

State Enterprises' Financial Stability Coefficients

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Received: March 11, 2015 Accepted: March 30, 2015 Online Published: May 22, 2015

doi:10.5539/res.v7n9p18

URL: <http://dx.doi.org/10.5539/res.v7n9p18>

Abstract

Currently national authors suggest using foreign models for determination of actual financial stability of a potential partner. However, it's unfeasible within Russian market due the fact that these models are based on statistical data of foreign organizations. The paper deals with the problem of scientific-methodic recommendations elaboration concerning improving financial stability of state enterprises based on the improvement of current asset management and development of measures for their application. Study object is state-owned prosthetic and orthopedic enterprises of the city of Moscow.

The role and significance of prosthetic and orthopedic enterprises aren't so much in their scale—they're relatively small—as in the critical importance of their social dimension. Sustainable management of current assets will allow improving financial standing of enterprises under study and create background for stable maintaining of simple and expanded reproduction. Research findings are detected dependence of current assets influence on financial stability of prosthetic and orthopedic enterprises. Recommended values of financial state indexes of state enterprises under study are calculated using economic and mathematical methods.

Keywords: financial stability, current assets, financial stability coefficients, recommended values

1. Introduction

1.1 Introduce the Problem

According to the conception of social and economic development of the RF for the period to 2020, one of priority long-term strands of social policy is "...rehabilitation and social integration of the disabled including development of infrastructure of rehabilitation centers that provide complex rehabilitation of the disabled and come-back to full life in society, organization of industry for producing state-of-the-art technical aids of rehabilitations; upgrading material and technical base of medical and social assessment institutions, rehabilitation institutions, and prosthetic and orthopedic enterprises" (James, Sheremet, & Negashev, 2010).

Given this, prosthetic and orthopedic enterprises have a problem concerning annual qualitative service of the disabled with rehabilitation equipment. Thus, by 2020 60% of disabled children shall be given rehabilitation services in specialized facilities for special needs children. Today according to World Health Organization the number of disabled adults in the RF is 13.2 mln people. Annually 1 mln people become disabled, consequently, the number of disabled adults in the RF will be 15.3-15.5 mln people by 2015 (Schinasi, 2002; Sheremet & Negashev, 2010).

Nowadays the major part of prosthetic and orthopedic enterprises in Russia operates as federal state unitary enterprises and institutions. However, as a result of the Federal law "Concerning Privatization of State and Municipal Property" adoption as of 11.07.2011 prosthetic and orthopedic enterprises fall within privatization in the form of joint-stock companies or limited liability companies. Currently the enterprises participate in tenders, thereby getting state contracts on servicing the disabled, but after the procedure of privatization they'll lose state support that will result in reduction of the number of disabled persons serviced at the expense of state and giving free rein to solve the problem of financial activity self-sufficiency (Evstigneev et al., 2011; Sheremet & Saifulin, 2008). Assessment of financial stability is carried out by internal and external users immediately interested in

enterprises' successful operation for the purpose of its state diagnostics and intelligent management decisions making. Operation features of prosthetic and orthopedic enterprises became the base for development of scientific-methods recommendations for its improvement.

1.2 Significance of the Problem

Slow development of market and its economic entities causes the need for enhancement of current estimation procedures of financial stability for its increase and strengthening. Therefore, when improving financial stability of prosthetic and orthopedic enterprises, it's necessary to presume that prosthetic and orthopedic type of economic activity should switch to high-technology business, developed in competitive market environment, based on optimization of enterprise's assets and enhancement of price mechanism (Cebotari, 2008; Volodin, 2006; Gorfinkel, 2013).

1.3 Description of Studies in the Area under Consideration

Currently individual questions of financial stability assessment aren't studied in detail in the light of specific features of modern Russian reality and lack of interrelation between theoretical evidences and strategy of application in enterprises' practice. Particularly, when solving an issue of financial standing state, as a rule there's underestimation of its dynamics that is also caused by the lack of uniform estimation procedure and stabilization of enterprise's solvency. Since stability is largely related to the problem of prosthetic and orthopedic enterprises' current assets management and application, it's necessary to improve complex and comprehensive management system within the framework of financially stable conception of development of the enterprise.

Current assets management system of prosthetic and orthopedic enterprises is shown in Fig. 1. One of main features of prosthetic and orthopedic enterprises' current assets management is the need for concurrent meeting the following requirements: quantity and quality conformity of current assets, in the form of supply, to product consumers' needs, current assets management policy conformity to enterprise's strategic and tactical functions (Organization financial standing analysis guidelines, approved by the order of ACAJ of the RF; Decree of the Government of the Russian Federation "Concerning disposal of prosthetic and orthopedic appliances"; Decree of the Government of the Russian Federation No. 240 "Concerning the procedure of providing the disabled with rehabilitation equipment and individuals among veteran with prostheses (except dental prostheses), prosthetic and orthopaedic appliances"; Savitskaya, 2009).

Specified features are taken into account when developing characteristic aspects of current assets management in the form of objective function and constraint system. The result of this problem solution can be significant, if the enterprise is absolutely free to choose types and amount of manufactured products. It's not implemented in practice, since the enterprise procures a public order for main product range, and other realization takes place involving free choice of product range.

1.4 Main Hypothesis and Its Conformity to the Study Problem

So far various approaches to financial stability characteristics are formed. They consider financial stability—external and internal risk coverage, enterprise's financial condition, capital structure (Conception of long-term social and economic development of the Russian Federation for the period until 2020; Lapusta, 2008).

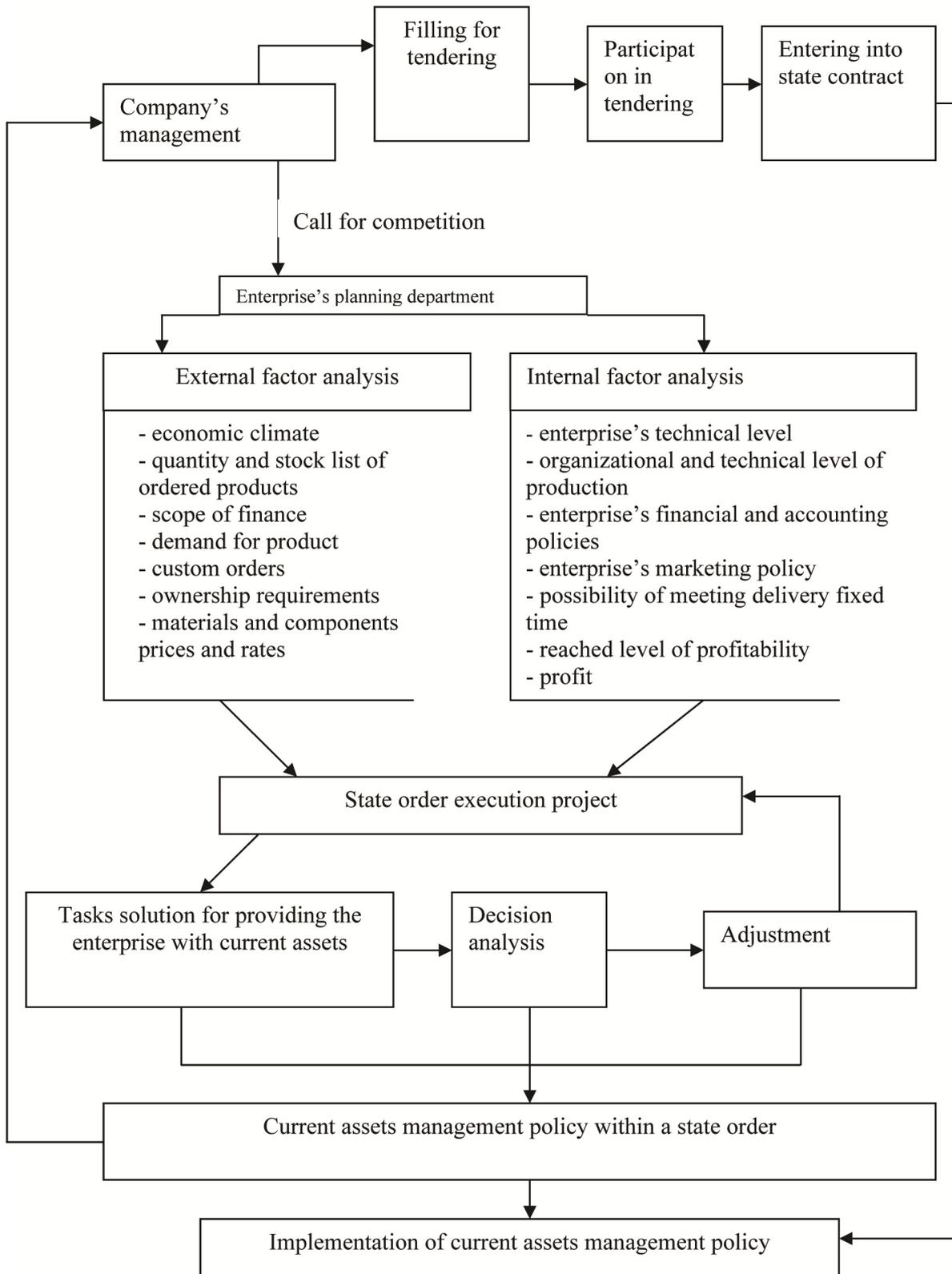


Figure 1. Prosthetic and orthopedic enterprise's current assets management system

Today financial stability is identified with such indicators as solvency, liquidity, lending, capacity, profitability, etc. In the course of economic literature analysis it was found that liquidity and solvency are external features of financial soundness, but herewith financial stability should meet strategic requirements of enterprise's

development as distinct from liquidity and solvency, that are of short-term nature (Plaskova, 2010). Thus, financial stability comes down to generation of money flows consistent with enterprise's financial commitments. Financial stability as capital structure assessment comes down to appraisal of equity capital and its structure for the purpose of subsequent evaluation of net assets subject to IFRS (Grachev, 2010; Lyubushin, 2010). Correlation and regression models of factor interrelations are widely used for quantitative analysis of financial stability indicators. Since financial stability is expressed by financial indicators, it should be represented as a complex combination of financial management with due attention to procured resources balance. In this context financial stability management is goal-oriented information influence of one system on the other for the purpose of change in that system behavior in the intended direction in order to achieve set objective under least costs (Figure 2).

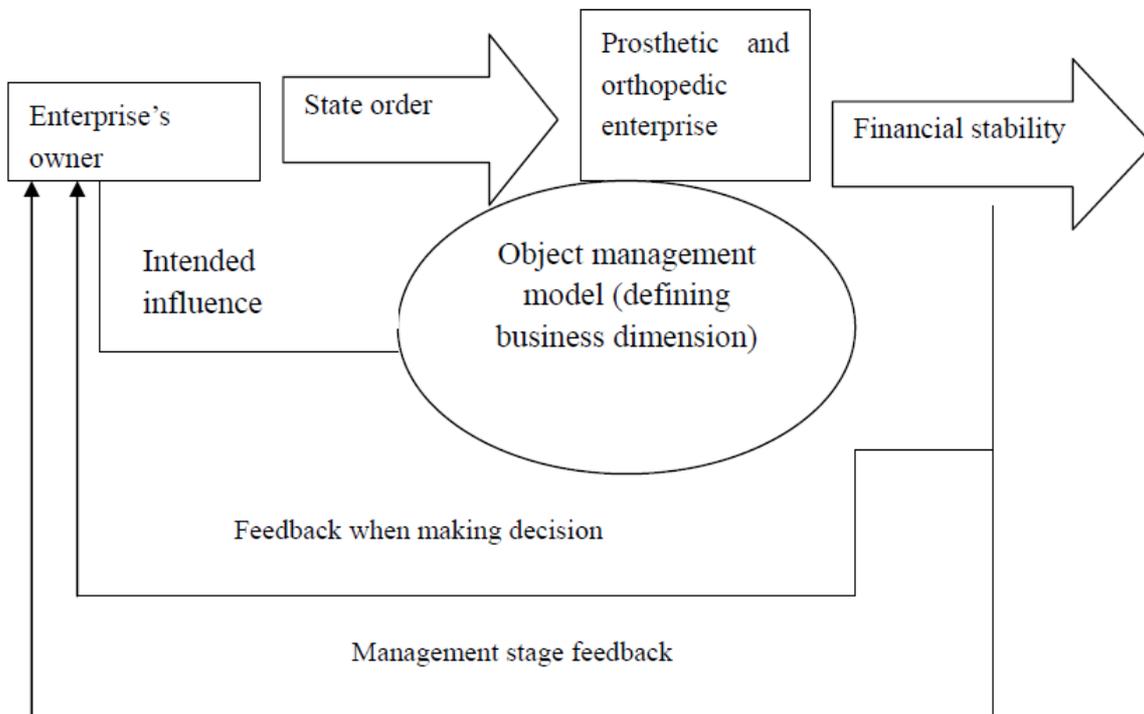


Figure 2. Prosthetic and orthopedic enterprise's financial stability management system

Therefore, scientific hypothesis of this study is elaboration of recommendations concerning improving financial stability of prosthetic and orthopedic enterprises based on enhancement of current asset management in order to make effective management decisions (Sarlin & Peltonen, 2011; Bepalov & Glazunov, 2011; Gorbunova & Kachkova, 2011).

2. Methods

2.1 Definition of Research Subject

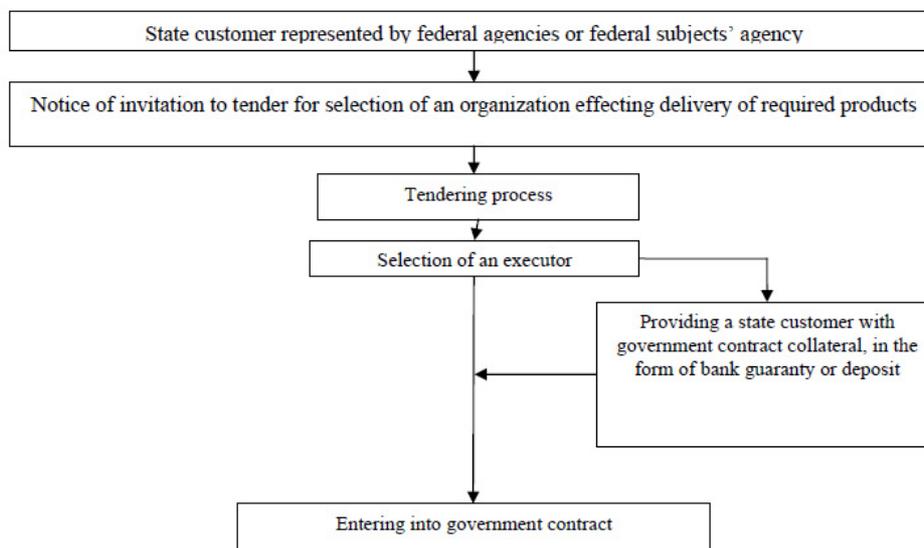


Figure 3. Sequence of government bidding for placing order for rehabilitation equipment supply

To the present day operation of prosthetic and orthopedic enterprises in Russia involves government orders that should be considered within the context of financial stability management. There's a procedure for placing government order for supply of rehabilitation equipment and tendering process. The mechanism of government bidding is shown in Figure 3.

Forecasting of demand on these products is difficult, and scarcity of budget financing negatively affects stock list and volume of ordered products. Production program of prosthetic and orthopedic enterprises is 70% backed within the framework of government order. If enterprises fail to secure government order, enterprises face a problem of further operation, for example, production conversion for the purpose of capacity utilization, and also possible bankruptcy. Thus, prosthetic and orthopedic enterprises operation peculiarities impose some conditions on retention of their financial stability.

Financial stability is one of most important characteristics of financial state of prosthetic and orthopedic enterprises. This category should be studied based on prosthetic and orthopedic enterprises operation peculiarities subject to ensuring solvency that will allow defining their development plan based on the system of finances and business operations self-improvement and volume of rehabilitation equipment government orders.

Among a wide variety of methods relating to current assets management none of them addresses specific features of prosthetic and orthopedic enterprises operation. This gap gave an opportunity to create prosthetic and orthopedic enterprises' current assets management system, which regards not only market demand but volume of government orders limited in budget financing (Morozova & Sahabutdinova, 2013; Gorbunova, 2011; Gorbunova, 2012).

Correlation and regression analysis should be given preference to estimate interrelation between current assets and financial stability. This analysis allows detecting quantitative dependencies, which define degree of impact of different items of current assets on prosthetic and orthopedic enterprises' financial stability.

2.2 Definition of Major Characteristics

In order to improve socioeconomic and financial indicators prosthetic and orthopedic enterprises should efficiently manage their financial resources, including current assets, independently of objective in view—development of new outlets, maintaining competitive performance or improving financial stability. Any of these goals can be achieved given that enterprise's owner understands what financing sources will be employed to carry out its operation. Adopted law on state property privatization is designed to decrease the number of unitary enterprises. However, the role of these enterprises in national economy with regard to federal and regional issues solution remains significant that predetermines need to study the issue of improving financial stability. However, the issues of interrelation of financial stability and current asset management of prosthetic and orthopedic enterprises that operate carrying out government orders are understudied in economical literature.

There's foreign practice when state is an enterprise or corporation's owner, and this enterprise operates based on government order. As a rule, state is an owner of enterprises where state's participation allows reallocating financial resources according to a plan, level the potential and level of development of vital socially important economic activities.

It should be noted that government management of economy shouldn't negatively affect financial stability of prosthetic and orthopedic enterprises and all the more shouldn't lead to decrease in production and business profits. Presence of the state in enterprise's productive-economic processes should make its production activity much profitable since it's inexpedient without state's participation in market environment. As a rule, it's achieved by means of public procurements, placing government orders, fixing contract import prices and duties, etc. Public procurements are goal-oriented, they are necessary for meeting governmental needs, its activity supporting and performing state functions.

Governmental needs are a basis of placing government order, which after placement fixes contract prices and meets assumed obligations represented by the state. The notion of government order as an economic unit is a specific need of the state in some or other goods, works, services meeting certain qualitative and quantitative characteristics for the purpose of performing state's functions. At the stage of placing government order, customer represented by the state should select future executor of government order for goods for state needs. The result of government order placement is conclusion of government contract with specific prosthetic and orthopedic enterprise by means of open and closed competitive bidding (Figure 3).

The period of overcoming crisis in Russia conditions solutions of new problems, one of them is optimization of current activity selection. State enterprises should define areas of current activities to carry out the most effective reorganization of assets and liabilities management policy for this activity. Financially stable state enterprises (in respect to current situation within the country) should also hold a complex of organizational-technical measures regarding its operation management that would provide the opportunity of improving main indicators of financial soundness.

2.3 Selection of Research Method

Over recent years Abryutina M. S. and Grachev A. V. have examined financial stability problems. Approaches they developed and offered differ from traditional ways of financial stability measurement. Enterprise's capital structure and solvency are considered separately, it allows developing priority of asset coverage with equity capital that will lead to searching for and making alternative decisions.

In the course of existing works systematization it was found that individual issues of financial condition assessment lack elaborate study in the light of specific features of modern Russian reality and lack of interrelation between theoretical evidences and strategy of application in enterprises' practice (Sarlin & Peltonen, 2011; Bespalov & Glazunov, 2011; Gorbunova & Kachkova, 2011).

Particularly, when solving an issue of financial standing state, as a rule, there's underestimation of its dynamics that is also caused by the lack of uniform estimation procedure and stabilization of enterprise's solvency. Since stability is largely related to the problem of prosthetic and orthopedic enterprises' current assets management and application, it's necessary to improve complex and comprehensive management system within the framework of financially stable conception of development of the enterprise (Okrainets, 2006).

The research base is founded on general scientific methods: logical system complex approach; statistical method of data processing, the unity of the historical and the logical, the inductive and the deductive; analysis and synthesis. Methods of financial management, statistical, system-economical and logical analysis, economical-statistical modeling, and methods of data processing using Microsoft Excel 2010 electronic worksheet were also applied in the course of the study.

3. Results

3.1 Set of Analyzed Data

Factors affecting the change in prosthetic and orthopedic enterprises' provision with current assets are detected based on correlation and regression analysis. Correlation and regression analysis allowed among a set of observable features detecting factors, which explain relation between these features and financial stability. Degree of dependency between variables was set in the form of pair correlation, which became the basis for constructing the matrix of prosthetic and orthopedic enterprises' financial state coefficients factor loadings.

Factors affecting profit-and-lost indicator are detected based on the factor loadings matrix. Prior to matrix construction all variables were checked for multicollinearity by means of carrying out correlation analysis and

pair correlation coefficients with respect to profit-and-lost indicator were calculated. Degree of impact and dynamics of individual factor loadings affecting financial stability were defined based on the methods of correlation and regression analysis. Obtained high values of determination coefficient R^2 indicate reliability of detected factor loadings affecting prosthetic and orthopedic enterprise's financial stability (Sarlin & Peltonen, 2011; Bespalov & Glazunov, 2011; Gorbunova & Kachkova, 2011).

Set values of the matrix of factor loadings with values <-0.7 and >0.7 are most significant for prosthetic and orthopedic enterprise for the purpose of current asset management (Table 1). Therefore, for improving prosthetic and orthopedic enterprises' financial stability, it's necessary to manage items of current assets that are most significant for these enterprises.

3.2 Statistics and Data Analysis

Based on correlation analysis, factor loadings with value <-0.7 and >0.7 (Table 1) were grouped and their significance was proved by means of analysis of variance.

Table 1. Dynamics of factor loadings of financial coefficients of prosthetic and orthopedic enterprises of Moscow, 2006-2014

Features (financial coefficient)	Designation	2006	2007	2008	2009	2010	2011	2012	2013	2014	2006-2014
Working capital coefficient mean value		0.9156	0.8488	0.8606	0.7772	0.7576	0.7857	0.8063	0.7989	0.7774	0.8131
Working capital coefficient	X_1	0.703	0.504	0.786	0.528	-0.326	0.977	0.599	0.443	0.538	0.971
Financial sustainability ratio	X_2	0.702	0.527	0.844	0.529	-0.017	0.971	0.659	0.567	0.547	0.960
Leverage coefficient	X_3	-0.695	-0.528	-0.837	-0.534	0.014	-0.971	-0.666	-0.574	-0.535	-0.953
Flexibility coefficient	X_4	-0.639	-0.252	-0.966	0.038	-0.955	0.799	-0.514	-0.614	-0.990	-0.756
Absolute liquidity ratio	X_5	0.842	0.736	-0.038	0.324	-0.532	0.927	0.570	0.196	-1.000	0.527
Liquidity ratio	X_6	0.836	0.392	0.968	-0.572	-0.745	0.542	0.597	-0.447	-0.158	0.872
Coverage ratio	X_7	0.892	0.457	0.812	0.428	-0.098	0.917	0.318	0.424	0.647	0.904
Coefficient of actual cost of property of production use	X_8	0.111	0.052	-0.752	0.987	0.563	0.778	-0.485	0.500	0.944	-0.063
Bankruptcy prediction coefficient	X_9	0.601	0.998	-0.538	0.612	-0.142	0.938	0.540	0.675	-0.984	-0.508
Accounts payable & receivable coefficient	X_{10}	-0.416	0.193	-0.984	0.720	-0.117	0.954	0.600	0.426	-0.604	-0.584
Profit margin ration	X_{11}	-0.835	-0.099	0.361	-0.638	-0.758	0.357	0.120	-0.683	0.174	0.438
Share of	X_{12}	-0.006	-0.026	-0.776	0.964	0.574	0.787	-0.519	0.485	0.950	-0.380

inventory in current assets											
Time of inventory turnover in days	X_{13}	-0.336	0.080	-0.168	0.537	0.907	0.463	-0.144	0.652	0.996	-0.153
Non-current assets profit ratio	X_{14}	0.814	0.499	-0.925	-0.168	-0.556	0.904	0.608	-0.192	-0.910	-0.238
Fixed assets return ratio	X_{15}	0.815	0.501	-0.924	-0.225	-0.528	0.896	0.607	-0.204	-0.907	0.190
Assets turnover ratio	X_{16}	0.867	0.459	-0.934	-0.032	-0.637	0.998	0.457	-0.162	-0.952	-0.358
Mobile means turnover ratio	X_{17}	-0.349	0.780	0.981	0.235	0.949	-0.248	0.697	0.593	1.000	0.852
Stocks turnover ratio	X_{18}	0.892	0.523	-0.922	-0.060	-0.615	0.998	0.503	-0.105	-0.951	0.382
Finished goods turnover ratio	X_{19}	0.901	0.552	-0.924	-0.040	-0.599	0.998	0.519	-0.081	-0.934	0.370
Receivable turnover ratio	X_{20}	0.871	0.493	-0.850	0.176	-0.379	0.972	0.599	0.249	-0.912	-0.690
Accounts payable turnover ratio	X_{21}	0.957	0.604	-0.619	0.097	-0.569	0.995	0.555	-0.139	-0.985	0.917
Coefficient return on assets of non-current assets	X_{22}	0.865	0.457	-0.953	-0.021	-0.634	0.999	0.456	-0.122	-0.967	-0.623
Equity turnover ratio	X_{23}	0.869	0.443	-0.945	-0.077	-0.637	0.999	0.455	-0.169	-0.970	-0.548

Values of explaining variables of multifactorial linear regression, analysis of variance and regression statistics are given in Table 2.

Table 2. Correlation and regression analysis results of factor loadings of financial coefficients of prosthetic and orthopedic enterprises of Moscow, 2006-2014

<i>Financial coefficients group</i>	<i>Regression statistics</i>	<i>Analysis of variance</i>		<i>Variable</i>	<i>Coefficients</i>	<i>P-value</i>	
I	Multiple R	0.9931	<i>F</i>	<i>Significance F</i>	K_{COC} -cross	0.8101	0.007178
	R-square	0.9862	42.78	0.005454	X_2	-0.8510	0.020747
	Standardized R—square	0.9631			X_{20}	0.0043	0.116346
	Standard error	0.0114			X_6	-0.0067	0.155516
					X_5	-0.0032	0.673605
				X_3	0.1864	0.356229	
<i>Financial coefficients group</i>	<i>Regression statistics</i>	<i>Analysis of variance</i>		<i>Variable</i>	<i>Coefficients</i>	<i>P-value</i>	
VIII	Multiple R		<i>F</i>	<i>Significance F</i>	K_{PII} -cross		
		0.9830				-0.0203	0.059244
	R-square	0.9663	86.10	0.0000381	X_6	0.0039	0.005465

Standardized		X_{14}		
R—square	0.9551		0.5009	0.000069
Standard error	0.0103			

Data of analysis of variance given in Table 2 evaluate overall quality of obtained models: its reliability according to Fisher’s ratio test (F) should be less than 0.05 (Significance F table row) (diagram 1 and 2). Practical relevance of obtained multiple regression equations is estimated by means of multiple correlation and determination coefficients. Thus, only one variable from found groups, in group I, with relations of such factors as $X_2, X_{20}, X_6, X_5, X_3$ (Table 1-2, diagram 1) has $P\text{-value} < 0.05$, therefore it affects availability of working capital. $P\text{-value}$ of other variables is > 0.05 , that’s why they do not affect profit-and-lost indicator or their impact slims to none.

$$y = -0.8510x_2 + 0.8101 \quad R^2 = 0.9862 \tag{1}$$

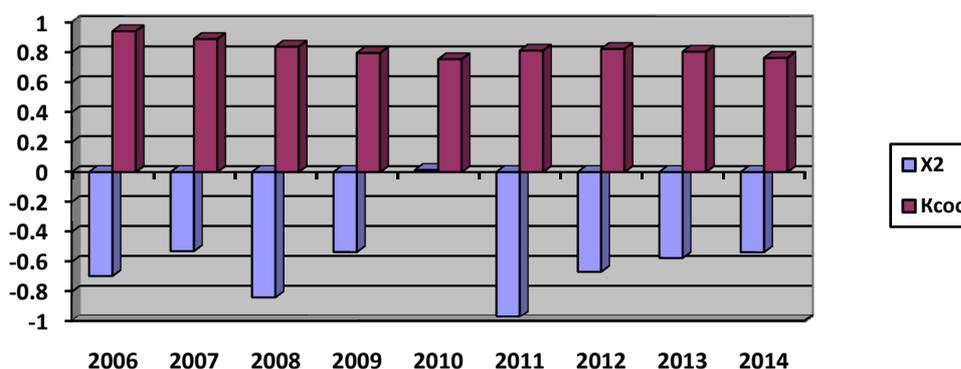


Diagram 1. Influence of leverage coefficient on financial situation of prosthetic orthopedic enterprises of Moscow (group I)

$$y = 0.0039x_6 + 0.5009x_{14} - 0.0203 \quad R^2 = 0.9663 \tag{2}$$

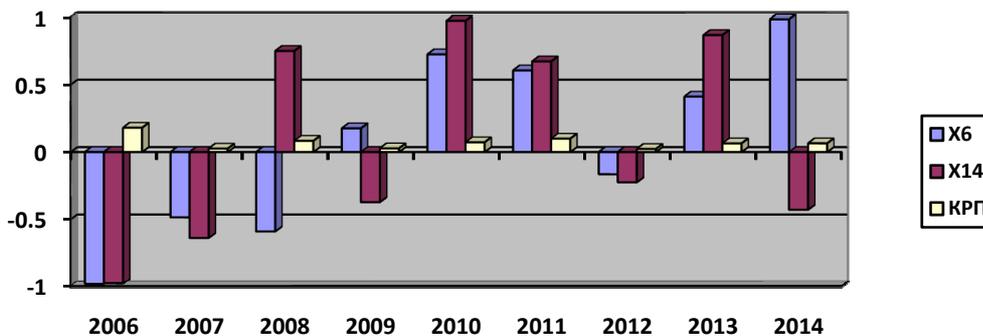


Diagram 2. Influence of coverage and fixed assets return ratios on financial situation of prosthetic orthopedic enterprises of Moscow (group VIII)

Practical relevance of resultant models is proved by correlation ratio according to determination coefficient, applying the Chaddock scale. Determination coefficient (R^2) has values 0.9663 and 0.9862 (Table 2). It is evidence that indicators included in equations predetermine change in working capital availability and profit

margin ratios amounting to 96.63-98.62%, others factors accounts for 3.37-1.38%, therefore the relation between factors is strong. Findings prove feasibility of regression equation, living up to obtained statistical models use for practical use for the purpose of detecting items of current assets that have a profound effect on financial stability of prosthetic and orthopedic enterprises.

3.3 Additional Analysis

Evaluation of financial position is related to quantitative evaluation of financial indicators, values of which are the cue for management decision making. Within the framework of this evaluation actual values of prosthetic and orthopedic enterprises' financial stability coefficients are compared to optimal values. However, the analysis of national and foreign studies revealed that most optimal values don't reflect specific nature of prosthetic and orthopedic enterprises.

For the purpose of development of financial coefficients recommended values system that would characterize prosthetic and orthopedic enterprises in the best way, the structure of assets and liabilities was defined. The structure of assets and liabilities, fully reflecting characteristics of studied state enterprises, is defined based on average weighted evaluation of assets and liabilities of prosthetic and orthopedic enterprises. The product of enterprise's total assets by profit margin of that enterprise was used as a variant of averaged feature (General theory of statistics: statistical methodology in studying business activities, 2009).

Thus, weighted average of balance items, determining recommended values of corresponding financial stability coefficients, is calculated according to the formula 1:

$$B = \frac{\sum_{j=1}^n b_{ij} * A_j * K_{PII_j}}{\sum_{j=1}^n A_j * K_{PII_j}} \quad (3)$$

Where

B —weighted average of the i^{th} item of balance sheet;

$I = \overline{1; m}$, m —the number of examined items of balance sheet;

b_{ij} —value the i^{th} item of the j^{th} enterprise balance;

$J = \overline{1; n}$, n —the number of examined enterprises;

A_j —volume of enterprise's assets;

$K_{p.n.j}$ —profit margin ratio.

Since one of prosthetic and orthopedic enterprises operation tasks is improving financial stability, estimated recommended values of financial coefficients are designed to guide all prosthetic and orthopedic enterprises. Consequently, when constructing prosthetic and orthopedic enterprises' average weighted structure of asset and liabilities it's necessary to use data of enterprises, finances and business operations of which are considered to be stable. In other words, only enterprises with $K_{PII} > 0$ should be taken into account to construct prosthetic and orthopedic enterprises' average weighted structure of asset and liabilities.

The study is carried out based on prosthetic and orthopedic enterprises' materials, data for 2006-2014 are used for average weighted structure calculation. (Table 3)

Table 3. Average weighted structure of prosthetic and orthopedic enterprises' assets and liabilities, Moscow, 2006-2014

	Balance item	Share to total balance, %
1	Non-current assets	17.97
2	Current asset, including	82.03
2.1	Inventory	47.23
2.2	Raw and other materials	11.60
2.3	In-process inventory	0.46

2.4	End products	35.18
2.5	VAT	0.98
2.6	Funds	17.10
2.7	Accounts receivable less than 1 year	8.88
2.8	Long-term receivables	6.19
3	Capital and reserves	84.26
4	Prepaid incomes	2.29
5	Reserves for future expenses	1.51
6	Long-term liabilities	2.59
7	Accounts payable	9.39

The structure of prosthetic and orthopedic enterprises' asset and liabilities reflects specific nature of their operation and presents a basis for financial coefficients recommended values calculation.

3.3.1 Statistics and Data Analysis

Offered methodic set of instruments for determining quantitative dependence of current assets influence on prosthetic and orthopedic enterprises' financial stability made it possible to calculate the recommended values of coefficients that characterize financial stability (Table 4).

Table 4. Financial stability coefficients of prosthetic and orthopedic enterprises

Coefficients	Optimal values	Recommended values
Financing coefficient	≥ 0.7 , wholesale 1.5	≥ 6.30
Financial sustainability (financial independence) coefficient	≥ 0.5 (0.4-0.6)	≥ 0.87
Capitalization coefficient	≤ 1	≤ 0.16
Financial dependence coefficient	≤ 0.5	≤ 0.14
Coefficient of financial independence of capitalized sources	> 0.6	> 0.97
Financial stability coefficient	≥ 0.6	≥ 0.89
Leverage coefficient	≤ 1.5	≤ 0.03
Equity flexibility coefficient	0.2-0.5	≤ 0.82
Fixed assets coefficient		≤ 0.18
Current solvency coefficient	≤ 3	≤ 0.92
Coefficient of current asset provision with equity capital	≥ 0.1	≥ 0.87
Coefficient of inventory provision with working capital	0.6-0.8	≤ 1.51
Coefficient of working capital in total assets		≥ 0.71
Investing coefficient		≤ 4.82

Data represented in Table 4 and diagram 3, 4 give evidence that values of financial stability coefficients are generally within calculated recommended values and slightly differ from optimal values. It is evident from Diagram 3 that recommended value of current solvency coefficient is lower than its optimal value several times. This goes to prove that coefficients values are designed for organizations in the form of joint-stock company or limited liability partnership without regard to characteristics of organizations' operation and assets and liabilities state.

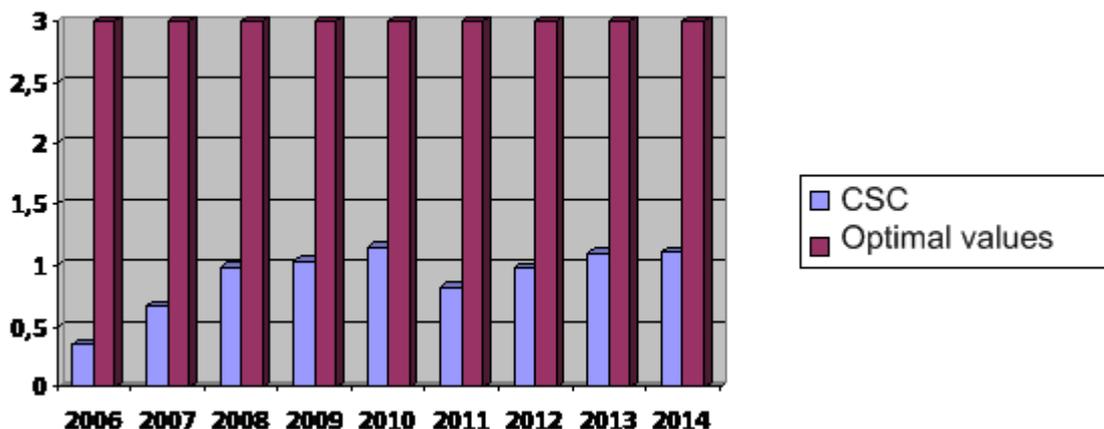


Diagram 3. Values of current solvency coefficient of prosthetic and orthopedics enterprise of Moscow, 2006-2014

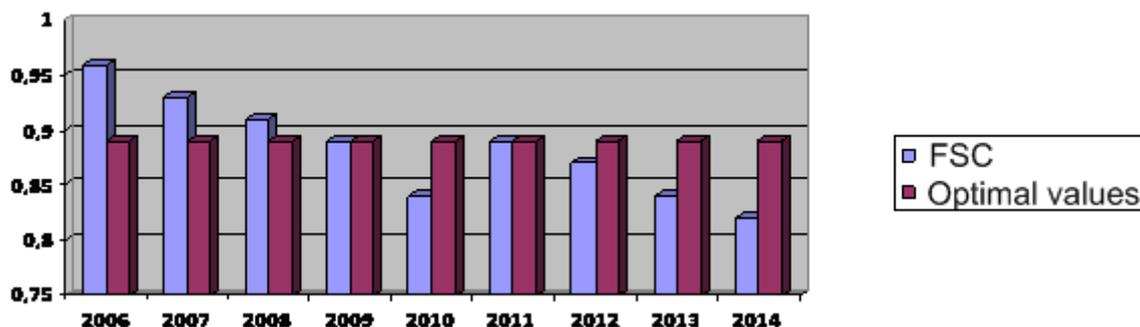


Diagram 4. Values of financial stability coefficient of prosthetic and orthopedic enterprises of Moscow, 2006-2014

Since the enterprises provide themselves with financial resources executing government orders, average monthly revenue for prosthetic and orthopedic enterprises is limited by a government order and cannot be greater than short-term obligations in three times as it's set by the optimal value.

4. Discussion and Conclusions

Assessment of financial stability is carried out by internal and external users immediately interested in enterprises' successful operation for the purpose of its state diagnostics and intelligent management decisions making. Operation features of prosthetic and orthopedic enterprises became the base for development of scientific-methods recommendations for its improvement.

Financial stability is one of most important characteristics of financial state of prosthetic and orthopedic enterprises, since their operation is 70% predetermined by government order limited in budget financing. Therefore, this category should be studied based on prosthetic and orthopedic enterprises' operation peculiarities subject to ensuring solvency that will allow defining their development plan based on the system of finances and business operations self-improvement and volume of rehabilitation equipment government orders.

Among a wide variety of methods relating to current assets management none of them addresses specific features of prosthetic and orthopedic enterprises operation. This gap gave an opportunity to create prosthetic and orthopedic enterprises' current assets management system, which regards not only market demand but volume of government orders limited in budget financing.

Correlation and regression analysis should be given preference to estimate interrelation between current assets and financial stability. This analysis allows detecting quantitative dependencies, which define degree of impact

of different items of current assets on prosthetic and orthopedic enterprises' financial stability.

The ratio analysis of current assets efficient use revealed that most optimal values don't reflect specific nature of prosthetic and orthopedic enterprises. Obtained results afforded ground for creating methodical set of instruments for developing financial coefficients recommended value, estimating financial state with respect to prosthetic and orthopedic enterprises' operation peculiarities.

Sequence of the use of correlation, regression and financial analysis allowed the author to reveal and formulate methodic set of instruments for determination of quantitative dependence between current assets and financial stability. The degree of influence is constructed in the form of feature matrix of pair correlation coefficients. Detected interrelations in the form of matrixes allowed determining significant items of current assets that influence financial stability.

In the framework of coefficient analysis in the alternative of financial coefficients optimal values it's expedient to use recommended values of financial coefficients that directly reflect specific nature of prosthetic and orthopedic enterprises.

Recommended optimal (cross-industry) values not always adequately estimate financial state of an economic entity, since they disregard particularities of organization's operation. Performed settlements show that recommended optimal (cross-industry) and recommended values of prosthetic and orthopedic enterprises slightly differ in hundredths by a number of coefficients, others differ several times. Optimal (cross-industry) values aren't set for all coefficients of financial situation. Offered methods eliminate this lack, and allow calculating any necessary financial coefficient.

For the purpose of enhancing theoretical bases and developing methodological recommendations for financial stability improvement based on current asset management it's recommended.

To apply developed values of financial coefficients for financial stability analysis, calculated based on data of accounting financial statements of prosthetic and orthopedic enterprises and reflecting specific nature of these enterprises. This will help to get most objective picture of financial situation stability and give the opportunity to make most effective management decisions in accordance with analysis findings.

To use developed current assets management algorithm, which has a constraint system, consisting of recommended values of financial coefficients and current assets items meeting assets and liabilities structure and state-run enterprises' obligations.

To maintain current financial standing comparing actual values by the following key coefficients: financial stability, current solvency and bankruptcy probability with recommended values for the purpose of developing measures to maintain current solvency. State-run enterprises' solvency is an external indicator of financial stability.

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