

UDC 658.012

E. S. DUBINSKAYA

Ph.D. in Economics, docent

MODELING OF INDUSTRIAL- FINANCIAL CYCLE TO ENSURE THE SOLVENCY OF THE MACHINE-BUILDING ENTERPRISES

The main problems of building crisis management of large engineering companies, and their limited ability to pay objectively occurring periods of shortage of funds. In the paper the simulation of production and financial cycle of a major engineering company and the basic directions to restore the solvency of financial safety and the area of large engineering companies are investigated.

Keywords: *crisis, crisis management, production and financial cycle solvency deficit, engineering enterprise.*

Formulation of the problem and its connection with important scientific and practical tasks. The complexity and unpredictability of changes in the internal and external environment predetermine a non-zero probability of the development of crisis phenomena. As a rule, the most threatening manifestation of the development of the crisis there are problems with solvency, as they may lead to claims by creditors of the enterprise-the debtor and the initiation of the bankruptcy case. The latter threatens the life of the enterprise or the loss of its (or share) for the owners. Therefore, management of a company must not only carry out continuous preventive work to prevent the development of crisis phenomena, first of all in the mechanism of organizational-industrial management, but also to be ready to implement measures to restore the solvency of that was lost in the conditions of crisis.

That is why the main problem of construction of anti-crisis management of the large machine-building enterprises is their limited solvency in objectively emerging periods of shortage of funds. During this period, the enterprise has significant payables and not enough money for its repayment, and therefore the probability of claims of creditors on the early repayment of creditor debts.

Analysis of the studies and publications on the problem. The problem of analysis of the limited solvency of the large machine-building enterprises engaged in many of the leading scientists among them it should be noted Davydenko, N.M. Andrushko O. W., Zolotarev A., Lytvyn N.M., Lukyanihina O. A. and others, but it till now remains not completely resolved. In particular remains neglected the specifics of building the operating cycle of the machine-building enterprises and correct organization of the production in periods of shortage of funds, which are objectively in such enterprises.

Summary of the basic material of research with the justification of the obtained scientific results. The financial cycle of the machine-building enterprises built specifically. He has the closest connection with the production cycle, so it is more correct to speak about production and financial cycle. Briefly the latter is characterized by the following scheme (Fig.1).

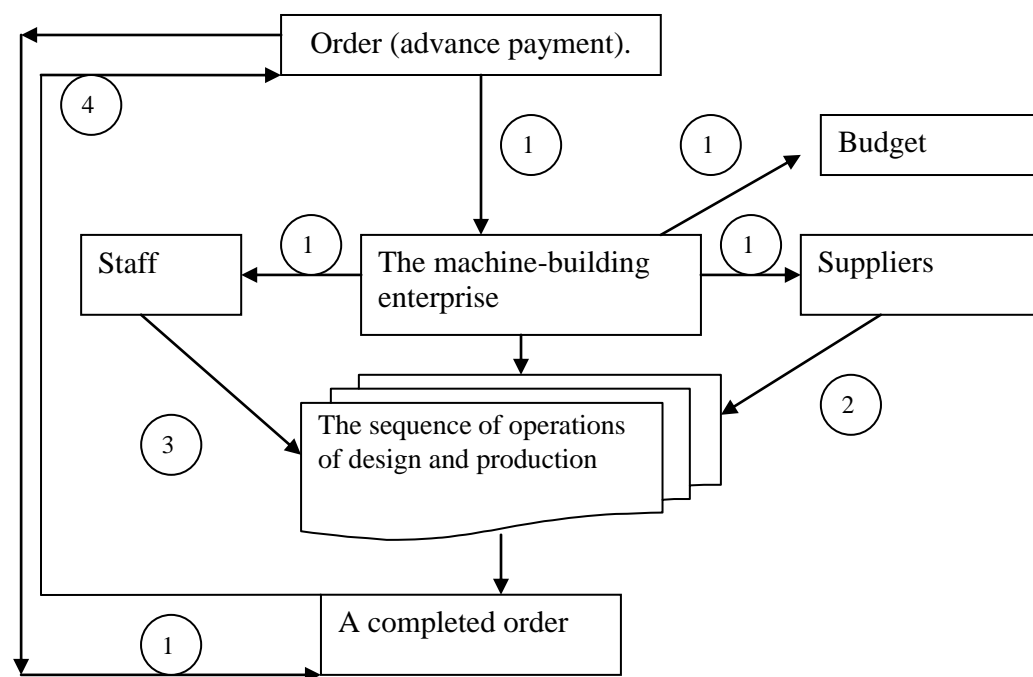


Fig.1. Industrial-financial cycle of large machine-building enterprise. 1 - the movement of funds; 2 - the movement of raw materials and materials; 3 - work; 4 - finished products.

Specificity of industrial-financial cycle lies in the fact that the orders, which are provided by the machine building enterprise, are large and require a lot of time on their implementation. Therefore, the machine-building enterprise, having received an advance payment, for a long time attracted in the process of production labor and material resources (with their corresponding payment). The advance payment received from the customer, as a rule less than the cost of attracted resources in the production process. In addition, like any entity legally working in the economy, the machine-building enterprise pays taxes and fees in social funds, which also entails a certain outflow of funds.

Thus, the nature of the industrial-financial cycle of the machine-building enterprise is characterized by periods of deficit financing activities (the moment of expenses exceeding the received advance until full payment for the order and delivered products). The latter leads to the problems of timeliness of payments with suppliers.

The complexity and unpredictability of changes in the internal and external environment of still predetermine a non-zero probability of the development of crisis phenomena. If the crisis manifested itself in the sphere of Finance before the in the organizational and production sphere of the enterprise there have been some negative phenomena, as a result of the development of the hidden negative trends so strong and on the significance of impact impacts of the external environment. As a rule the most threatening manifestation of the development of the crisis there are problems with solvency, as they may lead to claims by creditors of the enterprise-the debtor and the initiation of the bankruptcy case. The latter threatens the life of the enterprise, or the loss of its for the owners. Therefore, management of the enterprise within the paradigm of anti-crisis management must not only carry out

continuous preventive work to prevent the development of crisis phenomena, first of all in the organizational-industrial sphere, but also to be ready to implement measures to restore the solvency of that was lost in the conditions of crisis. In addition, for the machine-building enterprises, especially those, which do not work for the consumer market, and manufacture complex and expensive equipment for other companies, operating cycle is constructed so, that in it there is a long period of heightened threat of loss of solvency, the period of the financial threat.

Therefore, in this respect, it is impossible not to agree with the opinion that the priority action line managers to ensure the effective state of the enterprise in crisis conditions is to restore the profitability of the primary type of activity [3].

Firstly, the activity of the enterprise may be profitable, but in the current period, it may be unable to meet obligations to creditors. Secondly, the process of recovery of profitability can be long, and settle accounts with the creditors of the need for a short period of time to avoid bankruptcy. Therefore, the issue should be approached wider, taking into account strategic, tactical and operational aspect of the restoration and maintenance of solvency in the conditions of crisis. Besides which would not have used quantitative indicators for evaluating the effectiveness of enterprise management, quantitative evaluation is not enough, but to assess the quality control is very difficult, because this concept is subjective. Effective can be called such a version control, for which there is no possible alternative, of course preferable from the point of view of the goals and preferences of interested persons [4]. One group of persons (for example, the management Board of the company) can assess the actions of the Director-General as effective, and others (credit Committee of the Bank, employees of the enterprise) may adhere to other point of view.

Especially In crisis conditions, when there is a real threat to the opening of the bankruptcy case, ensuring the solvency becomes the priority task of the management. Only after its solution there is a possibility to take measures to ensure profitability.

The main difficulty in the process of ensuring the solvency can be called the search for a balance of profitability and liquidity, in which the assets of the enterprise will be used in the best way. The dilemma of the «profit - the risk of loss of solvency and liquidity of the» permeates the entire system of strategic and operational management of the enterprise, in the management of cash flows is shown in the form of the conflict criteria achieve maximum profitability and minimize the risk of a liquidity crisis. In the strategic aspect, the main mechanism to ensure the solvency of the planning and the timely identification of issues of financial security of the production program of the enterprise. In this aspect one should agree that the task of ensuring profitability and solvency are identical, and between them must be a compromise. However, directly in the process of the development of crisis phenomena of the problem of return (as and investment development and others) becomes in a certain period of time less significant compared with the solvency, since the loss of the last means the destruction of the enterprise). Especially In crisis conditions, when there is a real threat to the opening of the bankruptcy case, ensuring the solvency becomes the priority task of the management. Only after its solution there is a possibility to take measures to ensure profitability. Conceptually, we can highlight the following directions of optimization of the solvency of the machine-building enterprises:

- reduce the operating cycle, which reduces the time lag between receipt of components, raw materials and sales of finished products;

- increasing the turnover of accounts receivable;
- increase in the time gap between the supply of raw materials and components and payment of their cost suppliers.

If identified periods with negative balances of cash funds (deficits), it is necessary adjustments in the following ways:

1. increase of revenues due to the growth of sales volumes in kind and value terms;
2. reduction in payments for the account of the reduction of the Prime cost of products, fixed costs, better cost management;
3. the transfer of revenues to earlier periods due to the transfer to another form of payment for the product; the reduction of turnover of current assets, acceleration of implementation of development projects, which increase revenues;
4. the transfer of payments to a later date by means of transition to another form of payment to suppliers, slowing down or offset in time terms of implementation of the development projects, etc.;
5. increase in the own funds at the beginning of the period due to the increase of the authorized capital, implementation of highly liquid assets, etc.

After all of the above adjustments explores the conditions of attraction of borrowed funds, are determined by the amount of the interest rates, credit organizations. But the borrowed funds for repayment of debts to suppliers and contractors should be engaged as an extreme case, when other methods do not give the desired result.

The graph of the function of the difference accumulated cash receipts and accounts payable during the operating cycle of large machine-building enterprise is presented in figure 2.

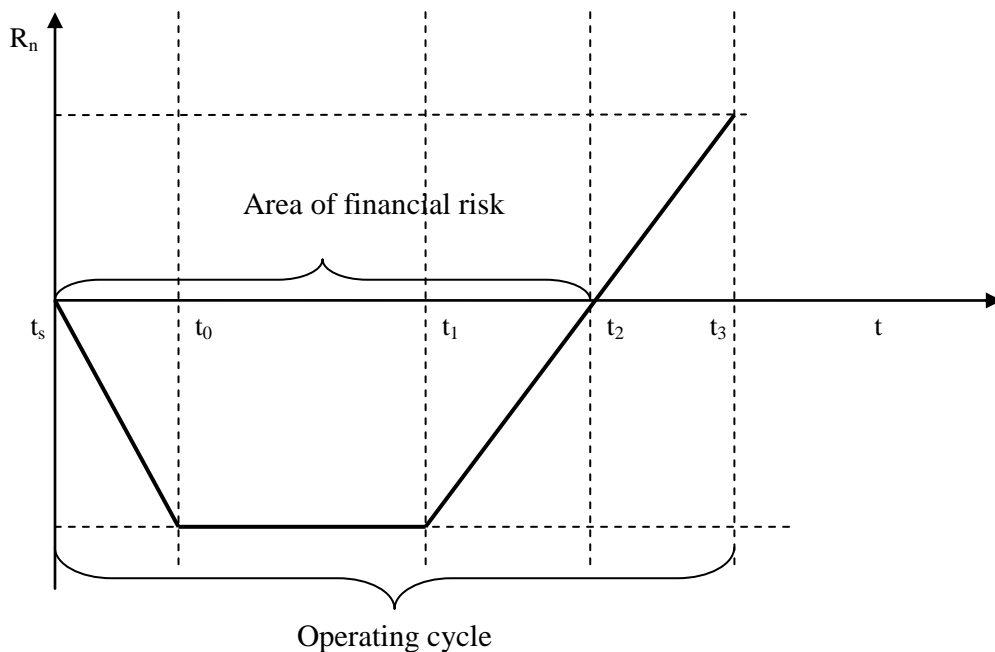


Fig.2. The operating cycle of the business portfolio and the area of financial risk of the machine-building enterprise.

As we can see from the figure, for a large part of the financial cycle of the machine-building enterprise is located in a zone of increased financial risk, as in the case of claims for early redemption of the obligation, management or forced to nominate the same requirements to the customers, or to urgently look for funding from external sources. To reduce this area can be due to: the acceleration of R & d by order and the reduction of production time, the acceleration of the comprehensive installation and commissioning work. The above two provisions reduce the area of financial risk are internal to the enterprise. Smaller features provides reduction of the term of postponement and collection of receivables, as in this case, the company runs the risk of losing customers.

Conclusions. Thus, the main purpose of the anti-crisis management in organizational-industrial sphere is not the elimination of the crisis phenomena and their prevention. Therefore, to reduce the threat of financial crisis related to the operating cycle, the machine-building enterprises of special importance acquires control of the deviations within the operating cycle.

In this aspect can be offered regularly to carry out the following tests:

1. monitoring the date of performance of orders, the installation of the equipment at the enterprises of the clients, the repayment of receivables in the context of the individual orders and periods, timely fixation of deviations and changes in the production program and budget of the enterprise;

2. check molded orders, comparing them with the critical points of the operating cycle, «separation» of orders on time, in order to avoid the singing of falling periods of financial risk immediately on a large number of orders;

3. verification of contracts, concluded with buyers and suppliers for compliance with the conditions adopted by the enterprise standards, budget and schedule of receipts and payments for the same purpose as in the previous paragraph.

The above measures will allow to reduce the risk of loss of solvency, which is one of the most unwanted of the crisis phenomena for any enterprise. Note that this kind of crisis is conditioned by the specifics of the operating cycle of the machine-building enterprises, and so the probability of its occurrence at any enterprise of machine-building industry should be taken into account with the development of appropriate measures for its prevention and programme of action in the case of manifestation.

Список використаних джерел та літератури:

1. Літвін Н.М. Поняття антикризового управління підприємствами (міжнародний досвід) // Вісник Київського університету. Міжнародні відносини. - Вип. 27. - К.: Київський університет. - 2003.- С.232-234.
2. Лук'янихіна О.А. Організація, технології та механізм антикризового управління підприємством / О.А.Лук'янихіна, Ю.В.Панасовський, Є.А.Мудрик // Проблеми і перспективи розвитку банківської системи України. – 2009. – Вип. 26. – С. 123-129.
3. Карпунь І.Н. Управління фінансовою санацією підприємства / І.Н. Карпунь. — Л.: Магнолія-2006, 2007. — 418 с.
4. Мойсеєнко Т.А. Санація як основний інструмент оздоровлення економіки / Т.А. Мойсеєнко // Актуал. пробл. економіки. — 2004. — N 12. — С. 136-141.
5. Андрушко О.Б. Деякі особливості управління підприємством в умовах кризи / О.Б. Андрушко // Вісник Національного університету “Львівська політехніка”. Проблеми економіки та управління.– Львів: Національний університет “Львівська політехніка”.– 2003.– № 484.– С. 217-220.

6. Давиденко Н.М. Ліквідність та платоспроможність як показники ефективності фінансового менеджменту підприємства / Н.М. Давиденко // Актуал. пробл. економіки. — 2005. — N 2. — С. 36-41.
7. Золотарев А. Организационные аспекты развития машиностроения / А. Золотарев // Экономика Украины. — 2004. - № 12.- С. 37- 41.