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### TARGET ORIENTATION IN MACHINE-BUILDING ENTERPRISES SOLVENCY INCREASE SUBJECT TO ANTI-CRISIS PROGRAMS EFFICIENCY IMPLEMENTATION

The article presents an anti-crisis program aimed at enterprise solvency increase. Along with theoretical grounding for the above program, empirical examples of the three Ukrainian machine-building enterprises are provided.

**Keywords:** anti-crisis program; solvency increase; owned assets; borrowed assets; circulating assets; machine-building enterprises.

### Ірина П. Косарєва

## ЦІЛЬОВА ОРІЄНТОВАНІСТЬ ПІДВИЩЕННЯ ПЛАТОСПРОМОЖНОСТІ МАШИНОБУДІВНИХ ПІДПРИЄМСТВ З УРАХУВАННЯМ ЕФЕКТИВНОСТІ ВПРОВАЛЖЕННЯ АНТИКРИЗОВИХ ПРОГРАМ

У статті запропоновано програму по виходу з кризи, що має цільову спрямованість на підвищення платоспроможності підприємства. Разом з теоретичним обґрунтуванням описано три приклади застосування такої програми на машинобудівних підприємствах України.

**Ключові слова:** програма виходу з кризи; підвищення платоспроможності; власні активи; позикові кошти; оборотні кошти; машинобудівні підприємства.

Рис. 1. Табл. 4. Літ. 12.

### Ирина П. Косарева

# ЦЕЛЕВАЯ НАПРАВЛЕННОСТЬ ПОВЫШЕНИЯ ПЛАТЕЖЕСПОСОБНОСТИ МАШИНОСТРОИТЕЛЬНЫХ ПРЕДПРИЯТИЙ С УЧЕТОМ ЭФФЕКТИВНОСТИ ВНЕДРЕНИЯ АНТИКРИЗИСНОЙ ПРОГРАММЫ

В статье предложена программа по выходу из кризиса с целевой направленностью на повышение платежеспособности предприятия. Вместе с теоретическим обоснованием предложенной программы описаны три примера ее применения на машиностроительных предприятиях Украины.

**Ключевые слова:** программа по выходу из кризиса; повышение платежеспособности; собственные активы; заемные средства; оборотные средства; машиностроительные предприятия.

**Problem statement.** Crisis management is a complex system which covers various processes and factors of influence at enterprises, including the machine-building ones: technical, economic, HR and financial. Evidently solvency provision is in the centre of enterprise management because it is solvency that enables maintaining organizational functioning and resiliency through purchasing new equipment, salary payments to staff, carrying out R&D etc.

That is why the issue of target orientation while increasing the solvency of machine-building enterprises is of vital importance and must include, inter alia, the efficiency of anti-crisis programs implementation. Dynamic development of market relations in Ukraine leads to the situation when one market segments get saturated,

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while new ones emerge, and thus, competition is getting even more tight, so that getting financial assets becomes more complicated, thus naturally reducing the paying capacity and solvency of enterprises.

Recent research and publications analysis. A range of issues related to fundamentals of competitiveness management and formation of anti-crisis programs in general has been covered by the research of the following economists: S. Buryi et al. (2006), I. Blank (2006), O. Butorina (2009), V. Ivanov (2009), M. Kolisnyk et al. (2007), L. Ligonenko (2001), Y. Nosova (2012), S. Onysko and M. Kits (2012), O. Pushkar et al. (2001), O. Raievnieva (2006), V. Vasylenko (2003) and some others.

Their works have become the grounds for further empirical research concerning target orientation in competitiveness increase at machine-building enterprises taking into account the efficiency of their anti-crisis programs implementation.

**Unresolved issues.** As of today there is no single strategy on increasing competitiveness of machine-building enterprises. Variety in concepts and approaches to solving this problem leads to various levels of efficiency from introduction of anti-crisis programs at enterprises. At the same time providing target orientation in competitiveness increase at machine-building enterprises taking into account the efficiency of anti-crisis programs implementation is an important factor of competitive advantages formation. The results of this research, therefore, can be used by machine-building enterprises management while adjusting their managerial decisions for higher efficiency.

The aim of the research is to analyze the issues related to provision of target orientation in increasing the competitiveness of machine-building enterprises taking into account the anti-crisis programs implementation efficiency.

**Key research results.** The system of target orientation on increasing the competitiveness of machine-building enterprises is based on constant overcoming of financial disbalances, and also on forecasting threats and crisis signs, analysis of its symptoms. Top priority is the optimization of financial flows and also the minimization of gap between the current and the necessary volume of financial resources needed for provision of maximum paying capacity and creating an efficient anti-crisis program on its basis (Figure 1).

Once we settle the three vectors of the anti-crisis program implementation — the management of borrowed, owned and circulating assets of machine-building enterprises, we can determine further details. In particular, the crisis prevention program for borrowed assets management is usually implemented in two major directions: management of short-term and long-term liabilities (Table 1).

To test determining the efficiency of anti-crisis programs in borrowed assets management of machine-building enterprises in the year 2014, for example, we took the data of the National Committee for Securities and Stock Market (www.nssmc.gov.ua). To calculate the efficiency we have used the notion of general and target solvency. General solvency of machine-building enterprises is defined as the ratio of the total liabilities under the borrowed assets to the total of own assets. While target solvency is determined by means of the efficiency criteria for the total solvency of a machine-building enterprise, regulated by the influence of financial stability of a machine-building enterprise.

The most efficient program for all machine-building enterprises in their management of borrowed assets is the program aimed at reducing the volumes of credit

indebtedness. Every 1% of credit indebtedness reduction leads to solvency growth by 0.56% for "NGMV-BUR", by 0.32% for "Dniprovazhmash" and by 0.60% for "Slovvazhmash". If the reduction of short-term liabilities occurs due to their transfer into long-term ones, than every 1% of this reduction would lead to lower growth of PS1: 0.10% – for "NGMV-BUR"; 0.11% – for "Dniprovazhmash" and 0.03% – for "Slovvazhmash". Therefore, such a program turns out to be rather inefficient for machine-building enterprises, because 1% reduction in short-term liabilities leads to only a minor increase in target orientation of solvency.

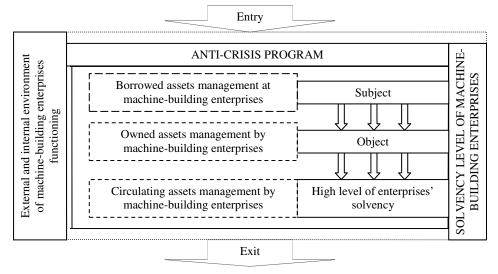


Figure 1. The system of anti-crisis program efficiency providing the target orientation in solvency increase by machine-building enterprises, author's development

Table 1. Efficiency of anti-crisis programs for borrowed assets management by machine-building enterprises, Ukraine, 2014, author's calculations

Anti-crisis programs	"NGMV-BUR"		"Dniprovazhmash"		"Slovvazhmash"	
	PS <sub>1</sub> , %	PS, %	PS <sub>1</sub> , %	PS, %	PS <sub>1</sub> , %	PS, %
Reducing the volumes of long-term liabilities	ı	ı	-	-	l	-
Reducing the volume of short-term liabilities:	+0.56	+0.17	+0.32	+0.21	+0.63	+0.31
By means of reducing the short-term credits from banks	ı	ı	-	-	ı	_
By means of reducing the volumes of indebtedness	+0.56	+0.17	+0.32	+0.21	+0.63	+0.31
By means of transfering liabilities from the short- into long-term ones	+0.27	+0.10	+0.13	+0.11	+0.22	+0.03

PS – enterprise solvency; PS<sub>1</sub> – enterprise target solvency.

Anti-crisis programs for own assets management are to be implemented in two directions: increasing the share of own assets as such and their restructuring (by means of selling or giving in a rent those assets which do not bring profit because they are not used) (Blank, 2006).

The most efficient for machine-building enterprises are those programs which allows them release additional sources by means of selling and/or giving in rent those fixed assets which are not used or are too expensive to be used (Table 2).

at machine-building enterprises, 2014, author s						
Anti-crisis overcoming program	"NGMV-BUR"		"Dniprovazhmash"		"Slovvazhmash"	
	PS <sub>1</sub> , %	PS, %	PS <sub>1</sub> , %	PS, %	PS <sub>1</sub> , %	PS, %
Increasing the share of own assets	+0.17	+0.05	+0.68	+0.31	+0.41	+0.20
Sale of fixed assets which are not in	+27.13	+11.86	+59.25	+37.18	+0.06	+0.37
use or are too expensive to use						
Renting out the fixed assets which						
are not currently in use and/or are	+4.12	+1.47	+6.21	+5.95	+9.45	+2.68
too expensive for own use						i l

Table 2. Anti-crisis programs efficiency in own assets management at machine-building enterprises, 2014, author's

Every 1% of these fixed assets sale would lead to target solvency growth by 27.13% in the case of "NGMV-BUR" and by 59.25% — in the case of "Dniprovazhmash" (the assets of these enterprises are formed mostly by means of fixed assets share, and every 1% of its reduction would thus lead to significant increase of assets as compared to already available, and this, in its turn, would increase the solvency of these enterprises).

Second in importance program of own assets management is the program of renting out the assets which are not in use or are very expensive in use (not profitable).

For "Slovvazhmash" the programs of both selling or renting out non-profitable fixed assets has low efficiency due to insignificant volumes of fixed assets which this enterprise is not using. The more of own fixed assets the enterprises under study are using — the higher get their indicators of autonomy. And this has the biggest influence on target orientation of solvency.

The volume of circulating assets an enterprise has in its disposal also has a significant impact on its solvency. The more circulating assets — the higher is the solvency. However, not economically grounded increase of circulating assets in use would ultimately lead to lower efficiency of this use.

This is why solvency management must be based on some sort of compromise reached between the level of circulating assets and the speed of their circulation, between the liquidity risk and the efficiency of work. Thus, circulating assets management programs should be based on their structure optimization and on speeding up their circulation at the same time.

Efficiency of anti-crisis programs for circulating assets of machine-building enterprises is presented in Table 3.

The above program implementation for circulating assets of machine-building enterprises in some cases would be possible only under prices reduction for own product, and this would naturally decrease its overall effect.

The overall efficiency of crisis overcoming programs aimed at increased solvency of machine-building enterprises is demonstrated on the data in Table 4.

The whole sequence of actions within an anti-crisis program aimed at solvency increase at machine-building enterprises starts with checking the necessity for target orientation as such to be the component of solvency by means of comparing the level

and the speed of assets circulation with the average values in the group of similar enterprises.

Table 3. Efficiency of anti-crisis programs for circulating assetsmanagement for machine-building enterprises, 2014, author's

Crisis overcoming program	"NGMV-BUR"		"Dniprovazhmash"		"Slovvazhmash"	
	PS <sub>1</sub> , %	PS, %	PS <sub>1</sub> , %	PS, %	PS <sub>1</sub> , %	PS, %
Selling the stock of readymade product on credit	+0.15	+0.25	+0.58	+5.69	+0.68	+0.36
Selling the stock of readymade product by prepayments	+3.65	+0.65	+9.58	+4.69	+0.47	+0.58
Debit indebtedness management	+10.27	+6.58	+4.58	+4.35	+2.68	+3.97

Table 4. Efficiency of anti-crisis programs aimed at target orientation of machine-building enterprises' solvency increase, 2014 data, author's

Cuisis avansamina muaama	"NGMV-BUR"	"Dniprovazhmash"	"Slovvazhmash"			
Crisis overcoming program	PS <sub>1</sub> according to Harrington scale					
Borrowed assets management	0.65	0.38	0.87			
Owned assets management	0.31	0.47	0.50			
Circulating assets management	0.59	0.68	0.36			

**Conclusions.** Implementation of the whole set of anti-crisis measures at a particular machine-building enterprise is carried out starting with the implementation of its potentially most efficient elements. If these actions do not help enterprises reach their target orientation and move to the zone with lesser crisis level – then it would be necessary to turn to more clearly pronounced and proactive measures, and if necessary – to strategic level of crisis prevention measures which are to correct and adjust crisis overcoming programs as such. The plan of crisis overcoming actions to be taken at an enterprise is to be based on a prior established sequence of actions. This plan is to cover the details on the resources needed to reach the objectives set and also the indicators which demonstrate whether the objective is reached or not. Each specific action has to be assigned to a particular functional unit at an enterprise, with assigned personnel responsible for it, and also exact deadline for this action to be taken. Also, major trends in motivation are to be outlined, both for the whole staff group and also for specific employees, so that the objectives are achieved and the enterprise leaves the crisis zone as soon as possible. For this matter, in full compliance with the plan of anti-crisis strategy implementation there must be a system of encouragements and fines for those employees who are engaged directly in crisis prevention program (or a specific part of it).

Constructing the system of efficiency for anti-crisis program aimed at target orientation of increasing the solvency of machine-building enterprises is to be performed basing on the profound analysis of the factors which were initially behind the crisis state. Also to be studied are all the related notions and crisis factors as well as crisis overcoming system's aims and tasks, directions, tools and methods. This would help determining the mechanism and the algorithm of management subject to the depth, certain stage and overall influence of crisis on machine-building enterprise activities.

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Стаття надійшла до редакції 23.11.2015.