

EVALUATING OF NATIONAL AGRICULTURAL HOLDINGS' WORKING CAPITAL

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Introduction. Importance of the agricultural sector appears not only in a country's food supply security, but in forming a powerful incoming flow of money in terms of foreign currency earnings. Using of export potential will enable increase in the sector's contribution to form positive currency balance and food supply security not only in Ukraine, but all over the world.

An enterprise's efficient activity to a great extent depends upon working capital efficient management, the main criterion of which is operating and cash conversion cycle time, and also the amount of net working capital. We have chosen 11 public agricultural holdings with shares quoting on the world stock exchanges, as a basis of our research. The choice of the research base can firstly be explained by a strong or even dominant position of the chosen enterprises in national sales markets, their active export operations, and secondly by the trust to the financial accounts of the companies, whose annual reports are inspected by the leading auditing companies.

The latest research and publications survey. The works by D. Parmakly, A. Yanioglo [1], O. Muravs'kyi [2], and L. Kozak [3] are devoted to the financial and operating aspects of agro-industrial enterprises' activity. Interrelation between the working capital management efficiency and the companies' financial results was studied by the foreign scientists [4, 5]. Still the issues of national enterprises' working capital management remain underanalyzed.

The purpose of our research is to analyze working capital dynamic indices of national public agricultural holdings and to reveal the tendencies to their changes.

The research methodology. The research is built on the data base of the companies' annual reports for the calendar 2012-2014 years, except the Kernel Company whose data were studied for marketing in 2012-2014 years [6-16].

Ratio calculation is shown in the table 1.

Table 1

Ratio calculation formulas	
Index name	Settlement procedure
Average collecting period (ACP)	$\left(\frac{\text{Average Trade Receivables}}{\text{Revenue}} \right) \cdot 365$
Days payables outstanding (DPO)	$\left(\frac{\text{Average Accounts Payable}}{\text{Total Supplier Purchases}} \right) \cdot 365$
Days sales in inventory (DSI)	$\left(\frac{\text{Average Inventory}}{\text{Cost of Sales}} \right) \cdot 365$
Operating Cycle (OC)	$DSI + ACP$
Cash conversion cycle (CCC)	$DSI + ACP - DPO$

Main material description. Working capital is an important factor in maintaining a company's efficient and permanent work. The traditionally mentioned factors of the efficient working capital management are the following:

- Net working capital that is the difference between the current assets and a company's current liabilities. It ought to be recalled that its value should be positive.
- The operating cycle time that is the duration between acquisition of reserves for operating activity, and getting money and their equivalents from disposal of products or goods and services manufactured from them (UAS 1). Shortage of this index is positive for an enterprise.

- The cash conversion cycle (CCC) is a metric that expresses the length of time in days, that it takes for a company to convert recourse inputs into cash flow. The value of this index, as well as the previous one, should have a tendency to shortening.

The annual accounts analysis has shown that during the period analyzed, all the companies, except Milkiland in 2014, had a positive index of net working capital, which is proved out by the indexes of general and instant liquidity (table 2).

Table 2

Company	2014		2013		2012	
	Current ratio	Quick ratio	Current ratio	Quick ratio	Current ratio	Quick ratio
Agroliga	3.51	1.44	4.47	1.71	4.38	1.65
Agrogeneration	1.12	0.41	1.77	0.61	6.18	2.60
Milkiland	0.96	0.78	1.38	0.99	1.65	1.21
Kernel	1.46	0.96	1.56	1.17	2.51	1.59
Astarta	1.61	0.30	2.17	0.40	2.57	0.55
Ovostar	4.63	2.09	4.48	1.98	4.98	2.98
AvangardCo	2.51	1.56	3.97	2.41	3.59	2.18
Ukrproduct	1.47	1.11	1.53	1.17	1.68	1.17
IMC	1.20	0.17	1.35	0.20	2.23	0.33
Agroton	4.45	2.66	6.35	2.88	8.02	3.16
MHP	2.43	0.96	2.65	1.12	2.33	0.93
min	0.96	0.17	1.35	0.20	1,65	0.33
max	4.63	2.66	6.35	2.88	8.02	3.16
average	2.30	1.13	2.88	1.33	3.65	1.67

The data shown in the table prove the companies' satisfactory liquidity, though its downward tendency is negative. For instance, general liquidity index was equal to 3.65 in 2012, but it was equal to 2.3 in 2014. Similarly, the maximum (from 8.02 to 4.63 respectively) and the minimum (from 1.65 to 0.96 respectively) liquidity indices moved downward. The given index decrease is determined by the 30% average shortening of all the companies' current assets in 2014, primarily the productive stocks and biological assets, and, to a less degree, by accounts receivable. As opposed to the current assets downward, observed in all the studied companies, the amount of current liabilities has differently changed. Thus, the index increase was shown by 6 companies, among which the biggest one noticed was shown by Avangard Co (186%) due to the issue of short-term bonds. Five companies reduced their current liabilities by 28% on the average.

As for the instant liquidity index, the optimal ratio of which varies between 0.5-2, the most of the companies meet these requirements, except Agrogeneration, IMC, and Astarta, whose ratios are lower, and Agroton, whose ratio is bigger than the limits specified. The first example may demonstrate the insufficient enterprises liquidity; the second one confirms insufficient current assets management efficiency.

The operation cycle time is among the most important indices in working capital management. The ratios of the mentioned indices of the investigated companies are listed in table 3

Table 3

National public agricultural holdings operating cycle (in days)			
Company	2014	2013	2012
Agroliga	234.7	274.5	211.7
Agrogeneration	212.4	232.5	340.9
Milkiland	103.2	105.4	109.2
Kernel	111,7	102.0	118.0
Astarta	400.6	468.6	405.4
Ovostar	221.8	213.5	210.5
AvangardCo	304.6	247.5	259.0
Ukrproduct	76.1	53.1	52.0
IMC	357.3	416.0	396.7
Agroton	327.9	282.1	358.1
MHP	235.7	204.6	215.6
min	76.1	53.1	52.0
max	400.6	468.6	405.4
average	235.1	236.3	243.4

The data analysis reveals invariability of the operating cycle during the studied period: the average index in 2012 was equal to 243.4 days, and to 235.1 days in 2014. Still this tendency is unequal among the companies. For instance, such companies as Kernel, AvangardCo, Ukrproduct, Agroton, MHP decreased their indices in 2014 compared to 2013. It should be noted, that Agrogenation is the only company to constantly decrease the operating cycle time during the analyzed period.

The data testifies that such producers of dairy products as Milkiland and Ukrproductgroup, of chicken and semi-finished products as MHP, and the Kernel with its most profitable business of selling sunflower oil have the smallest indices of the operating cycle time. Companies having more agricultural drive are marked as having longer operational cycles.

Table 4

National public agricultural holdings' Cash conversion cycle (in days)

Company	2014	2013	2012
Agroliga	204.7	250.7	177.0
Agrogenation	142.6	195.1	311.0
Milkiland	58.1	77.5	78.9
Kernel	103.7	96.0	113.0
Astarta	377.5	445.0	391.4
Ovostar	169.3	176.4	166.9
AvangardCo	284.9	231.4	238.2
Ukrproduct	32.8	21.4	23.9
IMC	248.1	379.1	381.8
Agroton	188.3	236.5	325.5
MHP	223.8	192.6	195.6
min	32.8	21.4	23.9
max	377.5	445.0	391.4
average	184.9	209.2	218.5

Trends in the Cash conversion cycle changes differ somehow from the trends of the operation cycle time changes. For instance, the average ratio of the analyzed index during the studied period decreased, though it can most probably be explained by the multiway nature of the Cash conversion cycle time changes, rather than by the common trend for the entire sampling frame. Thus, Agrogenation, Milkiland, IMC, Agroton companies were gradually decreasing the Cash conversion cycle time; the others increased it comparing to 2012.

Similarly to the operating cycle index, the smallest Cash conversion cycle time indices are demonstrated by companies with more advanced refining of their products, and due to this, with shorter time period of getting to the final consumer.

For better understanding of the reasons, forming the operating and Cash conversion cycle indices, let us analyze their constituents, which are stock holding time (table 5), average collection period (table 6), days payable outstanding (table 7).

Table 5

Days sales in inventory (days)

Company	2014	2013	2012
Agroliga	152.2	191.2	146.1
Agrogenation	179.8	192.3	283.0
Milkiland	32.0	46.3	60.1
Kernel	92.7	82.7	95.3
Astarta	379.0	431.9	371.2
Ovostar	161.7	154.7	138.1
AvangardCo	231.4	207.6	228.0
Ukrproduct	36.6	26.0	28.7
IMC	350.9	406.4	382.1
Agroton	209.8	193.8	266.3
MHP	218.4	187.1	197.6
min	32.0	26.0	28.7
max	379.0	431.9	382.1
average	185.9	192.7	199.7

As it was noted above, in 2014 there was a considerable shortage of production stock at the studied enterprises. Though the average period of stock circulating did not decrease significantly, that can be explained by 12% reduction of cost values according to sampling frame of the studied enterprises; which in its turn is connected with 8% decrease of sales revenues. Traditionally, the least stock holding time was demonstrated by the companies making goods of advanced refining.

Table 6

Average collection period (in days)			
Company	2014	2013	2012
Agroliga	82.6	83.3	65.7
Agrogeneration	32.6	40.2	57.8
Milkiland	71.2	59.0	49.1
Kernel	19.0	19.3	22.7
Astarta	21.6	36.7	34.2
Ovostar	60.0	58.8	72.3
AvangardCo	73.2	39.9	31.0
Ukrproduct	39.5	27.1	23.3
IMC	6.4	9.6	14.5
Agroton	118.0	88.3	91.8
MHP	17.3	17.5	17.9
min	6.4	9.6	14.5
max	118.0	88.3	91.8
average	49.2	43.6	43.7

Though according to sampling frame the average collection period generally increased by 5.6 days comparing to 2012-2013, in terms of enterprises it is evident that such companies as Milkiland, AvangardCo, and Ukrproduct considerably increased the studied index in 2014 comparing to 2013; that can be explained by the increase of accounts receivable for Milkiland and AvangardCo companies by 2.2% and 16% respectively, together with simultaneous reducing of sales proceeds by 15% and 36% respectively. Despite of Ukrproduct Company, reducing their accounts receivable by 10%, they did not compensate 39% shortfall.

Table 7

Days payable outstanding (in days)			
Company	2014	2013	2012
Agroliga	30.1	23.8	34.7
Agrogeneration	69.8	37.4	29.8
Milkiland	45.1	27.9	30.2
Kernel	8.0	6.0	5.1
Astarta	23.1	23.6	13.9
Ovostar	52.5	37.1	43.6
AvangardCo	19.7	16.1	20.8
Ukrproduct	43.3	31.7	28.0
IMC	109.3	36.9	14.8
Agroton	139.6	45.7	32.6
MHP	12.0	12.0	20.0
min	8.0	6.0	5.1
max	139.6	45.7	43.6
average	50.2	27.1	24.9

In 2014 the average payable outstanding time increased remarkably, that testifies to the growth of credit funds dependence while performing operational activity. Such companies as Agrogeneration, Milkiland, Ovostar, Ukrproduct, IMC and Agroton have demonstrated increase in the studied index. The index increase was mainly determined by credit debts expanding against the background of the total supplier purchases decrease.

Conclusion. The analysis of working capital indices of national public agricultural holdings permitted making the following conclusions. All the studied companies except Milkiland, had positive index of net working capital, and their general and instant liquidity indices are within the standard limits. This testifies to the enterprises' ability to settle with their current liabilities in time.

The analysis of the operating cycle proved that its smallest indices are demonstrated by the enterprises which make products of the higher value-added cost, and reach the final consumer faster. In the same way, the enterprises are divided according to the index of the Cash conversion cycle time. The authors have conducted the analysis of calculation constituents aimed at better understanding of the above mentioned indices variation. Some decline in these indices has caused proceeds reduction (and, as a result of these, the decline in production costs) by the bigger amount than reduction of production stock and accounts receivable.

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Shynkarenko R.V., PhD, Associate professor of the Economic Theory and Regional Economy Department, Poltava National Technical Yuri Kondratyuk University. **Kornyluk A.V.**, PhD, Senior lecturer of the Corporate Finances and Controlling Department, SHEE "Kyiv National Economical Vadym Het'man University". **Evaluating of national agricultural holdings working capital.** The main parameters of the working capital owned by the national public agricultural holdings throughout the 2012-2014 are estimated. The basic trends in liquidity, length of operating and cash conversion cycle are analyzed.

Key words: net working capital, operating cycle, cash conversion cycle .

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Шинкаренко Раїса Василівна, кандидат економічних наук, доцент кафедри економічної теорії та регіональної економіки, Полтавський національний технічний університет ім. Ю. Кондратюка. **Корнилюк Анна Валентинівна**, кандидат економічних наук, старший викладач кафедри корпоративних фінансів та контролінгу ДВНЗ «Київський національний економічний університет ім. В. Гетьмана». **Оцінка робочого капіталу вітчизняних агрохолдингів.** Здійснена оцінка показників робочого капіталу вітчизняних публічних агрохолдингів протягом 2012-2014 рр. Виділені основні тенденції зміни показників ліквідності, тривалості операційного та фінансового циклів.

Ключові слова: чистий робочий капітал, операційний цикл, фінансовий цикл.

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Шинкаренко Раїса Васильевна, кандидат экономических наук, доцент кафедры экономической теории и региональной экономики, Полтавский национальный технический университет им. Ю. Кондратюка. **Корнилюк Анна Валентиновна**, старший преподаватель кафедры корпоративных финансов и контроллинга ГВУЗ «Киевский национальный экономический университет им. В. Гетьмана». **Оценка рабочего капитала отечественных агрохолдингов.** Проведена оценка показателей рабочего капитала отечественных публичных агрохолдингов на протяжении 2012-2014 гг. Выделены основные тенденции изменения показателей ликвидности, длительности операционного и финансового циклов.

Ключевые слова: чистый рабочий капитал, операционный цикл, финансовый цикл.