Analysis and recommendations for improving the financial stability of agricultural production

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Abstract. Improving the financial stability of enterprises producing agricultural products is a priority direction of activity control. The analysis of financial activity of the enterprise producing agricultural products is presented. To assess the overall dynamics of financial stability, a horizontal and vertical analysis of the analytical balance sheet was carried out. The analysis of the main indicators of financial stability was carried out, the analysis was carried out using absolute indicators based on a comparison of the value of reserves and costs with sources of financing. As a result of the conducted research, it was revealed that the positive results of production and financial activities also contributed to the increase in the well-being of the enterprise owners in 2018-2020. The level of profitability on equity in 2018-2020 increased significantly (by 2.45% and 34.36% points). The only factor that played a negative role in this was the growth of the leverage ratio. Based on the data obtained, recommendations are made to improve the financial stability of the enterprise.

1. Introduction
The agro-industrial complex is a key sector of the national economy and an important factor in the development of rural areas, both from an economic and social point of view.

The strategic importance of the agro-industrial complex for the national economy is the provision of raw materials for the food industry [1-6]. The main risks in this area of production are a long production cycle of products, a long payback period of investments and unfavorable indirect conditions. We note that to produce high-quality products and attractive consumer ability, agricultural raw materials of proper quality are necessary, as well as constant product safety control and monitoring [7-13].

In view of the above, improving the financial stability of enterprises producing agricultural products is a priority direction of activity control.
Financial stability, a factor of economic security of the enterprise, the main goal and the key to obtain a stable profit. We will analyze the financial stability of the enterprise producing agricultural products and develop recommendations for its improvement.

2. Materials and Methods
The following materials and methods are used in the course of the work:

Equity ratio:

\[ K_a = \frac{\text{Own capital}}{\text{Balance currency}} \]  

(1)

Coefficient of security of current assets with working capital:

\[ K_{sos} = \frac{\text{Own capital} - \text{Fixed assets}}{\text{Current assets}} \]  

(2)

capitalization ratio:

\[ K_K = \frac{\text{Borrowed capital}}{\text{Own capital}} \]  

(3)

An indicator of financial independence, funds for the formation of reserves, their surplus or shortage, this indicator can be expressed by the following formula:

\[ Z = \text{Total value of reserves} \]  

(4)

Availability of working capital:

\[ \text{SOS} = \text{Capital and reserves} - \text{Fixed assets} \]  

(5)

Availability of own and long-term sources of reserves formation or functioning capital:

\[ K_F = \text{Capital and reserves} + \text{Long} - \text{term liabilities} - \text{Fixed assets} \]  

(6)

Total value of the main sources of reserves formation:

\[ V_I = K_F + \text{Short} - \text{term credits and loans} \]  

(7)

where: \( K_F \) - Availability of own and long-term sources of reserves formation

Surplus or shortage of working capital:

\[ F^s = \text{SOS} - Z \]  

(8)

where: \( \text{SOS} \) - Availability of working capital

\( Z \) - reserves

Surplus or shortage of own and long-term borrowed sources of reserves formation:

\[ F^t = K_F - Z \]  

(9)

where: \( K_F \) - Availability of own and long-term sources of reserves formation

\( Z \) - reserves

Surplus or shortage of the total value of the main sources for reserves formation:

\[ F^o = V_I - Z \]  

(10)

where: \( V_I \) is the total value of the main sources of reserves formation

\( Z \) - reserves

This group of indicators allows to determine a three-component indicator. The dependence of the financial situation on the indicators is presented in Table 1.
Table 1. Summary table of indicators by types of financial situations.

| Index | Financial situation type | Absolute independence | Normal independence | Unstable state | Crisis condition |
|-------|--------------------------|-----------------------|--------------------|---------------|----------------|
| $F^S$ | $F^S \geq 0$ | $F^S < 0$ | $F^S < 0$ | $F^S < 0$ |
| $F^T$ | $F^T \geq 0$ | $F^T < 0$ | $F^T < 0$ | $F^T < 0$ |
| $F^O$ | $F^O \geq 0$ | $F^O < 0$ | $F^O < 0$ | $F^O < 0$ |

3. Results and Discussion

The studied enterprise is engaged in the cultivation of cereals, leguminous crops and oilseeds. The manufacturing company has modern equipment, constantly monitors technological development in the industry and is improved by purchase of advanced equipment.

To assess the overall dynamics of financial stability, we will conduct a horizontal and vertical analysis of the analytical balance sheet.

The initial data and calculated indicators of horizontal and vertical analysis are presented in Table 2.

Table 2. Analytical balance.

| Index | Finally Of Absolute values, thousand rubles | Finally Of | Finally Of |
|-------|-------------------------------------------|------------|------------|
|       | 2018                                      | 2019       | 2020       |
| I. Non-current assets | 80,857 | 101,407 | 107,357 |
| II. Current assets | 104,913 | 76,574 | 115,714 |
| including Inventories and costs (including VAT) | 53,786 | 60,177 | 62,426 |
| Receivables | 6,528 | 3,417 | 1,602 |
| Cash | 44,599 | 12,980 | 51,686 |
| BALANCE | 185,770 | 177,981 | 223,071 |
| III. Sources of own funds | 118,440 | 123,814 | 176,734 |
| IV. Loans and borrowed funds | 67,330 | 54,167 | 46,337 |
| including long term duties | 4,115 | 1,919 | 0 |
| Short-term loans and borrowed funds | 0 | 0 | 0 |
| Accounts payable | 63,215 | 52,248 | 46,337 |
| BALANCE | 185,770 | 177,981 | 223,071 |

Based on the presented data, the total value of the property, including money and funds in calculations, increased by 37,301 thousand rubles during the study period. At the same time, in 2019, the value of the property decreased by 7,789 thousand rubles (or 4.2%), and in 2020, the value of the property increased by 45,090 thousand rubles (or 25.3%). Moreover, these changes for the period 2019-2020 occurred mainly due to changes in mobile (current) assets. In all the studied periods, the value of immobilized funds also tended to increase.

The main reason for the change in mobile funds, both in 2019 and in 2020, is a significant change in reserves and costs and the amount of cash of the enterprise. Thus, in 2018-2019, the rate of increase in reserves and costs amounted to 11.9%, which in absolute terms amounted to 6,391 thousand rubles with a simultaneous decrease in cash by 31,619 thousand rubles and accounts receivable by 3,111 thousand rubles. In 2020, the growth rate of cash was significant and amounted to 298.2%, which in absolute terms amounted to 38,706 thousand rubles.

At the same time, the amount of the company's accounts receivable for 2019-2020 continues to decrease to 1,602 thousand rubles.
Analyzing the sources of funds for the period 2018-2020, it can be noted that the decrease in the sources of the company's property in 2019 by 7,789 thousand rubles was provided by an absolute change in borrowed funds. In 2020, the situation is radically different from the previous year. Property value increase by 45,090 thousand rubles was provided with an increase in its own funds - by 52,920 thousand rubles (an increase of 42.7%). The amount of debt financing continued to decline (decrease of 14.5%).

The passive part of the balance sheet is characterized by the predominant share of own sources of financing, and their share in the total volume for the period under study increases from 118,440 thousand rubles in 2018 to 176,734 in 2019.

At the end of 2020, the share of borrowed sources was 20.8%. The predominant borrowed source is accounts payable. Thus, the share of accounts payable to legal entities and individuals at the end of 2018 was 36.2% and at the end of 2020 – 20.8%. There are no short-term loans and borrowings in the organization.

We will move on to the analysis of the main indicators of financial stability. We will conduct an analysis using absolute indicators based on a comparison of the value of reserves and costs with sources of financing.

Table 3 shows the calculations for the financial stability analysis.

| Index | Symbol | 2018     | 2019     | 2020     |
|-------|--------|----------|----------|----------|
| Own working capital | COC    | 37,583   | 22,407   | 69,377   |
| Permanent working capital | KF     | 41,698   | 24,326   | 69,377   |
| Main sources of formation Inventories | VI     | 41,698   | 24,326   | 69,377   |
| Inventories | 3      | 53,786   | 60,177   | 62,426   |
| Characteristics of financial stability | SOS<3  | KF<3     | SO<3     | KF>3     |
| | VI<3   | VI<3     | VI>3     | **       |

* - Unstable financial condition
** - Absolute independence

The data in Table 3 and regulatory inequalities allow to conclude that in 2018-2019 the financial condition of the enterprise can be characterized as unstable. In 2019, the financial condition of the company is radically changing to an absolutely independent one.

It can be concluded that operating activities in 2020 are financed from own funds, there is a sufficient amount of working capital, which indicates absolute financial independence and stability in 2020.

We will continue with the analysis of financial stability indexes. The values and dynamics of the indicators are shown in Table 4.

| Index | Indicator value | Change in indicator |
|-------|----------------|---------------------|
|       | 2018  | 2019  | 2020  | 2019  | 2020  |
| K₄    | 0.57  | 0.44  | 0.26  | -0.13 | -0.18 |
| K₅    | 0.64  | 0.70  | 0.79  | 0.06  | 0.10  |
| Kₛₘₛ | 0.36  | 0.29  | 0.60  | -0.07 | 0.31  |

The level of the equity ratio is outside the normal limit (0.4-0.6) in 2018-2020 and exceeds the maximum recommended value. Consequently, operating activities do not depend on external sources of financing, which reduces the risk of loss of financial stability, but also the level of efficiency of the use of the organization's own capital.
The current assets coverage ratio and current assets to equity ratio during 2018-2020 are positive, which indicates the financing of current assets by "normal" sources.

The dynamics of the capitalization coefficient also indicates excessive financial stability in all analyzed periods, since, for example, at the end of 2020, by 1 rub. of own funds account for 0.26 rubles of borrowed funds.

Table 5 shows the calculation of acceptable values for the equity ratio.

| Indicator, unit of measure | Indicator value |  |  |  |
|---------------------------|-----------------|---|---|---|
| 1 Permanent assets value, thousand rubles | 80,857.0 | 107,376.0 | 117,677.0 |
| 2 Cost of the least liquid part of current assets, thousand rubles | 27,862.0 | 20,118.0 | 21,403.0 |
| 3 Total the least liquid part of assets, thousand rubles | 108,719.0 | 127,494.0 | 139,080.0 |
| 4 In total, you need your own funds, thousand rubles | 108,719.0 | 127,494.0 | 139,080.0 |
| 5 The actual value of the assets of the enterprise, thousand rubles | 185,770.0 | 177,981.0 | 223,071.0 |
| 6 Allowable amount of borrowed funds, thousand rubles | 77,051.0 | 50,487.0 | 83,991.0 |
| 7 The ratio of own and borrowed funds allowed for a given enterprise | 1.41 | 2.53 | 1.66 |

The presented analysis showed that the analyzed enterprise improved all its indicators in 2020. At the end of the period under review, the company has absolute liquidity and solvency and is financially stable.

At the same time, the conducted analysis indicates excessive liquidity of the enterprise. The company has excess cash that does not work, which contributes to their depreciation.

The analyzed company is faced with an excess of cash. The company needs to prevent the loss of the real value of funds.

The direction for the effective use of funds and not allowing their depreciation should be an increase in investment activity. The use of bank deposits is proposed. Bank deposits are an effective way to use the company's available funds.

4. Conclusion
As a result of the conducted research, it was revealed that the positive results of production and financial activities also contributed to the increase in the well-being of the enterprise owners in 2018-2020. In 2018-2020, the company received net profit in the amount of 2,355 thousand rubles, 5,374 thousand rubles, 58,294 thousand rubles, respectively.

The level of profitability on equity in 2018-2020 increased significantly (by 2.45% and 34.36% points). The only factor that played a negative role in this was the growth of the leverage ratio.

The company has an excess of cash. The company needs to prevent the loss of the real value of funds.

The company is recommended to pursue a policy in the field of rational cash management. In particular, it is proposed to direct excess funds to a bank deposit for a period of 2 years, which will protect money from inflation, increase net profit and improve financial stability.

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