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Bachelor Thesis

Comparative analysis of two machinery companies in Russia

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Comparative analysis of two machinery companies in Russia

Objectives of thesis

The main goal of this work is the execution of inter-economic analyses for the activity of two machinery companies in Russia: “Kalugaputmash” JSC and “KalugaTransMash” JSC. For achievement of the specified goal, the following tasks were set:

- to study the theoretical basis of the economic activity analyses;
- to specify the peculiarities of enter-economic analyses arrangement;
- to carry out inter-economic analyses of the enterprises: “Kalugaputmash” JSC and “KalugaTransMach” JSC, which includes:
 - Brief characteristic of the enterprises
 - Liquidity analysis
 - Analyses of financial stability
 - Analyses of the cost-efficiency;
- to generalize the analyses results and present proposals on increasing production efficiency.

Methodology

Methodological and theoretical basis of the thesis is constituted by the publications of the Russian and foreign authors concerning the analysis of economic activity.

This work involves methods of comparison and generalization, balance and factor analyses. When carrying out the inter-economic analysis of the enterprises of machine-building branch of Kaluga city, the comparison for results of activity has been performed with identifying the reserves for increase in production efficiency.

The proposed extent of the thesis

40 pages

Keywords

Comparative analysis, balance analyses, factor analyses, Russia, machinery companies

Recommended information sources

Baumohl B. The Secrets of Economic Indicators: Hidden Clues to Future Economic Trends and Investment Opportunities (2nd Edition). Wharton School Publishing Paperbacks. 2007. ISBN 0132447290
Berdnikova L.F. The role of the economic analysis in increasing of results financial and economic activity of the organization. Economic management. Vector of the science TSU. Special issue № 1, 2010
Derkachenko V., Asanina D. Component Analysis of the Economic Activity of Small Enterprises. European Researcher, 2013, Vol.(48), № 5-1.
J. Stanley Johnson. Introduction to Economic Analysis. R. Preston McAfee. 2012. ISBN 160049000X
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Declaration

I declare that I have worked on my bachelor thesis titled "Comparative analysis of two machinery companies in Russia" by myself and I have used only the sources mentioned at the end of the thesis. As the author of the bachelor thesis, I declare that the thesis does not break copyrights of any their person.

In Prague on 13th of March 2017

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Srovnávací analýza dvou strojírenských společností v Rusku

Souhrn

Tato práce hodnotí srovnávací analýzu dvou společností: "KalugaPutMash" JSC a "KalugaTransMash" JSC. Práce zahrnuje metody srovnání a zobecnění, rovnováhy a analýzu faktorů. "KalugaPutMash" JSC a "KalugaTransMash" JSC podniky se nachází ve městě Kaluga, Rusko. V průběhu komparativní analýzy byla vypočtena analýza ukazatelů likvidity, finanční stability, zisku a ekonomické efektivity. Ukazatele byly analyzovány v letech 2013 - 2015.

Klíčová slova: Srovnávací analýza, bilance, faktorová analýza, Rusko, strojírenská společnost

Comparative analysis of two machinery companies in Russia

Summary

This thesis evaluates comparative analysis of two companies: “KalugaPutMash” JSC and “KalugaTransMash” JSC. Work involves methods of comparison and generalization, balance and factor analysis. KalugaPutMash JSC and KalugaTransMash JSC enterprises are located in the city of Kaluga. Carrying out the inter-economic analysis of the enterprises of machine-building branch, the comparison for results of activity has been performed with identifying the reserves for increase in production efficiency. In the course of comparative analysis has been calculated analysis of indicators of liquidity, financial stability, profit and economic effectiveness. Indicators have been analysed of the years 2013 – 2015

Keywords: Comparative analysis, balance analysis, factor analysis, Russia, machinery companies

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1. Introduction

Analysis of economic activity is a scientifically generated system of methods and techniques, which allow studying the economy of an enterprise, to reveal the production reserves on the basis of registration and reporting data, to develop pathways of their most effective use.

The analysis of financial and economic activity also allows estimating economic viability of the enterprise at the current moment and for the foreseeable future.

The important place in the economic analysis is occupied by the comparative analysis of the activity of several enterprises. The purpose of the inter-economic comparative analysis consists in comparison of the achieved results of economic activity to results of other enterprises, in studying the reasons for different use of production resources, in identification of reserves for further increase in production efficiency. Unlike analysis, carried out within one enterprise, the inter-enterprise analysis allows to generalize experience of several enterprises, to extend the best practices to the compared enterprise.

In conditions of the market relations the comparative inter-economic analysis of liquidity and solvency of the enterprises, their profitability and business activity is of a particular importance.

Solvency and financial stability are the most important characteristics of financial and economic activity of the enterprise in the conditions of market economy. If the enterprise is financially stable and solvent, it has advantages before other enterprises of the same profile in attraction of investments, access to lines of credit, in the choice of suppliers and in selection of qualified personnel. The stability of the enterprise is higher, especially it irrespective of unexpected change of market conditions and, therefore, there is less risk to appear on the edge of bankruptcy.

The higher level of stability the enterprise has, the more it is able to withstand unexpected changes in market conditions and, therefore, less risk to bankruptcy.

All aforesaid confirms the relevance of this thesis subject.

2. Aims and Methodology

The main goal of this work is the execution of inter-economic analysis for the activity of two companies: “KalugaPutMash” JSC and “KalugaTransMash” JSC. For achievement of the specified goal, the following tasks were set:

- To study the theoretical basis of the economic activity analysis;
- To specify the peculiarities of inter-economic analysis arrangement;

- To carry out inter-economic analysis of the enterprises: “KalugaPutMash” JSC and “KalugaTransMash” JSC, which includes:
 - Brief characteristic of the enterprises
 - Liquidity analysis
 - Analysis of financial stability
 - Analysis of the cost-efficiency;
- To generalize the analysis results and present proposals on increasing production efficiency.

Methodological and theoretical basis of the thesis is constituted by the publications of the Russian and foreign authors concerning the analysis of economic activity such as: Baumohl B., J. Stanley Johnson, Savitskaya G. V., Chechevitsina L.N., Sheremet A. D. and others.

This work involves methods of comparison and generalization, balance and factor analysis. When carrying out the inter-economic analysis of the enterprises of machine-building branch of Kaluga city, the comparison for results of activity has been performed with identifying the reserves for increase in production efficiency.

3. Theoretical part

3.1 Notion, Aims and Tasks of the economic activity analysis

The analysis of economic activity is a process of a research and comprehensive study of economic processes in their interrelation¹. It helps to carry out the assessment for effectiveness of the enterprise activity, identification, and measurement for influence of the factors on the achieved and expected results; to reveal the tendencies for development of the enterprise; to identify and mobilize the reserves of further increases in efficiency of activity; to make justification of optimal administrative solutions, relative to both current state of the research object, and the prospects of its development. Results of the analysis constitute the base for conclusions, which are followed by the definition of the ways for the solution of the revealed problems.

The market economy makes necessary the development of the analysis at the level of the separate companies. The economic analysis of the company is a basis for decision-making at the micro-level. Economic analysis as a science represents the special knowledge connected with:

¹Savitskaya G.V. Theory of economic activity analysis: Text-book /G.V. Savitskaya – 2-nd edition. - M: INFRA-M, 2010. - 301 p.

- A research of the economic processes in their interrelation, which are formed under the influence of objective laws and subjective factors;
- Scientifically-grounded assessment of business plans implementation;
- Identification of quantitative measurements volume of positive and negative factors;
- Identification of proportions of economic development and reveal of unused reserves;
- Generalization of obtained experience and making of administrative decisions.²

The economic analysis is one of the most important instruments of obtaining information necessary for making of the optimal administrative decisions and solutions. Efficiency of administrative decisions and therefore, the efficiency of the enterprise activity in many respects, depends on the quality of the economic analysis. In conditions of the market economy, only the analysis can give the basis for establishing an optimal variant of the solution not only for the reporting period, but also for a number of other periods and to define tendencies of its development. It allows researching and revealing most fully, the reserves for the current work and further development of the enterprise.

In generalized form, the subject of the analysis is understanding as all parts of financial-economic activity of the enterprise, reflected in the system of the indicators of the accounting planning, reporting and other sources of information.³

Activity of the company is reflected in the accounting and operational reporting, but the accounting and the reporting as they are, don't disclose adequately interrelation and interdependence of the economic processes, which are carried out during the activity of the company. Therefore, those aspects of the company, which can't be reflected in the account and the reporting, are examined by their analysis.

Thus, the analysis of economic activity is a continuation of the account and reporting, with its help, shortcomings of the enterprise come to light, actions for increase in production efficiency and quality of work are outlined.⁴

The purposes of the analysis could be various, but as a result, they are directed to increase in efficiency of activity of the enterprise on the basis of a system research of all types of activity and generalization of their results.

Main objectives of the analysis of economic activity for the enterprise are as follows:

² Economic analysis. Basic theory. Complex analysis of the economic activity: text-book / [N. V. Voitolovskiy et al.]. – M.: U-write: PH U-write, 2011. – 507 p.

³ Analysis of economic activity: text-book / L.N. Chechevitsyna, K.V. Chechevitsyn. – Rostov-on-Don: Phoenix, 2013. – 368 p.

⁴ Sheremet A. D. Analysis and diagnostics of financial-economic activity of the enterprise: Text book / A. D. Sheremet. – M.: Infra-M, 2009. – 365 p.

1) Verification of justification of indicators of intra-economic planning, their complexity and real possibilities of their fulfillment;

2) Objective control for the course of implementation of contractual obligations, intra-economic plans, carrying out results and assessment of activity of the company for their performance;

3) Identification of the reasons, which positively and negatively influence the contractual obligations and intra-economic planned performance;

4) research of production reserves, use of the progressive equipment and technology, for increase in output and product sales, improvement of quality, decrease in prime cost and distribution costs, increase in labor productivity, profitability and strengthening of a financial state;

5) Development of concrete ways for elimination of the drawbacks and optimum use of the revealed reserves.

3.2 Types of economic activity analysis

Depending on the aims and tasks of the economic activity, various methods and techniques of the analysis of economic activity are applied. To provide an effective use of the opportunities, available via the analysis, different types of the analysis of economic activity are applied⁵.

1. The industry analysis -its methods consider specifics of separate branches of economy.

2. The inter-industry analysis - represents theoretical and methodical basis of the analysis of economic activity.

3. According to the “time” parameter could be distinguished the preliminary or perspective analysis, and also the consecutive or retrospective analysis⁶.

4. According to the “space” parameter could be distinguished the intra-economic analysis, which studies activity only of the studied enterprise and its structural subdivisions, and the inter-economic analysis. In the course of the inter-economic analysis results of activity of two and more enterprises are compared.

5. According to subjects of management, it is possible to allocate the following types of the analysis:

⁵Economic analysis of economic activity / V. I. Gerassimova, G. L. Kharevich – Minsk: Law and economics, 2012. – 513 p.

⁶J. Stanley Johnson. Introduction to Economic Analysis. R. Preston McAfee. 2012.

- The technical and economic analysis – it is carried out by technical services. It consists in studying of interaction of technical and economic processes, establishment of their influence on economic results;

- The financial and economic analysis – is carried out by financial service of the enterprise, financial and crediting bodies and at the financial economic enterprise. It involves the analysis of the following directions: implementation of the financial plan, efficiency and use of own and loan capital; revealing the reserves for profit, growth and profitability, improvement of a financial condition of the enterprise, improvement of payment abilities of the enterprise;

- The accounting analysis is carried out by the auditors. It is an expert diagnostic of the financial "health" of the enterprise. It is carried out for the purpose of assessment and forecasting of a financial state and financial stability of the enterprise;

- The social and economic analysis is held by economic services of the management, social and statistical groups. It studies the interrelation of social and economic processes, their influence on groups of economic processes;

- The economical and statistical analysis – is carried out by statistical bodies. It is applied for studying of the mass public phenomena at the different levels of management of the enterprise, branch, region, and state in general;

- The economic and ecological analysis – is carried out by bodies of the environment control. It studies interactions of ecological and economic processes;

- The marketing analysis – is carried out by marketing service;

- Investment analysis – is used for development of the program and assessment of the investment activity effectiveness of economic subjects.

3.3 Spheres of application for economic activity analysis

In economic literature, the analysis of economic activity is classified by various parameters that is of a great importance for its correct application.

According to the industry parameter, which is based on the public division of labor, the analysis of economic activity is divided on industry analysis and inter-industry analysis. An objective need for the industry analysis of economic activity is caused by specifics of different branches of production. Each branch of public production, owing to the different nature of work, has its specific features and therefore, the characteristic economic relations. The need for research of specifics of different branches has caused the requirement for development of a

technique of the economic activity analysis, taking into account features and conditions of each branch of the economics.⁷

All branches of social production are closely connected, and it causes the necessity of inter-industry analysis (theory of the economic activity analysis) development. The theory of the economic activity analysis reveals the most common methodological features and peculiarities of this science, generalizes the best practices of the economic activity analysis in different branches of economics. Possession of the general theoretical knowledge of the economic analysis is a necessary condition of the competent, qualified development and practical use of individual techniques of the industry analysis.

The preliminary (perspective) analysis is carried out before implementation of economic operations. It is necessary for justifications of administrative decisions and plan targets, and also for forecasting of the future assessment of performance and the prevention of undesirable results⁸.

Consecutive (retrospective) analysis is carried out after fulfillment of economic operation. It is used for control of implementation of the plan, identification of unused reserves and objective assessment of the results of enterprise activity.

Consecutive (retrospective) analyses are closely interconnected with each other. Without retrospective analysis, it is impossible to make the perspective one. The analysis of work results allows studying tendencies, regularities, to reveal unused opportunities, the best practices that are important at justification of level of economic indicators on prospect. Retrospective analysis gives an opportunity to see the prospects. It is a basis for the perspective analysis.

In turn, results of the retrospective analysis depend on depth and quality of the preliminary analysis on prospect. If planned or expected targets are insufficiently proved and real, then their subsequent analysis in general loses meaning and demands preliminary estimate of validity of planned targets.

The consecutive (retrospective) analysis is divided into operational analysis and final analysis. Operational (situational) analysis is carried out immediately after performance of the economic operation or change of a situation over the short periods (day, week). The purposes of the operational analysis are a quick reveal of the shortcomings and prompt reaction to economic processes.

⁷Derkachenko V., Asanina D. Component Analysis of the Economic Activity of Small Enterprises. European Researcher, 2013, Vol.(48), № 5-1.

⁸Baumohl B. The Secrets of Economic Indicators: Hidden Clues to Future Economic Trends and Investment Opportunities (2nd Edition). Wharton School Publishing Paperbacks. 2007.

Final (resulting) analysis is carried out for the reporting period of time (month, year). It is valuable, as the activity of the enterprise is studied comprehensively and in a complex manner, according to reporting data. It justifies the full assessment of the enterprise activity for the use of the possible opportunities.

Final and operational analyses are interconnected and supplement each other. They give the chance to the enterprise managing staff not only to eliminate quickly the shortcomings of production process, but also to generalize in a complex way the achievements, results of the activity for the corresponding periods of time, to develop the actions, directed to production efficiency growth⁹.

The perspective analysis, depending on length of the temporary horizon, is divided into short-term and long-term analysis. The short-term analysis covers the period up to one year, and the long-term one – over a year. The short-term predictive analysis is used for development of tactical policy of the enterprise, and the long-term analysis – for strategic policy in business.

The intra-economic analysis is applied for studying of the activity of the taken enterprise and its separate segments¹⁰. In the inter-economic analysis, the results of the activity of two or more enterprises are compared. The inter-economic analysis allows to reveal the best practices, reserves and shortcomings and on its basis to give more objective assessment to efficiency of the enterprise activity.

An important place among all types of the analysis of economic activity is taken by the financial analysis. At the level of the enterprise it is carried out by financial services (departments). The external financial analysis is carried out by banks, professional auditing companies, investors.

The intra-corporate financial analysis is carried out by financial services of the enterprise. It is directed to studying the processes of formation, placement and effective use of the capital at all stages of its circulation. Its main goal is a search of reserves and program development for concrete actions, aiming to increase the profitability and to accumulation of the amount of the own capital, strengthening of a financial condition of the enterprise and reduction of financial risks. Its results constitute a commercial secret.

The technical and economic analysis is focused on studying of organizational and scientific-technical level of the enterprise, research of innovations in the field of improvement of the equipment, technologies and a system of production for increase in efficiency of operational activity and strengthening of competitive advantages of the enterprise. A subject of study is the

⁹Berdnikova L.F. The role of the economic analysis in increasing of results financial and economic activity of the organization. Economic management. Vector of the science TSU. Special issue № 1, 2010.

¹⁰Plaskova N. S. Economic analysis: text-book. – M.: Exmo, 2009. – 704 c.

cause-effect relationship of technical and economic events, their influence at each other and the final financial results. It is carried out jointly by technical and economic departments of the enterprises.

The social and economic analysis studies cause-effect relationship of social and economic processes, their influence at each other and at economic results of the business. Its purpose is to identify the opportunities of further development of the social sphere, improvement of the working conditions and increase in level of its motivation directed to increase in efficiency of functioning of the enterprise.

The economic and ecological analysis is a component of management of nature protection activity of the enterprise, which main contents is - the research of interaction of the ecological and economic processes, connected with preservation and improvement of the environment and expenses, directed to ecology. The purpose is to justify tactical and strategic policy on issues of environmental protection, creation of environmentally friendly production, safe production and increase in efficiency of nature protection actions.

The marketing analysis is applied by the marketing subdivision of the enterprise to study the external environment of the enterprise activity: raw materials markets and sales markets for finished goods, competitiveness, supply and demand, and commercial risk, formation of price policy, development of tactics and strategy of marketing activity.

Each form of the economic activity analysis is peculiar according to its contents, organization and performance technique.

3.4 Inter-economic comparative analysis

3.4.1 Inter-economic analysis as one of the types of economic activity analysis

The important place in the economic analysis is occupied by the comparative activity analysis of several enterprises and the functional and economic analysis, which are selected in independent types of the analysis on the basis of their implementation methods and techniques.

Inter-economic (inter-company) comparative analysis is important in identification of unused intra production reserves in current conditions of business activity.

Purpose of the inter-economic analysis consists in the following:

- to give more objective assessment of the results of activity of the concrete enterprise for business plan implementation, achieved technical and economic indicators and financial results, etc. (at inter-economic analysis results of work of the separate enterprises are estimated not only

proceeding from their conditions, but from general economic positions of the country, taking into account achievements of other enterprises);

- To reveal distinctions at the separate enterprises in the level of use of production capacity, labor, material and financial resources and production efficiency;
- To establish the reasons of distinctions in use of production reserves;
- To find intra production reserves of increase in production efficiency at the compared enterprises and to specify ways of their realization;
- To reveal the best practices for the use of production resources, increase in production efficiency, etc. and to provide distribution of the best practices at the compared enterprises;
- To define, on the basis of generalization, the best practices of group of companies, the possibility of further improvement of production with the compared enterprises.¹¹

Depending on the purpose of the economic analysis the base for comparison is chosen. If the task of the analysis is the identification of the best enterprise, then for the base we can choose the complex of indicators, which analysis will allow to study comprehensively results of activity of the compared enterprises, to compare them with the results of the advanced enterprises, with data of the previous periods, possible results at mobilization of intra-economic reserves, with the established industry standards.

The contents of the comparative analysis of the enterprises work are defined by the purpose and objects of the research.

The content of the comparative analysis of the enterprises work is defined by the purpose and objects of the research.

Inter-economic comparisons are carried out for the following purposes:

- To show to the managing staff how the results of the enterprise work are correlated with the results of the analogue enterprises;
- To draw attention of the managing staff to strong and weak points of business;
- To give to the managing staff an objective base for assessment of efficiency of the enterprise work and introducing some corrections into its strategic and tactical policy.¹²

Results of the comparative analysis have to be considered both in the current work, and when developing long-term plans of the enterprises. For example, the comparative analysis of the used equipment at the enterprises allows revealing the outdated equipment, to define the direction of future capital investments more precisely.

¹¹ Complex analysis of the economic activity of the enterprise: text-book. / [V.I.Barilenko]; edited by V.I.Barilenko. - M. : FORUM, 2012. - 463 p.

¹²Vartanov A. S. Economic diagnostics of enterprise activity: arrangement and methodology: Text-book / Vartanov A. S. – M.: Finances and statistics, 2014. – 326 p.

The following items could act as components of the inter-economic comparative analysis:

- The enterprises, producing identical or similar products, the enterprises of different industries;
- Work-shops of the similar type (sites) at different enterprises;
- Economic processes and phenomena of the same contents;
- Separate indicators of the enterprises activity (labor productivity, product prime-cost, material capacity of the production, profit, profitability).

In this analysis the separate technical and economic indicators, characterizing results of the activity of the compared enterprises, the growth rates of separate indicators, coefficients, indexes, specific weightings according to the compared enterprises are compared.

The analyzed enterprises usually are grouped according to the amount of the production (large, average, small), product form and its other features.

Comparability of the data, attracted to the analysis, is of great importance for inter-economic comparisons. The following main conditions should be observed for ensuring comparability:

- Indicators have to be estimated by a uniform technique;
- Uniform measuring instruments of production should be used;
- The identical prices of materials should be used;
- The number of the working days in the compared periods is identical;
- The compared indicators are qualitatively uniform, in particular the expenses, included in product cost are uniform, and the used equipment and the production technology are uniform¹³.

Comparability of the data under different enterprises considerably increases, when comparing separate indicators, for example, for separate operations, the identical or similar equipment are compared.

For reduction of separate data in a comparable form correction coefficients are used, recalculation of indicators according to calculation methodology at other enterprises is made, not compared values are excluded.

Use of relative values (percent, coefficients, indexes) considerably expands possibilities of comparison.

¹³Savitskaya G.V. Analysis of the enterprise economic activity. – M.: Infra-M, 2013. – 544 p.

In the course of the comparative analysis the reasons of distinctions of the same indicators, factors, which are depending and not depending on the enterprises are established to increase objectivity of comparison conditions.

The latest achievement in the field of the inter-company comparative analysis is benchmarking. It is the early warning system about the imminent problems, based on a research of achievements of science and practice not only in the considered branch, but also in other branches. It is used as the instrument of obtaining information, which is required for maintenance and achievement of advantages in the competition. The benchmarking helps to understand an essence of divergences between the achieved results of the enterprise and leaders, manages more sensitive and susceptible to need to search for innovations, creates base for innovative activity, helps the top management with optimization of strategic and tactical administrative decisions on elimination of lag in their business and reaching of a leadership positions in the market of products and services.

3.4.2 Organizational peculiarities of inter-economic analysis

Comparison is one of the main methods of management of economic processes. It shouldn't come down to simple comparison of numbers, but it is necessary for an explanation of the reasons of the existing shortcomings, distribution of the advanced methods and techniques of work, identification of reserves.

The purpose of the comparative inter-economic analysis is a synthesis of experience, obtained by the team of several enterprises, comparison of results of their work, identification and use of reserves of further increase in overall performance of the enterprises¹⁴.

Work results of the following groups of companies can be the objects of the comparative inter-economic analysis:

- 1) Producing identical products. This situation gives possibility for comparison of practically all indicators and at all sites of the operation;
- 2) Producing similar products. Concerning these enterprises comparison is carried out within the limited number of indicators or with application of various correction coefficients;
- 3) Producing different products. Concerning these enterprises, the number of the compared indicators is even more narrowed. Generally, it is financial performance of the enterprise work, for example, profit, cost-effectiveness, indicators of a financial condition of the enterprise.

¹⁴ Analysis of economic activity: text-book / L.N. Chechevitsyna, K.V. Chechevitsyn. – Rostov-on-Don: Phoenix, 2013. – 368 p.

When carrying out the comparative inter-economic analysis it is necessary to provide comparability of the compared indicators. Conditions for comparison of economic indicators are the following:

- 1) Unity of a technique for estimating procedures;
- 2) Neutralization of a price factor;
- 3) Identical geographical conditions;
- 4) Taking into account a temporary factor.

The comparative inter-economic analysis is carried out in several steps:

- Choice of the enterprises and objects for comparison;
- Definition of comparability degree and a circle of the compared indicators;
- collecting and processing of economic information about objects, converting indicators to a comparable form:
 - Comparison and the analysis of indicators, assessment of the achieved results, identification of the reasons of a divergence on them and the factors, which have determined the value of the indicators;

When carrying out the inter-economic analysis it is necessary to define how results of activity of the different enterprises differ and how these results can deviate from the best result. Then investigate the reasons of distinctions. Detection of distinctions and their reasons is an obligatory element of comparison, this warning facility of unjustified differentiation of results. Following the results of the analysis the actions necessary for improvement of work of the analyzed enterprises are developed.

For carrying out the comparative inter-economic analysis it is necessary to define:

- 1) Tasks of the comparative inter-economic analysis;
- 2) The list of the compared indicators;
- 3) Group of the executors;
- 4) Methods of indicators processing;
- 5) Schedule of carrying out the comparisons.

Comparisons differ under the volume, form, level and frequency.

According to degree of coverage of the studied economic events and processes, inter-economic comparisons can be the general (full) and partial (local). In the general inter-economic analysis activity of the compared enterprises is studied in a complex. The local analysis is limited to studying only of single questions, for example the level of product cost, extent of use of production capacity, solvency, and business activity.

When carrying out the intra-economic analysis, the economic situations and processes happening in structural divisions of the enterprise act as objects. When carrying out the inter-economic analysis, the activity of a number of the enterprises for the purpose of detection of objectively existing distinctions in their activity and search of reserves on the basis of use of the best practices is studied.

3.4.3 Methods of inter-economic analysis

Peculiarities of an inter-economic comparisons technique are caused by the purpose of the performance of the comparative analysis.

The main methods of ensuring comparability of the compared indicators include the following:

- 1) Exception of incomparable values;
- 2) Correction of indicators;
- 3) Recalculation of indicators by the calculation procedure, general for all enterprises;
- 4) Grouping.¹⁵

When carrying out the comparative analysis a special value belongs to grouping technique. It consists in grouping of the enterprises under volume of production, number, sum of the fixed industrial and production assets. On the basis of grouping it is possible to define, for example, influence of the size of the enterprise on economic indicators (average annual development of one employee, profitability level).

The enterprises are grouped depending on production type on large, average and small-scale that allows revealing influence like production on extent of use of production capacity and other indicators.

Variation indicators are applied to detection of distinctions in growth rates of indicators, their level.

When comparing activity of the enterprises the methods of comparative assessment, among which could be distinguished a method of the places sum, a method of distances, a tax on metrical method.¹⁶

Method of places under chosen indicators places between the enterprises (structural divisions) taking into account favorable dynamics of indicators are distributed: if efficiency of activity is connected with growth of an indicator, then the first place is given to the enterprise, at

¹⁵Abdulkarimov I.T., BeshpalovM.V. Financial-economic analysis of the economic activity of commercial enterprises: text-book. / I.T. Abdulkarimov, M.V.Beshpalov – M.: Infra-M, 2012. – 320

¹⁶Plaskova N. S. Economic analysis: strategic and current aspects, Russian and foreign practice / N. S. Plaskova. – M.: Exmo, 2010. – 702 p.

which this indicator is higher and vice versa. Further the sum of places is calculated for each subject of the analysis. First place is given to the enterprise with the smallest sum of places.

Method of distances among the compared objects, proceeding from the best values of indicators, a reference object is formed. Further on each column the difference of an indicator and a standard, which is squared, pays off, and the sum of these squares is taken from a root. The obtained value also characterizes object distance from a standard: than it is less than a distance, an object is closer to those to a standard.

Taxon metrical method is a modification of a method of distances. Previously average value of the corresponding line is subtracted from each number of the initial table; the result is divided into a mean square deviation. After that in every line reference value is defined and for each object the amount of squares of deviations is calculated.

The method of distances and taxon metrical method show more exact results of assessment in comparison with the method of the places sum. Time can make comparative rating assessment as at the moment, and in dynamics of development of the enterprises.

Considering issues of the comparative inter-economic analysis in modern conditions, specification of subjects of this analysis is necessary. Work on carrying out of the inter-economic analysis is performed by the commercial scientific and consulting companies. The comparative analysis, which is carried out according to accounting (financial) reports allows to compare rather authentically a property status of the enterprises (balance cost of the stock, shares, equity units), is a base for formation of market price of stocks, the rating of the separate enterprises.

Data of inter-economic comparisons allow the commercial companies to present more accurately the competitive advantages and weaknesses.

4. Practical part

4.1 Comparative analysis of the enterprises: “KalugaPutMash” JSC and “KalugaTransMash” JSC.

Comparison is the earliest and most widespread method of the economic analysis.

Comparison is a juxtaposition of the studied data and the facts of economic life. There exists the horizontal comparative analysis, which is applied to definition of absolute and relative deviations of the actual level of the studied indicators from basic; the vertical comparative analysis, used for studying of structure of economic events; the trend analysis, applied when studying relative growth rates and a gain of indicators for a number of years to the level of basic year i.e. at a research of dynamics ranks.

Obligatory condition of the comparative analysis is the comparability of the compared indicators assuming the following:

- Unity of volume, cost, quality, structural indexes;
- Unity of the periods of time, that comparison covers;
- Comparability of production conditions;
- Comparability of a technique for calculation of indicators.

There are several forms of comparison: with the plan; with the last periods; with the best data; with average data.

Comparison with the previous period of time is expressed in comparison of economic indicators of the present day, decade, month, quarter, year to the same previous periods. Comparison with past time is connected with great difficulties, which are caused by considerable violations of conditions of comparability. Comparison of the gross, commodity and sold output for a row of years in the current prices will be economically illiterate, for example; also the dynamic row characterizing the level of expenses in 3-5 and more years (and sometimes and for adjacent years) constructed without necessary adjustments will be incorrect. Comparison with last period demands recalculation of turnover in the identical prices (most often in the prices of the basic period), recalculation of a number of articles of expenses with application of a price index, tariffs, rates causes the necessity to consider and some other factors: social, ethnographic, natural.

Comparison with the best data — is a comparison with the best methods of work and indicators, the best practices, new achievements of science and technology and can be carried out both within the enterprise, and out of it. Within the enterprise could be compared the indicators of work of the best work-shops, sites, departments, the most advanced workers. The big effect is obtained via the economic analysis of indicators of this enterprise by comparison them with the indicators of the best enterprises of this system, working approximately in identical conditions and also with indicators of the enterprises of other branch (owners).

Comparison of indicators of the enterprise with average values is often used (associations, branches, the similar foreign enterprises, etc.).

The procedure of comparison in the analysis of financial and economic activity of the enterprise includes several stages:

- The choice of the compared objects;
- The choice of a type of comparison (dynamic, spatial, in relation to planned values);
- Choice of scales of comparison and degree of the importance of distinctions;
- The choice of a number of signs, under which the comparison has to be made;

- Choice of a type of signs, and also determination of criteria of their importance and insignificance;

- Choice of the base for comparison.

KalugaPutMash JSC and KalugaTransMash JSC are chosen as subjects of the comparative inter-economic analysis. The enterprises are located in the city of Kaluga. Kaluga is a city in central Russia, the administrative center of the Kaluga region. Considerable development in the city was gained by mechanical engineering and metal working. The specified enterprises belong to machine-building branch and produce similar products such as equipment for railway transport.

In the course of the comparative analysis the analysis of indicators of liquidity, financial stability, profit and economic effectiveness will be made. Indicators of the years 2013 - 2015 will be analyzed.

All calculations will be made in Russian rubles. Russian ruble is an official monetary unit of Abkhazia, Russia, South Ossetia. Currency code: RUB. Change monetary unit: Kopek (1/100). Now banknotes of 10, 50, 100, 500, 1000, 5000 of Russian rubles and coins of 1, 5, 10, 50 kopeks, 1, 2, 5, 10 rubles are available in use.

An exchanging rate for the beginning of the March 2017 is 1 Euro = 61.98 ruble. The exchange rate is the sum in one currency, which needs to be paid for purchase of other currency, i.e. for a currency exchange. The exchange rate is often called as currency rate.

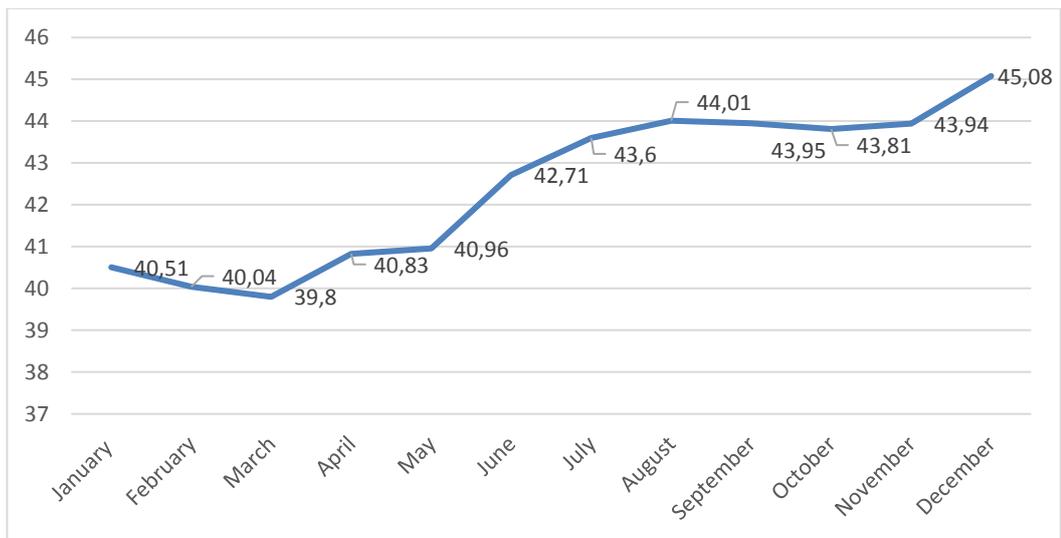
As currencies are always trading in couple, the exchange rate always influences the cost of currencies in couple in relation to each other. If the price of basic currency (which you want to buy) grows, the cost of the quoted currency (to which you pay for basic) falls in relation to the first.

Fluctuations of exchange rates represent serious risk for foreign dealers, and this currency risk makes the most important aspect of currency transactions.

Exchange rates fluctuate constantly if they have been given an opportunity to react to supply and demand in the foreign external exchange markets. Now rates of the main currencies fluctuate in the foreign external exchange markets in certain limits. Each national currency has the price in monetary units of other country. It is the essence of an exchange rate. The most widespread quotations of exchange rates result from direct trade between banks. Except for some specialized markets, such as the International monetary market in Chicago.

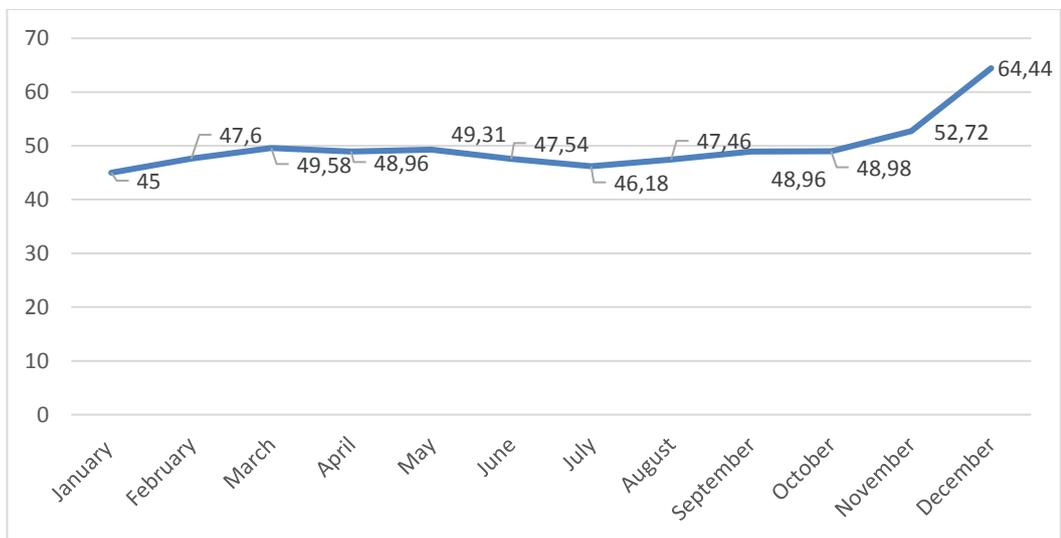
An exchange rate of the pair "Ruble-Euro" is very volatile and over these years, taken for the analyses, overcame great changes. The dynamics of the exchanging rate of Ruble to Euro is shown in the Figures 1, 2, 3.

Figure 1: Exchanging rate of Ruble to Euro in 2013.



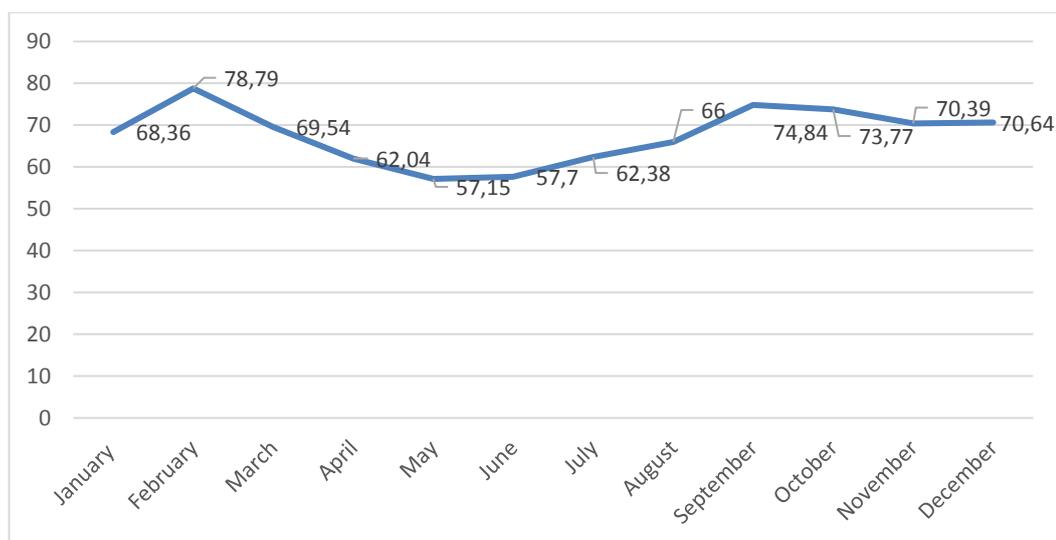
Source: The figure 1 was compiled on the basis of exchange rate data

Figure 2: Exchanging rate of Ruble to Euro in 2014.



Source: The figure 1 was compiled on the basis of exchange rate data

Figure 3: Exchanging rate of Ruble to Euro in 2015. (Own source, 2017)



Source: The figure 1 was compiled on the basis of exchange rate data

We can see that from 2013 to 2015 the Ruble became less valuable.

4.2 Brief characteristic of the enterprises

KalugaPutMash JSC is one of the oldest and leading enterprises of railway mechanical engineering in Russia. For more than 140-years history of the plant existence, various equipment for the railroads has been manufactured: from track motorcar to heavy railway machinery.

KalugaPutMash JSC is a leading enterprise in Russia involved in the production of railway equipment for repair, construction and operation of the railroads, also manufacturing hydraulic couplings for drives of processing equipment and hydro transmissions for industrial, shunting locomotives and railway locomotion. The enterprise constantly carries out research and development on creation of new samples of railway machinery and improvement of serially manufactured products. Development of new products, definition of their technical indicators, test of prototypes are carried out together with research institutes and the organizations.

Today KalugaPutMash JSC is a modern enterprise consisting of many types of production: grey iron foundry, steelmaking, forge and forming, thermal, metalworking, assembly- testing and repair-operational.

The enterprise specializes in production of the following items:

- Railway machinery used at construction, repair and operation of the railroads;
- Industrial locomotive of 202 kW (275 h.p.);

- Hydraulic transmissions for rail motor cars, industrial and shunting locomotives of 202-883 kW (275-1200 h.p.), for the 552-736 of kW diesel trains (750-1000 h.p.), for the auto loaders and the graders of 56-133 kW (75-180 h.p.);

- Hydro-transformers for the 295-883 kW power units of drilling rigs (400-1200 h.p.);

- Hydraulic couplings and 37-515 kW drives of processing equipment (50-700 h.p.).

Kaluga Plant of Transport Mechanical Engineering JSC (KalugaTransMach JSC) is founded in 1896. The main activity of the plant is a production of equipment for the railroads.

Today the plant is one of the leading producers of the mechanized traveling tool for repair, the regular maintenance and construction of a railway track, and also single-phase power plants, single-phase generators, vibrators and other products. Production of the plant is well-known in Russia, and abroad.

The enterprise has very skilled personnel, technical and production potential. The plant has design, production and technology departments, allowing development and introduction in the short and long term for mass production of a wide scale of new machinery and electrical units. Technological capabilities of the enterprise provide own machine-assembling, foundry and forming production, and also production of electric motors and generators. All stages of technological process include careful control, starting with the check of the arriving materials and ending with test of finished goods.

Range of the products:

- Rail drilling machines;
- Railway line routers;
- Rail-cutting machine;
- Petrol power plants;
- Diesel power plants;
- Diesel electrical units of DEA;
- Converting units;
- Welding electrical units;
- Cable armature;
- Hydraulic tools;
- Grinders;
- Railway spanners, screw guns, nut drivers;
- Manual cranes, railway motor cars;
- Industrial vibrators.

4.3 Liquidity analysis

Liquidity - is an ability of separate types of property to turn into a monetary form without loss of their balance value. Coefficients of liquidity reflect the ability of the enterprise to repay the short-term obligations in simplistic terms means: - High value of coefficients speaks about a strong financial position, low one – about problems with money and difficulties in further activity. Considerable excess by coefficients of standard values indicates unprofitable investment of capital in current assets.

Calculations in table 1 have been made under the following formulas:

$$\mathbf{Ccl} = (\mathbf{CA} - \mathbf{LTR}) / \mathbf{STO},$$

Where Ccl – Coefficient of current liquidity;

CA – current assets;

LTR – long-term receivables;

STO – short-term obligations.

$$\mathbf{Ccl} = (\mathbf{CA} - \mathbf{S}) / \mathbf{STO},$$

Where Ccl – coefficient of critical liquidity;

S – stocks.

$$\mathbf{Cal} = (\mathbf{MF} + \mathbf{STI}) / \mathbf{STO},$$

Where Cal – coefficient of absolute liquidity;

MF – monetary funds

STI – short-term investments.

$$\mathbf{Cfca} = \mathbf{CA} / \mathbf{Sr},$$

Where Cfca – Coefficient for fixation of current assets;

Sr – sales revenue.

$$\mathbf{Pt} = \mathbf{Sr} / \mathbf{P},$$

Where Pt – Payables turnover;

P – payables.

$$\mathbf{PRsto} = \mathbf{P} / \mathbf{STO},$$

Where PRsto – Payables ratio in short-term obligations.

Table 1: Analysis of liquidity indicators.

Indicator	KalugaPutMash JSC				KalugaTransMash JSC				Standard value
	for the end of 2013	for the end of 2014	for the end of 2015	changes 2015 to 2014	for the end of 2013	for the end of 2014	for the end of 2015	changes 2015 to 2014	
Liquidity coefficient	0.9				1.7				
- current	0.4	0.7	1.4	0.7	0.7	1.7	1.6	-0.1	1.5 - 2
- urgent (critical)	0.01	0.3	0.5	0.2	0.08	0.7	0.6	-0.1	0.8 - 1
- absolute		0.01	0.07	0.06		0.10	0.05	-0.05	0.2–0.25
Correlation of receivables and payables	0.56	0.24	0.50	0.26	2.380	2.394	0.950	-1444	
Coefficient for fixation of current assets	0.78	0.71	0.71	-	2.195	1.814	1.931	0.123	
Payables turnover	2.55	1.16	2.59	1.43	3.5	3.9	1.5	-2.4	
Payables ratio in short-term obligations	0.46	0.88	0.77	-0.11	0.215	0.247	0.555	0.308	
Influence the change of current liquidity by the following:									
- coefficient for fixation of current assets	x	x	x	0	x	x	x	0.2	
- payables turnover	x	x	x	0.9	x	x	x	-1.2	
- payables ratio in short-term obligations	x	x	x	-0.2	x	x	x	0.9	

Source: (Compiled by the author, 2017)

Calculations of influence to current liquidity changes are made under the following formulas:

$$Ccl = Cfca * Pt * PRsto \text{ (general formula)}$$

- Influence of coefficient for fixation of current assets:

$$\Delta Ccl = Ccl_1 - Ccl_{2014}$$

$$Ccl_{2014} = Cfca_{2014} * Pt_{2014} * PRsto_{2014}$$

$$Ccl_1 = Cfca_{2015} * Pt_{2014} * PRsto_{2014}$$

- Influence of payables turnover:

$$\Delta Ccl = Ccl_2 - Ccl_1$$

$$Ccl_2 = Cfca_{2015} * Pt_{2015} * PRsto_{2014}$$

- Influence of payables ratio in short-term obligations:

$$\Delta Ccl = Ccl_{2015} - Ccl_2$$

$$Ccl_{2015} = Cfca_{2015} * Pt_{2015} * PRsto_{32015}$$

KalugaPutMash JSC. Coefficients of liquidity are lower than standard values. The enterprise isn't ready to repay the current obligations quickly. 2014 experienced the decrease in of liquidity indicators in comparison with 2013. In 2015 there was an increase in all indicators. Indicators of the current and critical liquidity have approached standard value. Change of the current liquidity in 2015 was positively influenced by acceleration of turnover of accounts payable (increase in coefficient of the current liquidity), change of specific weight of accounts payable has exerted negative impact (reduction of coefficient of the current liquidity). Result of influence of all factors - improvement of a condition of solvency.

KalugaTransMash JSC. The coefficient of the current liquidity is in standard frames. Coefficients of urgent and absolute liquidity are lower than standards. It speaks about unavailability of the enterprise to repay short-term obligations and to quickly resolve issues of repayment of the current obligations. Liquidity in 2014 was at the level of 2013. During 2015 there was a decrease in all indicators.

As a result of the analysis of the influence of factors on change of the current liquidity of 2015 we have: increase in coefficient of fixing of current assets has increased coefficient of the current liquidity; reduction of payables turnover– has reduced the current liquidity; increase in Payables ratio in short-term obligations has increased the coefficient of the current liquidity. Mutual influence of factors has caused decrease in the current liquidity.

4.4 Analysis of financial stability

Indicators of financial stability of the enterprise characterize the structure of the capital used by the enterprise. They allow to determine the admissible shares of loan and own sources of financing. These indicators characterize ability of the enterprise to repay long-term obligations, allow estimating degree of security of investors and creditors.

Calculations in Table 2 have been made under the following formulas:

$$\mathbf{OWC = OC - FA + IFP + PFE,}$$

Where OWC – own working capital;

OC – own capital;

FA - fixed assets;

IFP – income of future periods;

PFE - provisions for future expenses.

$$\mathbf{ER=OWC/CA,}$$

Where ER – Equity Ratio;

CA - current assets.

$$\mathbf{EAr=OC/CB,}$$

Where EAr – equity-assets ratio;

CB – currency of the balance.

$$\mathbf{Cf = OC/BC,}$$

Where Cf - coefficient of financing;

BC – borrowed capital.

$$\mathbf{Ci = BC/OC,}$$

Where Ci – coefficient of investment.

$$\mathbf{Cocm = OWC/OC,}$$

Where Cocm – Coefficient of own capital mobility.

$$\mathbf{Cfs= (OC+LTO)/CB,}$$

Where Cfs - coefficient of financial stability;

LTO - long-term obligations.

Table 2: Analysis of indicators of financial stability.

Indicator	KalugaPutMash JSC				KalugaTransMash JSC				Standard value
	for the end of 2013	for the end of 2014	For the end of 2015	Changes 2015 to 2014	for the end of 2013	for the end of 2014	for the end of 2015	Changes 2015 to 2014	
Own working capital	-117594	-297374	-140052	-157322	75979	73679	77163	3484	
Asset coverage coefficient	-	-	-		0.378	0.410	0.374	-0.036	≥0.1
Equity-assets ratio	0.68	0.62	0.67	0.05	0.606	0.645	0.609	-0.036	>0.5
Coefficient of financing	2.2	1.6	2.1	0.5	2.053	2.566	3.728	1.162	>1
Coefficient of investment	0.5	0.6	0.5	-0.1	0.487	0.390	0.268	-0.122	< 1
Coefficient of own capital mobility	-	-	-		0.383	0.369	0.268	-0.101	0.3 – 0.5
Coefficient of financial stability	0.6	0.6	0.8	0.2	0.631	0.669	0.629	0.040	>0.6

Source: (Compiled by the author, 2017)

KalugaPutMash JSC. Own working capital is negative. Deficiency of own working capital has been revealed. The enterprise has to finance the needs of the current activity by the borrowed capital. Equity-assets ratio is in standard frames. The coefficient of financing shows, more than 2 rubles of owns capital is the share of each ruble of the borrowed capital. The coefficient of investment says that 0,5 rubles of the loan capital are the share of 1 ruble of own capital. The share of sources of the funds, used a long time, makes 70%. The size of coefficient of financial stability is in standard frames.

The financial state isn't steady. The Functioning Capital (FC) doesn't cover the stocks and expense (SE).

$$FC = OWC + LTO$$

2013: FC = -117594 + 159737 = 42143 thousand rubles SE = 634955 thousand rubles

2014: $FC = -297374 + 64729 = -232645$ thousand rubles $SE = 819495$ thousand rubles

2015: $FC = -140052 + 834463 = 694411$ thousand rubles $SE = 991727$ thousand rubles

The enterprise has to attract the short-term credits and loans; there is a delay of payments according to the current obligations.

KalugaTransMash. Asset coverage coefficient shows, that about 40% of current assets are financed by own capital. It exceeds standard value. More than 60% of the activity are financed by own capital that shows equity-assets ratio. This coefficient tends to decrease, but is in standard frames. The coefficient of financing shows, more than 3 rubles of owns capital is the share of each ruble of the loan capital. The indicator tends to growth and is significantly higher than the standard. The coefficient of investment says, that 30 kopeks loan are the share of 1 rub of own capital.

According to mobility coefficient about 30% of current assets are financed by own capital. The indicator is in standard side-altars. The share of sources of the funds used long term makes more than 60%. The size of coefficient of financial stability is in standard side-altars.

In spite of the fact, that value of indicators is in standard side-altars, the financial state isn't really steady. The functioning capital doesn't cover stocks and expenses.

FC = OWC + LTO

2013: $FC = 75979 + 8350 = 84329$ thousand rubles $SE = 122019$ thousand rubles

2014: $FC = 73679 + 7294 = 80973$ thousand rubles $SE = 108249$ thousand rubles

2015: $FC = 77163 + 6856 = 84019$ thousand rubles $SE = 134305$ thousand rubles

The enterprise has to attract short-term loans and credits.

4.5 Analysis of the profit and cost-effectiveness

Table 3: Analysis of the content and dynamics of the profit at KalugaPutMash JSC.

Indicators	2013		2014		2015		Deviations 2015 from 2014		Growth ratio, %
	Thousand rubles	In % to profit in p.4	Thousand rubles	In % to profit in p.4	Thousand rubles	In % to profit in p.4	Amount	In% to the result	

1. Profit (losses) from sales	390875	459.2	376539	516.8	290777	334.2	-85762	605.9	77.2
2. Other incomes	145660	171.1	142597	195.7	140125	161.1	-2472	17.4	98.3
3. Other expenses	451415	530.3	446283	612.6	343895	395.2	-102388	723.4	77.1
4. Total profit (losses) before taxation	85120	100	72853	100	87007	100	14154	x	119.4
5. Deferred tax assets	9519		8576		7704		-872		89.8
6. Deferred tax liabilities	2348		5268		18548		13280		352.1
7. Current income tax	42560		37664		35494		-2170		94.2
8. Net profit (losses)	49731		38497		40669		2172		105.6

Source: (Compiled by the author, 2017)

Growth ration is defined via correlation of the indicators of 2014 to 2015.

In 2014-2015 there was a decrease in profit from sales by 85762 thousand rubles in 2015, or by 22.8%, in comparison with 2014. It demonstrates decrease in efficiency of primary activity. The sum of other expenses is higher than the sum of the other income that speaks about unprofitability of other types of activity. Profit before the taxation in 2015 in comparison with 2014 has increased up to 19.4%. It was a consequence of decrease in dynamics of the sum and specific weight of the other income and expenses, and also the fact, that growth rate of the other income advances growth rate of other expenses. The net profit has increased for 5.6%.

Table 4: Analysis of the profit from sales at KalugaPutMash JSC.

Indicators	2013	2014	2015	Changes
Sales revenue – net, thousand rubles	1464786	1762438	2120574	358136
Production cost of the sold products, thousand rubles	1001211	1279873	1647783	367910

Gross profit, thousand rubles	463575	482565	472791	-9774
Commercial expenses, thousand rubles	-	-	27385	27385
Administrative expenses, thousand rubles	72700	106026	154629	48603
Sales profit, thousand rubles	390875	376539	290777	-85762
Cost-effectiveness from the sales, %	26,7	21,4	13,7	-7,7
Influence to change of sales profit:				
- change of sales revenue				77264
- change in the level of cost-effectiveness of the sales				-163026

Source: (Compiled by the author, 2017)

Sales cost-effectiveness (Sce):

$$\mathbf{Sce = P / Rs,}$$

Where:

P – Sales profit;

Rs – Sales revenue

Calculation of the influence to changes of sales profit:

$$\mathbf{P = Sce * Rs}$$

$$P_{2014} = Sce_{2014} * Rs_{2014} = 0.214 * 1762438 = 376539 \text{ thousand rubles}$$

$$P_1 = Sce_{2014} * Rs_{2015} = 0.214 * 2120574 = 453803 \text{ thousand rubles}$$

$$P_{2015} = Sce_{2015} * Rs_{2015} = 0.137 * 2120574 = 290777 \text{ thousand rubles}$$

Influence to changes of sales profit:

- Changes of sales revenue

$$P_1 - P_{2014} = 453803 - 376539 = 77264 \text{ thousand rubles}$$

- Changes in the level of cost-effectiveness of the sales

$$P_{2015} - P_1 = 290777 - 453803 = -163026 \text{ thousand rubles}$$

Table 4 shows, that in 2015 in comparison with 2014 sales revenue increases to 358136 thousand rubles, or to 20.3% (358136 / 1762438). Production cost of the sold products increased to 367910 thousand rubles, or to 28.7% (367910/1279873). Because growth of production cost advances growth of revenue, the gross profit has decreased by 2.0% (-9774/482565). Commercial expenses and growth of administrative expenses have lowered profit on sales on 75988 thousand rubles (27385+48603). As a result the profit on sales has decreased on 11.25 (85762/376539).

Increase in proceeds from sales has increased profit on sales by 77264 thousand rubles, decrease in profitability has lowered sales profit on 163026 thousand rubles. As a result, the sales profit has decreased on

$$77264 - 163026 = - 85762 \text{ thousand rubles.}$$

Table 5: Analysis of the level and dynamics of cost-effectiveness.

Indicator	2013	2014	2015	Changes
Sales profit, thousand rubles	390875	376539	290777	-85762
Average annual cost, thousand rubles:				
- property (investments)	3891282	4505954	5217720	1069902
- current assets	1044365	1203576	1387059	183483
- own capital	2520529	2924641	3393543	468902
Sales revenue, thousand rubles	1464786	1762438	2120574	358136
level of cost-effectiveness (%):				
- property (assets)	10.0	8.4	5.6	-2.8
- current assets	37.4	31.3	21.0	-10.3
- own capital	15.5	12.9	8.6	-14.6
- sales	26.7	21.4	13.7	-7.7

Source: (Own source, compiled by the author, 2017)

Cost-effectiveness of the property (Pce):

$$\mathbf{Pce = P / Pac,}$$

Where P – sales profit;

Pac – average annual property cost.

Cost-effectiveness of the current assets (CECA):

$$\mathbf{CECA = P / CA}$$

Cost-effectiveness of the own capital (CEOC):

$$CEOC = P / OC$$

Cost-effectiveness of the sales (CEs):

$$CEs = P / Rs$$

During 2014-2015 all indicators of the cost-effectiveness have decreased. It is connected with the fact, that sales revenues has decreased, but revenue from the sales and the cost of property, current assets and own capital have increased. Decrease in cost-effectiveness demonstrates decrease in profit from each ruble of revenue and decrease in return from each ruble of cost of assets and own capital. Therefore, efficiency of primary activity has decreased. Calculations of influence of some factors to change of cost-effectiveness of investments in 2015 in comparison with 2014 are shown below.

Table 6: Calculation of influence of some factors to change of cost-effectiveness of investments (assets) KalugaPutMash JSC.

Indicator	2014	2015	Change
Level of investments (assets) level	8.4	5.6	-2.8
Level of sales cost-effectiveness	21.4	13.7	-7.7
Turnover of the current assets (number of turns)	1.46	1.53	0.07
Current assets ratio within the property of the enterprise	26.7	26.6	-0.1
Influence to change of the investments cost-effectiveness:			
- change of sales cost-effectiveness	x	x	-3.1
- change of current assets turnover	x	x	0.3
- current assets ratio within the property	x	x	0

Source: (Own source, compiled by the author, 2017)

$$CEp = CEs * Tca * CAr,$$

Where CEp - cost-effectiveness of the property;

Tca – current assets turnover;

CAr – current assets ration within the property.

$$CEp_{2014} = CEs_{2014} * Tca_{2014} * CAr_{2014} = 21.4 * 1.46 * 0.267 = 8.4$$

$$CEp_1 = CEs_{2015} * Tca_{2014} * CAr_{2014} = 13.7 * 1.46 * 0.267 = 5.3$$

$$CEp_2 = CEs_{2015} * Tca_{2015} * CAr_{2014} = 13.7 * 1.53 * 0.267 = 5.6$$

$$CEp_{2015} = CEs_{2015} * Tca_{2015} * CAr_{2015} = 13.7 * 1.53 * 0.266 = 5.6$$

Influence to change of cost-effectiveness of investments (property):

- Change in sales cost-effectiveness

$$Pce_1 - Pce_{2014} = 5.3 - 8.4 = -3.1$$

- Change in turnover if current assets

$$Pce_2 - Pce_1 = 5.6 - 5.3 = 0.3$$

- Change of current assets ratio within property structure

$$Pce_{2015} - Pce_2 = 5.6 - 5.6 = 0$$

$$\text{Verification: } -3.1 + 0.3 + 0 = -2.8$$

Acceleration of current assets turnover has led to increase in cost-effectiveness of property. Decrease in sales cost-efficiency has negatively affected property cost-effectiveness. Cost-effectiveness of the property has decreased generally due to decrease in sales cost-effectiveness.

Table 7: Analysis of cost-effectiveness of production assets of KalugaPutMash JSC.

Indicators	2013	2014	2015	Changes
Revenue - net, thousand rubles	1464786	1762438	2120574	358136
Sales profit, thousand rubles	390875	376539	290777	-85762
Average annual fixed assets value, thousand rubles	1391777	1705148	2089077	383929
Average annual inventories (stocks) value, thousand rubles	583977	727225	905611	178386
Sales cost-effectiveness,%	26.7	21.4	13.7	-7.7
Capital intensiveness of the product	0.95	0.97	0.99	0.02
Materials/output ratio	0.40	0.41	0.43	0.02
Cost-effectiveness of production assets,%	19.8	15.5	9.7	-5.8

Source: (Compiled by the author, 2017)

Capital intensiveness of the product:

$$Ce = FA / Rs,$$

Where FA – fixed assets value;

Rs – Sales revenue.

Materials/output ratio:

$$MOr = Sv / Rs,$$

Where Sv – stocks value.

Cost-effectiveness of production assets:

$$\mathbf{CEpa = P / (FA+Sv)}$$

In 2014 in comparison with 2013 there is a growth of capital intensiveness and a materials/output ratio. In 2015 the amount of the profit, achieved from one ruble of production assets value has decreased by 5.8 kopeks in comparison with 2014. The capital intensiveness and a materials/output ratio of production have increased, sales cost-effectiveness has decreased.

Let's consider influence of some factors on cost-effectiveness of production assets in 2015 in comparison with 2014.

$$\mathbf{CEpa = Sce / (Ci +MOr)}$$

$$CEpa_{2014} = Sce_{2014} / (Ci_{2014} + MOr_{2014}) = 21.4 / (0.97 + 0.41) = 15.5$$

$$CEpa_1 = Sce_{2015} / (Ci_{2014} + MOr_{2014}) = 13.7 / (0.97 + 0.41) = 9.9$$

$$CEpa_2 = Sce_{2015} / (Ci_{2015} + MOr_{2014}) = 13.7 / (0.99 + 0.41) = 9.8$$

$$CEpa_{2015} = Sce_{2015} / (Ci_{2015} + MOr_{2015}) = 13.7 / (0.99 + 0.43) = 9.7$$

Influence of the factors:

1) Sales cost-effectiveness: $CEpa_1 - CEpa_{2014} = 9.9 - 15.5 = -5.6$

2) Capital intensiveness: $CEpa_2 - CEpa_1 = 9.8 - 9.9 = -0.1$

3) Materials/output ratio: $CEpa_{2015} - CEpa_2 = 9.7 - 9.8 = -0.1$

Decrease in sales cost-effectiveness has caused decrease in productive assets cost-effectiveness by 5.6%, increase in capital intensity – decrease by -0.1%, increase in a materials/output ratio has caused decrease by -0.1%. As a result, cost-effectiveness of productive assets has decreased on

$$- 5.6 - 0.1 - 0.1 = -5.8$$

The greatest impact was exerted by decrease in sales cost-effectiveness.

Table 8: Analysis of the content and dynamics of the profit for KalugaTransMash JSC.

Ingredients	2013		2014		2015		Deviations 2015 from 2014		Growth ratio, % Thousand rubles
	Thousand rubles	In % to profit in p.4	Thousand rubles	In % to profit in p.4	Thousand rubles	In % to profit in p.4	Thousand rubles	In % to profit in p.4	
1. Profit (losses) from sales	20390	105.9	28022	110.5	28561	128.4	539	17.9	101.9
2. Other incomes	6842	35.5	6813	26.9	8777	39.4	1964	12.5	128.8
3. Other expenses	7979	41.4	-9487	37.4	-15088	67.8	5601	30.4	159.0
4. Total profit (losses) before taxation	19253	100	25348	100	22250	100	-3098	x	87.8
5. Deferred tax assets			-		-				
6. Deferred tax liabilities			-		-				
7. Current income tax	6738		-8872		-7788		-1084		87.8
8. Net profit (losses)	12515		16476		14462		-2014		87.8

Source: (Compiled by the author, 2017)

Over 2014-2015 the sales profit increased. In 2015 there was an increase in profit on sales by 539 thousand rubles, or by 1.9%, in comparison with 2014. It demonstrates improvement of efficiency of primary activity. Growth of other expenses has outstripped growth of the other income that speaks about unprofitability of other kinds of activity. In this regard the profit before the taxation has decreased by 1084 thousand rubles. The net profit in dynamics tends to decrease.

Table 9: Analysis of the profit of KalugaTransMash JSC.

Indicators	2013	2014	2015	Changes
Sales revenue – net, thousand rubles	91656	99017	106969	7952
Production cost of the sold products, thousand rubles	70665	70203	69744	-459
Gross profit, thousand rubles	20991	28814	37225	8411
Commercial expenses, thousand rubles	445	594	5562	4968
Administrative expenses, thousand rubles	156	198	3102	2904

Sales profit, thousand rubles	20390	28022	28561	539
Cost-effectiveness from the sales, %	22.2	28.3	26.7	-1.6
Influence to change of sales profit: - change of sales revenue - change in the level of cost-effectiveness of the sales				2250 -1711

Source: (Compiled by the author, 2017)

Calculation of the influence to change of sales profit:

$$P_{2014} = S_{ce2014} * R_{s2014} = 0.283 * 99017 = 28022 \text{ thousand rubles}$$

$$P_1 = S_{ce2014} * R_{s2015} = 0.283 * 106969 = 30272 \text{ thousand rubles}$$

$$P_{2015} = S_{ce2015} * R_{s2015} = 0.267 * 106969 = 28561 \text{ thousand rubles}$$

Influence to changes of sales profit:

- Change of sales revenue

$$P_1 - P_{2014} = 30272 - 28022 = 2250 \text{ thousand rubles}$$

- Change of the level of sales cost-effectiveness

$$P_{2015} - P_1 = 28561 - 30272 = -1711 \text{ thousand rubles}$$

Table 9 shows that in 2015 in comparison with 2014 sales revenue have increased on 7952 thousand rubles, or for 8% (7952/99017). Production cost of the sold products has decreased by 1% (-459/70203). As a result, the gross profit has increased by 29.2% (8411/28814). But, in connection with significant growth in commercial and administrative expenses, the sales profit has increased only by 1.9%.

Increase in sales revenue has increased the sales profit by 2250 thousand rubles; decrease in cost-effectiveness has lowered sales profit on 1711 thousand rubles. As a result, the sales profit has increased on

$$2250 - 1711 = 539 \text{ thousand rubles.}$$

Table 10: Analysis of the level and dynamics of the cost-effectiveness.

Indicator	2013	2014	2015	Changes
Sales profit, thousand rubles	20390	28022	28561	539
Average annual cost, thousand rubles:				
- property (investments)	314767	318669	322619	3950
- current assets	187756	190409	193099	2690
- own capital	196300	199166	202074	2908

Sales revenue, thousand rubles	91656	99017	106969	7952
level of cost-effectiveness (%):				
- property (assets)	6.5	8.8	8.9	0.1
- current assets	10.9	14.7	14.8	0.1
- own capital	10.4	14.1	14.1	0
- sales	22.2	28.3	26.7	-1.6

Source: (Own source, compiled by the author, 2017)

In 2014 in comparison with 2013 all indicators of cost-effectiveness increased. In 2015 in comparison with 2014 cost-effectiveness of the property and current assets has increased, cost-effectiveness of own capital hasn't changed, sales cost-effectiveness has decreased. It is connected with the fact, that growth rate of sales profit advances growth rates of cost of property and current assets, but lags behind growth rates of revenue.

Table 11: Calculation of influence of some factors to cost-effectiveness.

Indicator	2014	2015	Changes
Level of investments (assets) level	8.8	8.9	0.1
Level of sales cost-effectiveness	28.3	26.7	-1.6
Turnover of the current assets (number of turns)	0.52	0.55	0.3
Current assets ratio within the property of the enterprise	598	59.9	0.1
Influence to change of the investments cost-effectiveness:			
- change of sales cost-effectiveness	x	x	-0.5
- change of current assets turnover	x	x	0.5
- current assets ratio within the property	x	x	0.1

Source: (Own source, compiled by the author, 2017)

$$CE_{p2014} = CES_{2014} * Tca_{2014} * CAR_{2014} = 28.3 * 0.5200 * 0.5975 = 8.8$$

$$CE_{p1} = CES_{2015} * Tca_{2014} * CAR_{2014} = 26.7 * 0.5200 * 0.5975 = 8.3$$

$$CE_{p2} = CES_{2015} * Tca_{2015} * CAR_{2014} = 26.7 * 0.5540 * 0.5975 = 8.8$$

$$CE_{p2015} = CES_{2015} * Tca_{2015} * CAR_{2015} = 26.7 * 0.5540 * 0.5985 = 8.9$$

Influence to change of cost-effectiveness of investments (property):

- Change of sales cost-effectiveness:

$$CEp_1 - CEp_{2014} = 8.3 - 8.8 = -0.5$$

- Change of current assets turnover:

$$CEp_2 - CEp_1 = 8.8 - 8.3 = 0.5$$

- Change of current assets ratio within property:

$$CEp_{2015} - CEp_2 = 8.9 - 8.8 = 0.1$$

Acceleration of current assets turnover (+0.5) and increase of their ratio within the property (+0.1%) have exerted positive impact on cost-effectiveness of the property. Decrease in profitability of sales promoted decrease in cost-effectiveness of property by 0.5%.

Table 12: Analysis of cost-effectiveness of production assets of KalugaTransMash JSC.

Indicators	2013	2014	2015	Changes
Revenue - net, thousand rubles	91656	99017	106969	7952
Sales profit, thousand rubles	20390	28022	28561	539
Average annual fixed assets value, thousand rubles	78915	87731	97532	9801
Average annual inventories (stocks) value, thousand rubles	109302	115134	121277	6143
Sales cost-effectiveness,%	22.2	28.3	26.7	-1.6
Capital intensiveness of the product	0.86	0.89	0.91	0.02
Materials/output ratio	1.19	1.16	1.13	-0.03
Cost-effectiveness of the productive assets, %	10.8	13.8	13.1	-0.7

Source: (Own source, compiled by the author, 2017)

Cost effectiveness of productive assets in 2014 in comparison with 2013 has increased. It is connected with the growth ratio of the profit, as it is higher than the growth ratio for cost of productive assets; but intensity of production and materials/output ratio were not changed considerably. In 2015 the size of the profit got from one ruble of production assets cost has decreased by 0.7 kopeks in comparison with 2014. The capital intensity of production has increased the materials/output ratio of production and cost-effectiveness of sales has decreased.

Let's consider influence of some factors on cost-effectiveness of productive assets in 2015 in comparison with 2014.

$$CEpa = Sce / (Ci + MOr)$$

$$CEpa_{2014} = Sce_{2014} / (Ci_{2014} + MOr_{2014}) = 28.3 / (0.89 + 1.16) = 13.8$$

$$CEpa_1 = S_{ce\ 2015} / (Ci_{2014} + MO_{2014}) = 26.7 / (0.89 + 1.16) = 13.0$$

$$CEpa_2 = S_{ce\ 2015} / (Ci_{2015} + MO_{2014}) = 26.7 / (0.91 + 1.16) = 12.9$$

$$CEpa_{2015} = S_{ce\ 2015} / (Ci_{2015} + MO_{2015}) = 26.7 / (0.91 + 1.13) = 13.1$$

Influence of the factors:

1) Sales cost-effectiveness: $CEpa_1 - CEpa_{2014} = 13.0 - 13.8 = -0.8$

2) Capital intensiveness: $CEpa_2 - CEpa_1 = 12.9 - 13.0 = -0.1$

3) Materials/output ratio: $CEpa_{2015} - CEpa_2 = 13.1 - 12.9 = 0.2$

Decrease in sales cost-effectiveness has caused decrease in cost-effectiveness of productive assets by 0.8%, increase in a capital intensity – decrease by 0.1%, decrease in materials/output ratio has caused increase by 0.2%. As a result – cost-effectiveness of productive assets has decreased on

$$-0.8 - 0.1 + 0.2 = -0.7\%$$

4.6 Generalization of the analysis results and proposals on increasing of production efficiency

On the basis of the results of the analysis it is possible to draw the following conclusions:

1) Following the results of the activity over the year 2015, in comparison with the year 2014, at both enterprises the revenues from sales have increased. At KalugaPutMash JSC growth of production cost of the sold products has led to decrease in sales profit following the results of a year. At KalugaTransMash JSC production cost of the sold products has decreased, as a result – the profit on sales has increased. Other kinds of activity are unprofitable at both enterprises. In 2015 KalugaPutMash JSC has considerably cut expenses on other activity, that has allowed to reach growth of balance and net profit. Growth of expenses on other activity at KalugaTransMash JSC has led to decrease in balance and net profit in 2015. Profitability of sales at all enterprises has decreased.

2) The analysis of liquidity has shown, that both enterprises aren't ready to repay short-term obligations and to resolve issues of repayment of the current obligations quickly. At KalugaPutMash JSC liquidity indicators during 2015 have increased and have approached standard value, what is a positive tendency. At KalugaTransMash JSC liquidity indicators in 2015 had higher value (in comparison with KalugaPutMash JSC), but have by the end of the year decreased. It is a negative tendency.

3) The analysis of financial stability has revealed an unstable financial position at both enterprises - the functioning capital doesn't cover stocks and expenses. The enterprises have to attract the loan capital. But situation at KalugaTransMash JSC is better – this enterprise has its own working capital, by means of which 60% of activity are financed.

For improvement of a financial position at the analyzed enterprises it is necessary to implement the following:

- to pursue policy of accumulating of own capital for reduction of financial dependence on external investors;
- to introduce operating control of receivables and payables situation for the purpose of repayment;
- to carry out works on decrease in costs of production;
- to develop actions for decrease in expenses for other kinds of activity for increase in balance profit.

5. Conclusion

The market economy makes necessary the development of the analysis at the level of the separate enterprise. The economic analysis of the enterprise is a basis for decision-making at the micro-level. In conditions of the market economy only on the basis of the analysis it is possible to establish an optimal variant of the solution of objectives not only for reporting period, but also for a number of other periods and to define tendencies of its development.

By means of the economic analysis the assessment of effectiveness of activity of the enterprise, identification of reserves of further increase in efficiency of activity, prospects of its development is carried out. Following the results of the analysis conclusions are formed and ways of the solution of the revealed problems are defined.

The purposes of the analysis can be the most various, but they are directed to increase in efficiency of the enterprise activity on the basis of a research of all kinds of activity and generalization of their results.

The inter-economic analysis is one of types of the analysis of economic activity.

Inter-economic comparison in this Bachelor thesis was carried out with the purpose to give objective base for assessment of efficiency of functioning of the enterprise. The enterprises, which are producing similar products, located at the same city, relating to one branch of industry were chosen as subjects of the inter-economic comparative analysis.

The indicators over the year have been analyzed. Such analysis is valuable, as the activity of the enterprise is studied in a complex and comprehensively according to reporting data. Full assessment of the enterprise activity under use of opportunities is explained by it.

Following the results of the comparative analysis of the activity in 2014-2015 of two enterprises of machine-building branch: KalugaPutMash JSC and KalugaTransMash JSC, it has been revealed, that both enterprises are in an unstable financial position. KalugaPutMash JSC has no own working capital and has to attract the short-term loans for ensuring production activity. KalugaTransMash JSC finances 60% of the activity by own capital, but the functioning capital doesn't cover stocks and expenses, the loan capital is necessary.

The analysis of the liquidity of the enterprises has revealed, that they aren't ready to repay the current obligations quickly. At KalugaPutMash JSC the liquidity has improved, and at KalugaTransMash JSC the liquidity has decreased.

By results of the analysis of profit and cost-effectiveness it is visible, that profitability of sales has decreased at both enterprises. It is connected with unprofitability of other activity, growth of non-productive expenses. Growth of production cost has outstripped growth of revenues from sales at KalugaTransMash JSC. Cost-effectiveness of productive-assets has

decreased at both enterprises. It is connected with an advancing of growth of funds value over the growth of revenues from sales and profit.

By results of the inter-economic analysis it is recommended to enterprises to improve control over expenses, to pursue policy of control over receivables, to augment own capital for reduction of dependence on external financing.

6. Literature

1. Analysis of economic activity: text-book / L.N. Chechevitsyna, K.V. Chechevitsyn. – Rostov-on-Don: Phoenix, 2013. – 368 p.
2. Abdukarimov I.T., Bespalov M.V. Financial-economic analysis of the economic activity of commercial enterprises: text-book. / I.T. Abdukarimov, M.V. Bespalov – M.: Infra-M, 2012. – 320
3. Baumohl B. The Secrets of Economic Indicators: Hidden Clues to Future Economic Trends and Investment Opportunities (2nd Edition). Wharton School Publishing Paperbacks. 2007. Economic analysis. Basic theory. Complex analysis of the economic activity: text-book / [N. V. Voitlovskiy et al.]. – M.: U-write: PH U-write, 2011. – 507 p.
4. Berdnikova L.F. The role of the economic analysis in increasing of results financial and economic activity of the organization. Economic management. Vector of the science TSU. Special issue № 1, 2010.
5. Derkachenko V., Asanina D. Component Analysis of the Economic Activity of Small Enterprises. European Researcher, 2013, Vol.(48), № 5-1.
6. Complex analysis of the economic activity of the enterprise: text-book. / [V.I. Barilenko]; edited by V.I. Barilenko. - M. : FORUM, 2012. - 463 p.
7. Economic analysis of economic activity / V. I. Gerassimova, G. L. Kharevich – Minsk: Law and economics, 2012. – 513 p.
8. Plaskova N. S. Economic analysis: text-book. – M.: Exmo, 2009. – 704 c.
9. Plaskova N. S. Economic analysis: strategic and current aspects, Russian and foreign practice / N. S. Plaskova. – M.: Exmo, 2010. – 702 p.
10. Savitskaya G.V. Theory of economic activity analysis: Text-book / G.V. Savitskaya – 2nd edition. - M. : INFRA-M, 2010. - 301 p.
11. Savitskaya G.V. Analysis of the enterprise economic activity. – M.: Infra-M, 2013. – 544 p.
12. Sheremet A. D. Analysis and diagnostics of financial-economic activity of the enterprise: Text book / A. D. Sheremet. – M.: Infra-M, 2009. – 365 p.
13. Stanley J. Johnson. Introduction to Economic Analysis. R. Preston McAfee. 2012.
14. Vartanov A. S. Economic diagnostics of enterprise activity: arrangement and methodology: Text-book / Vartanov A. S. – M.: Finances and statistics, 2014. – 326 p.

7. Appendix

Balance sheet report KalugaPutMash JSC

Assets	Code of the indicator	on 01.01.2014	on 01.01.2015	on 01.01.2016
1	2	3	4	5
I. FIXED ASSETS				
Nominal assets	110	10 462	2 484	1 832
Fixed assets	120	1 481 442	1 928 854	2 249 300
Construction-in-progress	130	1 686 754	1 396 836	1 985 300
Income yielding investments into tangible assets	135			
Long-term financial investments	140	5 683	5 683	5 063
Deferred tax assets	145	40 703	45 855	40 115
Other non-current assets	150			
Total under section I	190	3 225 044	3 379 712	4 281 610
II. CURRENT ASSETS				
Stocks	210	634 955	819 495	991 727
including:				
raw materials, expendables and other analogue objects of value	211	185 603	182 803	165 463
animals in farming and fattening	212			
expenses for in-process inventory	213	10 723	7 789	18 717
finished products and goods for resale	214	429 681	623 353	802 105
shipped goods	215			
expenses of future periods	216	8 948	5 550	5 442
other stocks and expenses	217			
value added tax on acquired assets	220	98 724	68 696	22 132
receivables (payments, waiting to be settled in more than 12 months after reporting date)	230	77 016	79 146	51 902
including buyers and customers	231	77 016	79 146	51 902
receivables (payments, waiting to be settled within 12 months after reporting date)	240	323 113	278 807	355 081
including buyers and customers	241	203 615	201 893	215 713
Short-term financial investments	250			17 536
Monetary funds	260	10 115	12 609	53 075
Other current assets	270	3 223	1 253	22 659
Total under section II	290	1 147 146	1 260 006	1 514 112
BALANCE	300	4 372 190	4 639 718	5 795 722

Liabilities	Code of the indicator	on 01.01.2014	on 01.01.2015	on 01.01.2016
1	2	3	4	5
III. CAPITAL AND STOCKS				
Ownership capital	410	59 682	59 682	59 682
Shares repurchased	411	()	()	()
Added capital	420	1 745 388	1 745 388	2 399 884
Capital reserves	430	4 406	4 406	4 406
including:				
stocks, formed in accordance with legislation	431	4 406	4 406	4 406
stocks, formed in accordance with constitutive documents	432			
Production development fund		10 751	31 097	56 711
Target financing		1 074 313	972 397	1 309 249
Undistributed profits (unrecovered loss)	470	70 605	71 167	73 017
Total under section III	490	2 965 145	2 884 137	3 902 949
IV. LONG-TERM LIABILITIES				
Loans and credits	510	154 006	54 464	807 632
Deferred tax liabilities	515	5 731	10 265	26 831
Other long-term liabilities	520			834 463
Total under section IV	590	159 737	64 729	834 463
V. SHORT-TERM LIABILITIES				
Loans and credits	610	529 604	362 390	118 746
Payables	620	574 895	1 127 405	687 233
including:				
suppliers and contractors	621	203 841	511 125	399 993
payables to employees	622	35 184	46 738	100 722
payables to state non-budgetary associations	623	25 859	32 791	112 501
taxes and charges payable	624	14 194	265 788	29 178
other payables	625	295 817	270 963	44 839
Payables to participants (founders) under profit payments	630	504	2 856	13 722
profits of future periods	640			
Stocks of future expenses	650	142 305	198 201	238 609
Other short-term liabilities	660			
Total under section V	690	1 247 308	1 690 852	1 058 310
BALANCE	700	4 372 190	4 639 718	5 795 722

Profit and loss statement KalugaPutMash JSC for 2013-2015

Indicator		2013	2014	2015
Description	code			
1	2	3	4	5
Normal income and expenses				
Revenue (net) from sale of goods, products, works, services (minus a value added tax, excises and similar obligatory payments)	010	1 464 786	1 762 438	2 120 574
Production cost of the sold goods, products, works, services	020	(1 001 211)	(1 279 873)	(1 647 783)
Gross profit	029	463 575	482 565	472 791
Commercial expenses	030	()	()	(27 385)
Administrative expenses	040	(72 700)	(106 026)	(154 629)
Profit (loss) from sales	050	390 875	376 539	290 777
Other incomes and losses				
Interest receivable	060	5	1	462
Interest payable	070	(65 197)	(49 233)	(62 109)
Participation capital	080	7	6	9
Other incomes	090	145 648	142 590	139 654
Other expenses	100	(386 218)	(397 050)	(281 789)
Profit (loss) before taxation	140	85 120	72 853	87 007
Deferred tax assets	141	9 519	8 576	7 704
Deferred tax liabilities	142	2 348	5 268	18 548
Current income tax	150	(42 560)	(37 664)	(35 494)
Net profit (loss) of the reporting period	190	49 731	38 497	40 669

Balance sheet report KalugaTransMash JSC

Assets	code of the indicator	on 01.01.2014	on 01.01.2015	on 01.01.2016
1	2	3	4	5
I. FIXED ASSETS				
Nominal assets	110	600	606	682
Fixed assets	120	83157	92305	102759
Construction-in-progress	130	31424	25630	14030
Income yielding investments into tangible assets	135			
Long-term financial investments	140	11299	11499	11529
Deferred tax assets	145			
Other non-current assets	150			
Total under section I	190	126480	130040	129000
II. CURRENT ASSETS				
Stocks	210	122019	108249	134305
Including:				
Raw materials, Expendables and other analogue objects of value	211	31436	3716	3150
Animals in farming and fattening	212			
Expenses for in-process inventory	213	1172	1560	2932
Finished products and goods for resale	214	86953	98653	120593
Shipped goods	215			
Expenses of future periods	216	210	280	516
Other stocks and expenses	217	2248	4040	7114
Value added tax on acquired assets	220	7256	828	750
Receivables (payments, waiting to be settled in more than 12 months after reporting date)	230	180	222	664
Including buyers and customers	231			
receivables (payments, waiting to be settled within 12 months after reporting date)	240	61813	60489	64973
Including buyers and customers	241	48386	50396	50500
Short-term financial investments	250	2648	2384	284
Monetary funds	260	7252	7478	5572
Other current assets	270			
Total under section II	290	201168	179650	206548
BALANCE	300	318669	322619	335548

Liabilities	code of the indicator	on 01.01.2014	on 01.01.2015	on 01.01.2016
1	2	3	4	5
III. CAPITAL AND STOCKS				
Ownership capital	410	64036	64536	65468
Shares repurchased	411	()	()	()
Added capital	420	23420	23804	24080
Capital reserves	430	3679	4059	4103
Including:				
Stocks, formed in accordance with legislation	431			
Stocks, formed in accordance with constitutive documents	432	3679	4059	4103
Undistributed profit (uncovered losses)	470	-	-	3026
Total under section III	490	198431	199901	204247
IV. LONG-TERM LIABILITIES				
Loans and credits	510	8350	7294	6856
Deferred tax liabilities	515			
Other long-term liabilities	520			
Total under section IV	590	8350	7294	7075
V. SHORT-TERM LIABILITIES				
Loans and credits	610	88300	70624	47930
Payables	620	25967	25361	69059
Including:				
Suppliers and contractors	621	17599	15549	47477
Payables to employees	622	3240	3812	7022
Payables to state non-budgetary associations	623	1550	1804	4870
Taxes and charges payable	624	1100	1276	5454
Other payables	625	2478	2920	4236
Payables to participants (founders) under profit payments	630			
Profits of future periods	640	4028	3818	1916
Stocks of future expenses	650			
Other short-term liabilities	660	2572	2692	5540
Total under section V	690	120867	102495	124445
BALANCE	700	327648	309690	335548

Profit and loss statement KalugaTransMash JSC 2013-2015

Indicator		2013	2014	2015
description	code			
1	2	3	4	5
Normal income and expenses				
Revenue (net) from sale of goods, products, works, services (minus a value added tax, excises and similar obligatory payments)	010	91 656	99 017	106 969
Production cost of the sold goods, products, works, services	020	(70 665)	(70 203)	(69 744)
Gross profit	029	20 991	28 814	37 225
Commercial expenses	030	(445)	(594)	(5 562)
Administrative expenses	040	(156)	(198)	(3 102)
Profit (loss) from sales	050	20 390	28 022	28 561
Other incomes and losses				
Interest receivable	060	4 312	4 654	1 610
Interest payable	070	(5 195)	(4 188)	(3 102)
Participation capital	080	2 050	1 064	4 814
Other incomes	090	480	600	749
Other expenses	100	(2 784)	(3 584)	(11 344)
Profit (loss) before taxation	140	19 253	25 348	22 250
Deferred tax assets	141			
Deferred tax liabilities	142			
Current income tax	150	(6 738)	(8 872)	(7 788)
Net profit (loss) of the reporting period	190	12 515	16 476	14 472