

GCPMED 2018
**International Scientific Conference "Global Challenges and
Prospects of the Modern Economic Development"**

**ASSESSMENT OF THE FINANCIAL CONDITION OF AGRO-
INDUSTRIAL CORPORATIONS**

T.M. Kovaleva (a)*, V.A. Rahaev (b), O.A. Hvostenko (c), T.K. Elkanova (d), E.V. Frolova (e)
*Corresponding author

(a) Samara State University of Economics, Sovetskoi Armii Str., 141, 443090, Samara, Russia, e-mail: fikr@bk.ru

(b) Samara State University of Economics, Sovetskoi Armii Str., 141, 443090, Samara, Russia, e-mail: Rahaev-VA@samara.rshb.ru

(c) Samara State University of Economics, Sovetskoi Armii Str., 141, 443090, Samara, Russia, e-mail: khvostenko@samtfoms.ru

(d) Samara State University of Economics, Sovetskoi Armii Str., 141, 443090, Samara, Russia, e-mail: elkanovatk@mail.ru

(e) Moscow State Pedagogical University (a branch in Anapa, Krasnodar Territory), Astrakhanskaya Str., 88, 353410, Anapa, Krasnodar Territory, Russia, e-mail: frolovaelizaveta@yandex.ru

Abstract

The goal of a corporation's financial management is to ensure its stable financial condition and solvency. The existing methods of assessing the financial condition involve determining the type of financial condition of corporations by calculating the appraisal by points of key indicators of the balance sheet and a report on financial results. The disadvantage of financial ratios calculated on the basis of profits and assets is their static nature, simultaneity, the possibility of overestimating the level of ratios due to the inclusion in the composition of current assets of illiquid inventory, receivables, finished products, low information content for forecasting money receipts and payments. This leads to a distortion of the current financial stability and solvency of the corporation. This problem is particularly relevant for agribusiness corporations, which are characterized by seasonality of activity and the associated temporary discrepancy between expenses, income, receipts and payments of funds. To eliminate this discrepancy, when calculating financial ratios, the balance sheet items are adjusted, as well as a comparative analysis of financial ratios at the last reporting date and a similar date last year. An analysis of the financial statements of many corporations shows that with the normative values of financial ratios, they did not adequately fulfill obligations to counterparties, i.e. their financial condition was characterized by insolvency.

© 2019 Published by Future Academy www.FutureAcademy.org.UK

Keywords: Corporate finance, financial state of agri-industrial corporations, analysis of financial ratios, appraisal by points, money flow analysis.



1. Introduction

The seasonality of agricultural production, the long duration of the production and financial cycle, the lack of own funds, the uneven need for working capital and the uneven receipt of revenue from the sale of products to customers during the year determine the features of assessing the financial condition of agri-industrial corporations. It is known that seasonality is due to the fact that most of the revenue from sales of crop products falls on the second half of the year, although income can be earned monthly through the production of livestock products.

The analysis of the financial status of agribusiness corporations is usually carried out for the last three completed years, as well as on the last reporting date of the current year and a similar reporting date of the last year (Rakhayev, 2015).

The existing valuation methodologies involve the determination of the type of financial condition of a company by calculating the appraisal by points on key balance sheet indicators and a report on financial results. The following indicators are used as key indicators in most methods: financial independence ratio, the ratio of own working capital, current liquidity ratio, net profit ratio, working capital turnover ratio (Bukit & Nasution, 2015). In the process of calculations, the obtained values of the coefficients are assigned points in accordance with the established scale, which are then summed up and the total score is determined. The number of points less than 25 corresponds to a “bad” financial condition, from 25 to 52 points inclusive corresponds to the “average” financial condition, more than 52 points corresponds to a “good” financial condition.

2. Problem Statement

Most of the researchers involved in the analysis of the financial status of agribusiness corporations, when analyzing, calculate financial ratios which reflect specific aspects of the financial state: inventory turnover, receivables and payables, financial stability, liquidity, profitability (Gaisumov & Zaitsev, 2015; Kovalev & Kovalev, 2018).

The disadvantage of financial ratios calculated on the basis of profits and assets is their static nature and simultaneity (Fawzi, Kamaluddin, & Sanusi, 2015). Since the financial condition of a corporation depends on filling financial indicators with monetary resources, a more reliable picture of financial condition can be obtained by supplementing the appraisal by points with money flow analysis, which is not given sufficient attention in the scientific literature (Kornev, 2014).

3. Research Questions

In order to fill the above-mentioned gap in the scientific literature, this study raised the following questions:

- What is the sequence of determining the type of financial condition of an agri-industrial corporation based on the appraisal by points?
- What are the advantages of a money flow based financial analysis compared to an appraisal by points-based analysis?

4. Purpose of the Study

The objectives of the study are as follows:

- to determine the type of financial condition of an agri-industrial corporation based on the appraisal by points;
- to analyse the financial condition of the agri-industrial corporation on the basis of money flow, to compare the results of the research and to draw conclusions about the preferred methodology.

5. Research Methods

In this work, we use general logical methods and research techniques such as synthesis, analysis, analogy.

As an information base, publications of domestic and foreign authors in the field of research of corporate finance, as well as statistical data of agri-industrial corporations of the Samara region were used.

6. Findings

Specific data for the study are taken from the activities of the company Stepnoye LLC, which, in the opinion of the authors, represents the most illustrative example of the agri-industrial corporations of the Samara region (Table 01).

There is a positive trend in the gross income index and balance-sheet total of the corporation in 2015-2016. However, over the past 12 months (from 01/01/2017 to 01/01/2018), the cost of property, equity, revenues and profits decreased due to adverse weather conditions and production cuts in the first half of 2018.

Table 01. Indicators of the financial statements of Stepnoe LLC, thousand rubles

Indicator	Date of financial statement				
	01.01.16	01.01.17	01.07.17	01.01.18	01.07.18
Total balance	309 441	363 081	588 568	430 360	503 420
Out of circulation assets	164 479	176 615	185 483	226 133	241 465
Current assets	144 962	186 466	403 085	204 227	261 955
Supplies	111 095	147 326	317 985	135 604	194 566
Accounts receivable	33 108	38 515	34 864	68 559	56 950
Short-term financial investment	0	0	0	0	9 947
Monetary means	759	625	50 236	64	492
Equity capital	67 932	164 980	194 289	74 203	87 719
Borrowed funds total, including:	241 509	198 101	394 279	356 157	415 701
Loans and advances, including:	79 692	132 969	337 776	331 554	349 250
Long-term	0	296	61 684	62 345	61 700
Short-term	79 692	132 673	276 092	269 209	287 550
Accounts payable	161 817	65 132	56 503	24 603	66 451
Revenues	76 210	163 974	88 039	181 073	21 522
Costs of production	57 747	94 494	61 613	161 551	17 218
Sales profit	18 463	69 480	26 426	19 522	4 304
Net profit	34 607	97 048	29 309	9 678	13 516
EBITDA (calculated as for 12 months)	55 408	124 387	80 678	42 021	33 526
Debt/EBITDA	1,4	1,1	4,2	7,8	6,3

Note: The data are taken from the financial statements of Stepnoe LLC for 2016-2018.

The appraisal by points ratios were calculated according to the financial statements (Kovalev & Volkova, 2010) (Table 02).

The value of the financial independence ratio is below the optimum for all reporting dates under consideration, except January 1, 2017, which indicates the predominance of borrowed capital in the balance structure (Trejo, Noguera, & White, 2015).

Compared to the same period last year, the indicator fell by 0.16 points, which indicates an increase in dependence on borrowed funds.

The working capital to current assets ratio does not match the standard value and on all analyzed dates, except 01.07.2017, has a negative value. This indicates the absence of its own working capital.

Table 02. Financial ratios of appraisal by points of Steptoye LLC

Financial condition ratios	Date of financial statement				
	01.01.16	01.01.17	01.07.17	01.01.18	01.07.18
<i>1. Obligatory:</i>					
leverage ratio ($H \geq 0,4$)	0,22	0,45	0,33	0,17	0,17
working capital financed by equity to total assets ratio ($H \geq 0,1$)	-0,66	-0,06	0,02	-0,74	-0,59
current ratio ($H \geq 1,5$)	0,6	0,94	1,21	0,7	0,74
quick assets ratio ($H \geq 0,5$)	0,14	0,2	0,26	0,23	0,19
profitability of sales ($H \geq 0,05$)	0,24	0,42	0,3	0,11	0,2
net profit margin ($H \geq 0,01$)	0,45	0,59	0,33	0,05	0,63
working capital turnover ($H > 1$)	0,52	0,9	0,4	0,9	0,08
<i>2. Recommended:</i>					
absolute liquidity ratio ($H \geq 0,05$)	0	0	0,15	0	0,03
Material assets turnover (H from 60 to 120 days)	693	561	1 394	302	2 056
Maturity of accounts receivable ($H < 75$ days)	156	85	107	136	482
Maturity of account payable ($H < 75$ days)	1009	248	248	55	702

Note: The calculations are based on the financial statements of Steptoye LLC for 2016-2018

Equity funds and long-term loans do not cover the need for non-current assets.

The current liquidity ratio does not correspond to the optimal level for all reporting dates. The company does not have sufficient working capital to secure current liabilities. The values of the quick liquidity ratio for the entire period under review are also lower than the normative, which indicates the inability to immediately pay off most of the short-term liabilities (Velez-Pareja & Magni, 2010).

On all reporting dates, the profitability of sales exceeds the recommended value. However, over time, a decrease in the indicator values is observed, which negatively characterizes the corporation's production activities (Shamsudin & Kamaluddin 2015).

The values of the indicator of the net profit rate correspond to the recommended value for all reporting dates. The large value of the indicator as of 01.07.2018 is the result of government subsidies, the absence of which in the future could lead to losses.

The low level of inventory turnover on 01.07.2018. is due to the large share of costs in work in progress. As of the reporting date, individual crops were not harvested.

In the reporting period, the turnover of receivables decreases and does not correspond to the normative level due to a decrease in revenues, an increase in receivables and a delay in payment by the largest buyers. The share of overdue debt is increasing.

Accounts payable turnover in 2018 also slowed down and significantly exceeded the standard value. This slowdown is due to the provision of deferred payments until the new harvest, the availability of overdue debts to suppliers, advances received from buyers and a decrease in sales volumes in January-June 2018.

The appraisal by points of the financial condition of the corporation as of the last reporting date according to the method approved by Bank of Russia Regulation No. 254-P dated March 26, 2004, is 40 points, which corresponds to the “unstable” financial condition, but bank lending is allowed.

To clarify the reasons for the “unstable” financial condition, the money flow was built by an indirect method, i.e. by adjusting earnings for changes in inventories, receivables and payables, and accounting for depreciation. Based on the money flow, the corresponding ratios were calculated (Oral & CenKakkaya, 2015) (Table 03).

Table 03. Ratios based on money flow for Stepnoye LLC, thousand rubles

Money flow	Data of financial statement				
	01.01.16	01.01.17	01.07.17	01.01.18	01.07.18
Operational, thousand rub.	68 221	-23 675	-140287	-26 573	- 7 321
Investment, thousand rub.	-180479	-29 736	-14 909	-72 118	- 9 947
Financial, thousand rub.	113 017	53 277	205 103	98 130	17 696
Net money flow, thousand rub.	759	-134	50 172	-561	428
Operational money inflow, thousand rub.	38 100	81 318	66 950	89 450	39 893
Money ratios					
Operational money inflow to circulating capital(H>1)	0,26	0,44	0,17	0,44	0,15
Operational flow to net profit (H=1)	1,97	-0,24	-4,79	-2,75	-0,54
Operational flow to short-term liabilities (H>1)	0,28	-0,12	-0,42	-0,09	-0,02
Joint debt to operational flow(H>1)	3,5	-8,4	-2,81	-13,4	-57
Operational flow before interest deduction to interest (H>1)	16,7	-1,67	-27,3	-0,68	0,14

Note: Calculations are based on financial statements of Stepnoye LLC for 2016-2018

The analysis of monetary ratios shows negative aspects in the financial activities of the corporation:

- the operating money flow is negative during the period under review, with the exception of 2015; the company during the period under review was unable to generate a positive money flow sufficient to make payments on its core business;
- the coverage of negative operating and investment money flow during 2016-2018 is carried out by attracting loans and borrowings; as a result, the repayment of previously taken loans is made at the expense of attracting new ones, the absolute value and the proportion of loans and loans in the balance currency are constantly increasing. Accordingly, the company’s dependence on borrowed funds also increases, liquidity, solvency and financial stability decrease;

- due to operating activities the company is unable to repay existing debt obligations. The term of repayment of bank loans comes in 2018–2019, and the minimum period required for a company to repay loans is 6-7 years (debt / EBITDA is 6.3), which is much higher than the standard level.
- operational money inflow is not enough to finance working capital; that is, the flow of money from the sale of products does not allow even 1 turnover of funds during the year, which indicates an extremely slow turnover; and in the long term the value of the indicator decreases;
- the operating cash flow before interest deduction is not enough to pay interest, which means the highest probability of default.

These conclusions are confirmed by the calculation of coefficients based on money flow, which for the analyzed period does not only meet the standards, but also in most cases has a negative value. The growing insolvency of the company is indicated by the value of the indicators of the operational flow to short-term liabilities and the total debt to the operational flow (Kovalev & Kovalev, 2018).

The negative dynamics of financial condition is also confirmed by the sharp increase in the ratio of short-term loans to revenues (Yang, Xia, & Wen, 2016). The value of the indicator increased from 1.05 to 2.51 for the period from 01/01/2016 to 01/07/2018. It took a little over a year to repay short-term loans in 2015, whereas in 2018 it took 2.5 years. Considering that the maturity of short-term loans is 1-2 years, it can be stated that the corporation has overdue loans.

A more detailed analysis of the execution of concluded credit contracts based on money flow revealed the presence of overdue repayment of principal loan and interest lasting more than 60 calendar days in the last 180 days, which is a significant factor in the problematic nature, which makes it possible to consider the debt on loans as “problematic”. To alleviate the situation, it is necessary to prolong the payment of the loan principal and interest on loans.

The money flow analysis carried out in this study revealed that the corporation is not able to generate enough money flow to incur current expenses and to service loan debt due to its core business (Ilysheva & Krylov, 2015).

The analysis confirmed the “unstable” financial condition of the corporation, bordering on the “crisis” financial condition.

7. Conclusion

Thus, the analysis of money flow shows more specific financial results of the work of agri-industrial corporations and the problems associated with their financial condition in comparison with the analysis of indicators calculated on the basis of profits and assets. The results of money flow analysis can be used to refine the appraisal by points of the financial condition.

The proposed algorithm can be used in order to comprehensively assess the financial condition of agri-industrial corporations. The proposed method which combines the analysis of financial statements and the assessment of money flow, allows to obtain more complete and reliable information on the financial condition necessary for making management decisions.

References

- Bank of Russia Regulation No. 254-P dated March 26, 2004. "On the order of formation by credit institutions of reserves for possible losses on loans, on loan and equivalent debt"
- Bukit, R. B., & Nasution, F. N. (2015). Employee Diff, Free Cash Flow, Corporate Governance and Earnings Management. *Procedia - Social and Behavioral Sciences*, 211, 585 – 594.
- Fawzi, N.S., Kamaluddin, A., & Sanusi, Z.M. (2015). Monitoring distressed companies through cash flow analysis. *Procedia Economics and Finance*, 28, 136 – 144.
- Gaisumov, A.S., & Zaitsev, S.Yu. (2015). *Corporate Finance study guide*. Rostov Social and Economic Institute
- Ilysheva, N. N., & Krylov, S. I. (2015). *Analysis of financial statements*. Moscow: Finance and Statistics
- Kornev, V.M. (2014). Diagnostics of the financial condition of agricultural organizations in the region using multidimensional statistical analysis. *Vestnik of the Samara State University of Economics*, 7 (117), 124-127.
- Kovalev, V.V., & Kovalev, V.V. (2018). *Corporate finance*. Moscow: Prospect
- Kovalev, V.V., & Volkova, O.N. (2010). *Analysis of the economic activity of the enterprise* Moscow: Prospect
- Oral, C., & CenkAkkaya, G. (2015). Cash flow at risk: a tool for financial planning. *Procedia Economics and Finance*, 23, 262-266
- Rakhayev, V.A. (2015). Assessment of the financial position and creditworthiness of agricultural organizations based on cash flow. *Vestnik of the Samara State University of Economics*, 1, 87-90
- Shamsudin, A., & Kamaluddin, A. (2015). Impending bankruptcy: examining cash flow pattern of distress and healthy firms. *Procedia Economics and Finance*, 31, 766 – 774.
- Trejo, C.O., Noguera, P.M., & White, S. (2015). Financial ratios used by equity analysts in Mexico and stock returns. *Contaduría y administración*, 60(3), 578-592.
- Velez-Pareja, I., & Magni, C. A. (2010). Potential dividends and actual flows in equity valuation. *A critical analysis. Estudios Gerenciales*, 25(113), 123-150.
- Yang, R., Xia, K., & Wen, H. (2016). Venture capital, financial leverage and enterprise performance. *Procedia Computer Science*, 91, 114-121.