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METHODS OF ASSESSING AND MONITORING INVESTOR
APPEAL OF AGRICULTURAL COMPANIES

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Abstract

Russian agriculture is given much attention by the government in consequence of the country's policy of import substitution and concern with security of the food supply. State regulation policies for agriculture involve economic stimuli and supports and aim to make the sector more attractive to investors. In consequence investment activity is expected to increase, assets to be consolidated, ineffective companies should get new owners and more deals for agricultural assets should be struck. Agricultural firms in the country have limited means of their own and credit is difficult to access, which leads them to use resources more efficiently in production, optimize business processes, cut costs and streamline management and control. Thus, to survive the economic environment companies are forced to review their business practices, including with regard to investments, oversight of investment activity and investment audit.

This article considers approaches to building a system of assessing and monitoring investor appeal of an agricultural company, based on an estimate of investment potential, activity and risk. An algorithm and indicators for expressing investor appeal are offered and applied to an actual enterprise. The purpose of the method is to help evaluate efficiency of investor money and that of company sales and prepare a data pool to support management decisions in agriculture.

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Keywords: Agricultural company, investment activity, investment risk, investor appeal.

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1. Introduction

Research here contained is made relevant by the situation of Russian agriculture and the task of progressive development set before it. The state policy of restrictions on the import of produce is being pursued and programs are being implemented to support domestic agricultural producers and rural development (Resolution of the Government of the Russian Federation of No. 717 of 14.07.2012), conditions are being created for investing in the agro-industrial complex (Federal Law..., 2016), all of which works in favor of investor appeal of agricultural companies.

There is no achieving stable growth without investments in fixed capital, and effectiveness of investor money will be directly reflected in the subject company's appeal to other investors. These matters can be approached practically if we systematize the best practices in adapting modern scientific knowledge to the actual business of real agricultural companies – to be passed on to professional management.

2. Problem Statement

At present the meat market (including pork) in Russia is subjected to a number of macroeconomic and political factors as well as regional factors that predispose it to systemic, production and financial risks (Salov & Salova, 2015). The pork market in Russia in 2016 continued to adapt to new parameters: a decrease in effective demand from the population against a backdrop of increasing domestic production, saturation of the market with domestic products, import substitution and an increase in exports.

According to 2016 end-of-the-year figures, about 3.6 million tons of pork was produced in Russia, which was by 12.9% more than in 2015, and some 2.8 million tons of that were in the corporate sector (National Pig Breeder Union, 2016). At the same time a number of key regions saw a decline in production during 2016: Belgorod Oblast (-3%), Leningrad Oblast (-1%), Krasnodar Krai (-5%), Mari El Republic (-18%). This indicates a strategic decision by a number of major market players to reduce output, something similar to oil countries' agreement to cut oil production. By 2020 pork production is set to increase to 4.5 million tons, which in the medium term suggests possible full substitution for pork imports. And taking into account the fact that Russia's need for meat products is only 70% satisfied today, we can conclude that pig breeding and the meat processing industry have the potential for growth during an economic recovery.

The task of progressive development of the agricultural complex set by the Russian government should result in an increase in investment activity in the industry, which should translate, among other things, into consolidation of assets, change of owners of inefficient companies and an increase in transactions for the purchase and sale of assets.

Often a change of ownership of a business takes place in two cases:

- 1) Selling a profitable, efficiently operating business at the peak of its attractiveness – to reap revenue;
- 2) Selling unprofitable businesses which cannot develop given the limited resources of the owner – to save and withdraw funds, at least some minimum amount.

In this regard, there is a need to develop methods for assessing the investment potential and investor appeal of an agricultural enterprise both for the purposes of investment, purchase and sale transactions and to make ongoing managerial decisions.

3. Research Questions

Any would-be owner of agricultural assets (company stock and property) wants to be well-informed of the target's financial situation, its relative investor appeal, activity and potential. That information is just what investment audit seeks to provide. But methods of investment audit and application of its results to management and control of agricultural companies are not well-covered in the literature. Many who have tried writing on the subject give scattered and haphazard accounts. Some believe that investment audit is an additional service during a regular mandatory service, i.e. there is an opinion that investment audit is part of management consulting. There is no definite method of management investment audit such that could contribute to a knowledge base for managerial decisions. All companies variously handle this lack of method: create internal documents and assign extra functions to their internal audit services, set up investment committees within corporate management structures, invite outside organizations etc. There is considerable interest in a method of internal investment audit that would be helpful in management.

For this reason internal investment audit should aim at checking the accuracy and justification of expenses, managing investment risks and evaluating efficiency of using investments, all to be used in managing investment activities of the company and improving its investor appeal. Risk can be understood as likelihood of an unfavorable outcome (losses or missed profits) compared to a predicted scenario in consequence of uncertainties in the project. Investment audit, then, can dispel such risk by confirming financial reporting, evaluating efficiency of investments and charting out the company's prospects post investment. As for investor appeal, it and efficiency are in inverse proportion to the number of risks the project might face, and directly tied to the project's resilience to existing risks.

4. Purpose of the Study

The purpose of the study is to develop methods for assessing investor appeal of agricultural enterprises (using the example of a pig-breeding complex)

5. Research Methods

Let us consider the basic definitions on which our system of indicators of investment appeal and investment potential can be based. Investment potential is an indicator of investor appeal of an object (an enterprise, a region, a territory or the country as a whole), which is a set of objective conditions and prerequisites for investment (availability of consumer demand, relevance of investment proposals, current economic situation in the country, particulars of taxation, variety of investment objects and the like) (Mannanov, Volozhanin, & Vainshtein, 2010). The investment potential of an enterprise as an investment object is a set of strategic prerequisites and factors for its sustainable development, including attraction of outside investments (Salova & Degterenko, 2013). Thus, the indicators characterizing investment potential of the enterprise, with actual figures to come from management and financial reporting, will represent:

- Investment sources (own and attracted, accrued and secured by cash flow).
- Profitability of investments in the form of the ratio of net profit generated by the enterprise to the volume of investments brought in.
- Market value of the enterprise expressed in the change in equity in the process of implementing investment activities (net asset value, earnings per share).

- The concept of investor appeal is also connected with investment activity, considered as intensity of investment processes at the enterprise (Vyborova & Salyahova 2015).

Evaluating existing methods, it should be noted that current developments rely mainly on the coefficient method, and all sorts of analytical procedures are brought to bear.

We suggest an expanded concept of enterprise investment activity to encompass financial condition of an economic entity that determines its current and future sustainability, development potential of its own and attracted funds. At the same time, attracting investments only confirms that a third party has received reliable information and confirmation of the company's stability and is ready to invest funds. Veracity of this information is what an investment audit proves.

Investment activity of an enterprise can be determined on the basis of such indicators as:

1. Indicators characterizing free equity:

- Return on working capital.
- Share of borrowed funds financial sources.
- Profitability of own circulating assets, etc.

2. Indicators characterizing development and sustainability potential:

- Capital productivity, which measures effectiveness of property in the production process and generation of income.
- Ratio of investments made to the balance of the source of investment, which shows the company's ability to repay investors with cash.
- Reinvestment coefficient, showing how much of the net profit was invested in the enterprise after its end-of-the-year distribution to shareholders.

Investment risk determines the ability of the enterprise to generate a given level of return on invested capital. An investor gauges the sense, or lack of, in investing funds against the level of risk inherent in the business entity.

In the agricultural sector, including pig farming, including the entire production cycle from the rearing of animals to the manufacture of meat products, the following risks stand out (Salov & Salova, 2015, pp. 202-206):

- Volume of the output of meat products, which is associated with the level of demand, considered in conjunction with the factor of rising prices and purchasing power at a time when buyers' real incomes are slipping. At the same time, the Far Eastern region is known to be a territory where the self-sufficiency indicator for pig production is not being met, the volume deficit is covered by delivery from other regions, which pushes local economies to increase output.
- Industry-specific factors of growth in production costs. Significant increase of the cost of meat production due to a rising price of grain and imported veterinary drugs, the growth of tariffs and prices. The ability of the economy to manage prime costs, to restrain the factors of its growth is crucial for keeping enterprises competitive at a given level.
- Significant burdens of risk management, including the price of implementing agricultural insurance measures. Here the object of consideration is the main herd and its protection with insurance, since herd safety and the ability to multiply livestock is a factor of sustainability.

- Inadequate technological efficiency, which is associated with limited opportunities for investment. This factor is directly related to the indicators of investment potential and investment activity indicated earlier.

The particular systemic risks inherent in the agricultural sector and their understanding and assessment form the investor's view on appropriateness of bringing money to a company in this field. Indicators that can measure the level of risks inherent in investment in the agricultural sector, in this case pig farming, may be as follows:

- Ratio of the number of livestock to the production capacity of the agricultural complex, which shows the production potential and prospects for its growth, the ability of the enterprise to ensure output at a given level to generate income levels that provide the investor with a given return on invested capital.
- Coverage of the main herd with agricultural insurance, which shows resilience of the enterprise when animals succumb to diseases, natural disasters, get wasted by unlawful actions of third parties, etc.
- Unit costs per 1 ruble of revenue, helpful in the management of costs as it provides a given level of profitability for the financial and economic model being implemented, determined by the annual business plan of the enterprise.
- Debt to equity ration, which shows the structure of sources of financing of the company.

Considered comprehensively, efficiency and investor appeal indicators will supply both the owner of the business and the potential investor with information about the investment potential, investment activity and level of investment risk borne by the company in question. Investor appeal breaks down to some key factors:

- Justification of investment by a comparison between risk and ROI.
- Increase of the market value of the enterprise;
- Availability of sufficient resources for the planned development of production capacities and sale of products;
- Availability of a sound plan for the development of the enterprise, technical modernization, introduction of modern technologies to production and management, a competent hiring policy.

From all of the above, the study proposes the following algorithm for assessing and monitoring investor appeal of an enterprise:

1. Establish current level of investor appeal of the enterprise, including based on the results of investment audit.
2. Project likely investor appeal on the basis of the business plan and the company development strategy.
3. Evaluate the results.
4. Develop and implement managerial decisions touching on investment activities of the enterprise.
5. Repeat one or all stages as necessary.

This approach to monitoring and evaluating investor appeal of an enterprise can take advantage of multiplicative integral indices, which are calculated as the average geometric change of their individual indicators. The basic idea is that the future behavior of an object is uniquely determined by its state (X) at

the initial (current) point in time, so a projected change of the index will represent a change of investor appeal, for the better or for the worse. To try this approach, we selected some of the indicators to focus on:

1. Ratio of investments made to source of investment. This indicator reflects the ratio of investments made to the remainder of the source of investment, which shows the company's ability to provide the source with cash flow (X_1).

2. Number of livestock to production capacity, which shows the production potential and prospects for its growth, the ability of the enterprise to ensure output at a level that allows generating revenue that provides the investor a given return on invested capital (X_2).

3. Coverage of the herd with agricultural insurance, which shows the enterprise's resilience to animal deaths, loss due illegal actions of third parties etc. (X_3).

4. Specific costs per 1 ruble of revenue, representing the ability to manage costs while providing a given level of profitability for the financial and economic model being implemented, determined by the annual business plan of the enterprise (X_4).

The following formulas are to be used:

- Let initial (current) state of investor appeal is $X(t_0)$.
- The situation with investor appeal at each next point in time $t_0 + t$ is $X(t_0 + t)$.
- Each indicator index (I_{px}) in the next period relative to the current state follows formula 1:

$$I_{px} = X(t_0 + t) / X(t_0).$$

- The index of the enterprise's investor appeal (IP) in the next period relative to the current one follows formula 2:

$$IP = \sqrt[4]{(I_{px1} * I_{px2} * I_{px3} * I_{px4})}$$

The possible states of the composite integrated index (IP):

- $IP > 1.0$ the trend is positive;
- $IP = 1.0$ the situation has not changed;
- $IP < 1.0$ the trend is negative.

Using the geometric mean for the calculation of integrated indicators, in the author's opinion, has a number of advantages:

- The possibility of its use in cases where it is difficult to give preference to scales where the integral index should include specific indicators.
- To allow bringing to a common denominator indicators, measured in different units.
- To ensure that the dynamics of individual indicators are taken into account.
- To form a knowledge base for management decisions.

Our sample application of this method of gauging investor appeal based on the indicators of an agricultural enterprise is presented in table 1.

Table 01. Evaluation of investor appeal of an agricultural enterprise

Index	Value	
	Planned	Actual
1. Ratio of investments made to source of investment (X_1)	0.399	0.191
2. Number of livestock to production capacity (X_2)	0.856	0.853
3. Coverage of the herd by agricultural insurance (X_3)	0.973	0.976
4. Specific costs per 1 ruble of revenue (X_4)	0.975	0.931
Index of investor appeal (IIP)	0.869	0.788

As this table shows, the composite index of investor appeal of the enterprise under consideration was determined at the level of 0.788, which corresponds to 78.8% (with a plan of 86.9%). Let us consider the components of the index:

1. Ratio of investments made to source of investment (X_1) was 0.191, which is formed from a ratio of investments made in the amount of 51.8 million rubles to the balance of the source of investment at the end of the period 270.7 million rubles. The enterprise could not ensure full return on investment, the investments were actually made against a background of a significant deficit of own funds.

2. Number of livestock to production capacity (X_2). In 2015 the number of livestock was 38.4 thousand heads, with the production capacity of the pig complex 45 thousand heads. Thus, the capacity utilization amounted to 85.3% of the design capacity, which in general indicates potential for increasing the output of meat products given more livestock.

3. Coverage of the herd by agricultural insurance (X_3). The indicator was at 0.976 or 97.6%. Thus, the enterprise has a high level of coverage of the livestock, close to the actual number of animals, which means the firm is well-protected against the risks inherent in the industry.

4. Specific costs per 1 ruble of revenue (X_4) amounted to 0.931 rubles per ruble of revenue, which shows the company's ability to manage costs while providing a given level of profitability for the financial and economic model being implemented, determined by the annual business plan..

6. Findings

The proposed indicators of investor appeal are geared towards a complex of effects that should bring together the interests of the business owner and potential investors. Charting out indicator changes, with a view to the actual plans, makes it possible to assess systemic changes in the implementation of the investment activity of the enterprise. As already noted, when carrying out such comprehensive assessment, large amounts of initial information is used, reflecting the impact of factors of the external and internal environment of the enterprise, which determine effectiveness of its investment activities. Given this, the method is best used with information technology to speed up the assessment process and enable modelling of future outcomes.

7. Conclusion

As the results of the test show, on the whole the index of investor appeal corresponds to the actual situation of the agricultural company under study. The main contributing factor in the decline of investor

appeal index is shortage of funds to supply investment sources with cash. Nonetheless, the company has the potential to expand production, and risks inherent in the agricultural sector are covered by agricultural insurance (Salov, 2015).]

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