Management: Theory and Practice*. Cincinnati South-Western College Pub, 2014, 1163 p.
- Dekhtyar, N. A., & Deineka O. V. (2015). Management of the equity of enterprises. *Problems and prospects for the development of the banking system of Ukraine: a collection of scientific papers*, Vol. 42, p. 81–90.
- Ishchenko Y. P., & Galaida L. V. (2015). Theoretical basics of the formation of the equity capital of the enterprise. *Scientific Bulletin of Kherson State University: Economic sciences series*, Vol. 15(1), p. 146–148.
- Lee, C. F., Cheng, K. C., & Finnerty, J. E. (2020). *Corporate Finance: Theory, Method and Applications*. Harcourt Brance Jovanovich Publishers. 765 p.
- Lysenko, A. M. (2020). Components of the methodology for analyzing the financial statements of small enterprises. *Scientific notes of TNU named after V. I. Vernadskyi, series Economics and management*, Vol. 31(70), No 4, p. 119–125.
- Lysenko, A. M. (2013). Features of compiling financial statements from 2013 and their impact on the formation of the algorithm for calculating key indicators applied in the process of analyzing the financial condition of the enterprise. *State and regions, series Economy and entrepreneurship*, Vol. 5(74), p. 68–73.
- Mishchuk, E. V., & Mishchenko, V. V. (2015). Features of the equity management system of enterprises and ways to improve it. *Agrosvit*, Vol. 24, p. 46–49.
- National regulation (standard) of accounting 1 “General requirements for financial reporting” (edition of 2018). Available at: <https://zakon.rada.gov.ua/laws/show/z0336-13#Text>
- Silakova, G. V., & Petukhova, O. M. (2018). Modern views of equity management. *Intelligence XXI*, Vol. 3, p. 101–105.
- State Statistics Service of Ukraine (2022). Available at: <https://www.ukrstat.gov.ua/>

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