



Main Trends of Corporation Accounts Receivable Optimization

Khristina A. Pavlova*, Daniya K. Bikchantaeva

Institute of Management, Economics and Finance, Kazan Federal University, Kazan, Russia

Received: 13/09/2019

Accepted: 22/11/2019

Published: 20/12/2019

Abstract

Accounts receivable, being the most important factor of the positive cash flow of any company, is under close attention of its management. The definition and maintenance of receivables at an acceptable level allows a company to solve the problems of its obligations to creditor repayment timely and to predict cash flows. In this regard, the systematic approach to the formation of a portfolio of debtors is of particular importance, taking into account the specifics of a company. This article discusses the main trends of counterparty obligation optimization of an enterprise through factoring mechanisms, mutual claim offset and debt restructuring. Debt optimization does not come down to work with problem customers. This process is ongoing and covers two aspects, both at the formation stage and in relation to the existing debt structure. The choice of a financial mechanism must be made on the basis of a counterparty credit rating compilation, which is necessary for companies from the perspective of the temporary aspect of cash resource receipt. This proposal is interesting in the practice of a particular financial scheme selection. The practical part of the article is devoted to specific calculations of financial instrument use such as factoring and debt restructuring. The advantages and disadvantages of each of them are shown and attention is paid to the timeliness of their application, since the real value of money received as the implementation result of these schemes will differ from their nominal value. Specific calculations are based on the official reporting of "KAMAZ" PJSC, which also allows us to conclude that the article is of practical importance.

Keywords: Accounts receivable, Accounts payable, Factoring, Restructuring, Cash flows, Mutual obligations

1 Introduction

The factors which determine the success of business development and its financial attractiveness are represented by the building of long-term relationships with contractors (1). The business reputation of a company, the reliability of its financial flows and, ultimately, the investment attractiveness depends on their effectiveness. In such a variety of relations, a special place is occupied by accounts receivable, which is one of the most important conditions for a positive cash flow development of any organization. The quality of the portfolio of debtors largely determines the solvency of a company and its financial stability.

The problem of timely payments by debtors has been and remains relevant both in the current moment of an enterprise activity and during the prediction of its cash flows. In this regard, the issues of counterparty obligation management, determination of overdue and bad debts and the timely adoption of measures aimed at minimization of losses in cases of untimely fulfillment of obligations (2,18,19) become particularly relevant. To address these issues various

financial schemes are used in the practice of receivables management. Each of them involves the observance of certain conditions, the implementation of which ensures the effectiveness of their implementation. At the same time, their use should not be of a template nature, as each enterprise has its own specifics in production and commercial activities.

In the framework of this article, they will consider the theoretical and practical aspects of the most effective measures (in our opinion) to optimize the receivables of an enterprise.

2 Methods

The quality of accounts receivable, as all know, is characterized by three indicators: its "average age" (the period of provision), the degree of late repayment risk, and the proportion of overdue and problem liabilities in their aggregate value (3). And this, in turn, determines the main trends for the optimization of accounts receivable, which are the sequence of stages and a set of measures aimed at debtor portfolio quality improvement. The optimization process can be considered from two aspects: optimization of an existing portfolio of receivables and optimization relative to potential partners. In other words, both at the formation stage and in relation to the existing debt structure.

Corresponding Author: Khristina A. Pavlova, Kazan Federal University, Kazan, Russia. E-mail: khristinsha@mail.ru.

Each of these aspects involves its own tools and methods, and, above all, proper analysis conduct. So, potential counterparties are subject to a more thorough analysis for their degree of solvency and the assessment of transaction effectiveness, taking into account the form of payment, possible risks and additional costs associated with the conclusion of contracts (6, 11, 12). Regarding regular customers, the structural analysis is carried out according to several criteria: the timing of occurrence and repayment, according to the degree of the counterparty importance for the enterprise (ABC analysis), according to the established amounts of a commodity loan. Thus, a company receives not only a complete picture of the current and possibly future state of receivables, but also the ability to predict the receipt of funds, taking into account a pre-developed settlement procedure for the future period and possible amounts of bad receivables.

The most effective mechanisms for receivable optimization are factoring, offsetting mutual claims and their restructuring. It is advisable to select and apply them on the basis of a counterparty credit rating compilation, which allows ranking debtors not only by the degree of their solvency and timeliness of their obligation fulfilling, but also by the needs of an enterprise in cash resources at a particular time moment. In other words, a credit rating is necessary for a company from the perspective of the temporary aspect of cash inflows. So, if debt restructuring is applied to problem debtors, the factoring scheme can be applied both to bona fide buyers and customers, and in relation to overdue debts. The option of mutual claim offsetting is possible if a company has, first of all, mutual obligations and, secondly, the goals of the company pursues in this case: priority of repayment of receivables or payables.

Let's consider the appropriateness of the abovementioned method application to optimize receivables.

The goal of a factoring transaction for an enterprise is the speed of receipt of funds from the sale of relatively liquid receivables (7, 13,15,16,17). Its use is conditioned by several reasons. The first is the degree and frequency of the need for cash resources at any given point of time. The second reason is the problem of external financing source attraction. The price of a factoring transaction will depend on the degree of the receivable liquidity and its maturity, the interest rate of the bank loan provided by the factoring company and the commission of the factoring company (2, 9,20).

The feasibility of a factoring agreement conclusion for the sale of receivables is conditioned, first of all, by the real possibility of a faster receipt of funds, since such a transaction may take place before the receivable maturity. If overdue debt falls into a factoring transaction, then in this case an enterprise removes the problem of its collection. In any case, the factoring scheme is the receipt of funds with a certain discount. In addition, timely factoring is the most important factor to accelerate the turnover of receivables.

Thus, choosing the feasibility of a factoring scheme application, a company proceeds from its monetary component. Its effectiveness will be determined by the relevance of timely fulfillment of obligations of an enterprise: the payment of suppliers' bills, tax obligations, loan servicing. The restructuring of liabilities, as was noted above,

relates to the problem of receivables. The fact is that drawing up an additional agreement to the principal debt and setting a schedule for paying off overdue debts will allow a company to receive, albeit by installments, but still a positive cash flow. At the same time, several options are possible, starting from mitigating the penalty conditions specified in the main contract, ending with a flexible schedule for main debt repayment.

Considering a restructuring option, it must be borne in mind that the real value of cash received will differ from the nominal value of the debt by a discount coefficient that reflects the level of the inflation component. Offsetting mutual claims is also an interesting financial tool for large corporations with extensive cooperative ties, assuming the existence of mutual obligations between its counterparties (8, 10, 14). In these conditions, the management of such enterprises can solve the problems arising with the repayment of debts through their mutual offsets. Mutual liabilities are selected by counterparties, maturity and amount of debt, as well as their degree of content uniformity. The significance of this debt repayment mechanism is the simultaneous write-off of obligations. At that, there is no real cash flow.

3 Results and Discussion

The theoretical aspects of accounts receivable optimization through factoring and debt restructuring, are considered in the second part of the article, provide specific calculations for one of the leading Russian enterprises "KAMAZ" PJSC. The structural analysis of accounts receivable for three reporting periods (2016 - 2018) showed the growing dynamics of this indicator, and its growth was significantly faster than revenue growth. In the structure of total receivables, customer and buyer liabilities decreased from 58% to 43%. Over the same period, advance payments have grown significantly (by 12.8%). During consideration of receivable optimization approach application feasibility in terms of cash receipts, the obligations of suppliers and contractors should not be taken into account. As for short-term liabilities, loans and borrowings increased from 9% to 21%, and accounts payable decreased from 27% to 19% in general sources of financing over the same period. In general, the total amount of current liabilities of "KAMAZ" PJSC exceeds the amount of receivables excluding advance payments to suppliers and contractors by 2.4 times. Hence the relevance of timely payments by debtors.

The effectiveness of the factoring transaction for "KAMAZ" PJSC can be shown by the example of other receivables, the share of which in total liabilities was 38% (15,443.4 million rubles) in 2018. So, if 5% of this amount (or 772.2 million rubles) were spent through factoring operations, then the positive flow of a company could make 602.3 million rubles under the most severe conditions of the transaction (with the discount of 22%). Thus, "KAMAZ" PJSC would have reduced the amount of receivables by 772.2 million rubles. At that, cash received in the amount of 602.3 million rubles could be sent towards paying off accounts payable, in particular, on tax liabilities, which amounted to 1,405.7 million rubles in 2018. In addition, as the result of this scheme, the speed of circulation of receivables would be

reduced by 1 day. The effect of factoring operations on the turnover rate is presented in Table 1.

Table 1: The influence of the factoring on the rate of accounts receivable turnover

Indicator	Before factoring	After factoring	Change
Average amount of accounts receivable excluding advance payments, mln rub.	28 313	27 627	-686
Turnover ratio of accounts receivable excluding advance payments, turnover	5,33	5,47	+0,14
Period of repayment of accounts receivable excluding advance payments, in days	68	67	-1

Source: compiled by the authors on the basis of the accounting and analytical balance of "KAMAZ" PJSC for 2018.

Table 2: Initial conditions for scheduling the restructuring of "KAMAZ" PJSC receivables

Indicator	Unit	Value
Amount of overdue debt	thousand rubles	180 000
The period of delay	Days	90
Amount of penalty for each day of delay	%	0,03%
Penalty amount for the period of delay	thousand rubles	4 860
The total amount of indebtedness	thousand rubles	184 860

Source: compiled by the author

Table 3: Offered repayment schedule options thousand rubles

Restructuring option		Month 1	Month 2	Month 3	Month 4	Month 5	Month 6
Option 1 - equal share							
principal debt	180 000	30 000	30 000	30 000	30 000	30 000	30 000
accrued interest	4 860	810	810	810	810	810	810
Total	184 860	30 810	30 810	30 810	30 810	30 810	30 810
Option 2 - deferred payment of penalties							
principal debt	180 000	30 000	30 000	30 000	30 000	30 000	30 000
accrued interest	4 860				1 620	1 620	1 620
Total	184 860	30 000	30 000	30 000	31 620	31 620	31 620
Option 3 - flexible schedule							
principal debt	180 000	18 000	27 000	27 000	36 000	36 000	36 000
the percentage of repayment of principal		10%	15%	15%	20%	20%	20%
accrued interest	4 860			1 215	1 215	1 215	1 215
Total	184 860	18 000	27 000	28 215	37 215	37 215	37 215
Option 4 - without payment of penalties							
principal debt	180 000	18 000	18 000	36 000	36 000	36 000	36 000
the percentage of repayment of principal		10%	10%	20%	20%	20%	20%
accrued interest	4 860						
Total	184 860	18 000	18 000	36 000	36 000	36 000	36 000

Source: compiled by the authors

Table 4: Calculation of the real value of cash flow for each restructuring option

Discount rate	0,99643	0,992872	0,989327	0,985794	0,982274	0,978767
Cash flow, thousand rubles						
Option 1	30 700	30 590	30 481	30 372	30 264	30 156
Option 2	29 893	29 786	29 680	31 171	31 060	30 949
Option 3	17 936	26 808	27 914	36 686	36 555	36 425
Option 4	17 936	17 872	35 616	35 489	35 362	35 236

Source: compiled by the authors

The practical application of the financial instrument for the restructuring of overdue receivables is also relevant for "KAMAZ" PJSC. In order to not delay the delay, it is advisable, in case of contractual obligation violation for more than three months, to offer debtors to restructure their debts so that the accumulated overdue debts do not burden subsequent payments. So, if "KAMAZ" PJSC has overdue receivables of more than 3 months in the amount of 180 million rubles and accrued interest for this period in the amount of 4.86 million rubles, the debtor is invited to restructure the debt for 6 months. During scheduling the repayment of the main debt and accrued interest, you can choose one of the options that would satisfy both parties. These may be the following options:

- Monthly repayment of principal and accrued interest in equal shares over the entire restructuring period;
- Monthly repayment of the principal debt with deferred payments of accrued interest;
- The development of a flexible schedule for the principal debt and accrued interest repayment on the conditions of repayment amount gradual increase;
- The development of a flexible schedule for principal debt repayment without taking into account the repayment of accrued interest.

The choice of this or that option is determined by several reasons: the importance of the counterparty for the enterprise, the debtor's ability to repay the debt fully in principle. Possible options for debt restructuring are shown in table 2, 3. Proceeding from the proposed calculations, it is possible to calculate the real value of cash flows for each option, taking the annual inflation rate at 4.3% in 2018. The real value of cash receipts for each option is shown in table 4.

Despite the depreciation of cash flows, in case of a positive decision on debt restructuring is more preferable as compared to the factoring operation in terms of overdue debt. Firstly, the projected cash flow for the restructured debt will be less costly for an enterprise, since you do not have to pay a percentage to a factoring company, a bank and a risk premium. Secondly, the depreciation of money value is slower as compared to the price of factoring.

4 Conclusions

Thus, each of the considered trends of receivables optimization has its advantages and disadvantages. At the same time, they, as management tools, are aimed at an

effective system development for an enterprise settlement discipline development. A very important factor of their successful implementation is the timeliness of the decision on the choice of a tool, since they are aimed at a positive cash flow development of an enterprise. As calculations showed, the real value of the repaid obligations and their nominal value do not match. Therefore, the time aspect of these operations is of particular importance. The sooner and faster certain measures are taken, the greater the financial ability of an enterprise to make managerial decisions.

5 Summary

The problem of receivables optimization is multifaceted and complex. In the framework of one article it is impossible to consider all its aspects. The obligations of counterparties, on the one hand, are future cash and therefore they must be transparent and clearly foreseeable in the future (4, 5). On the other hand, when they conclude contracts, there is always a risk of their untimely receipt or complete absence. The growth of receivables leads to the alienation of funds. Therefore, any company has the problem of finding an optimal amount of receivables, which would not allow a company to solve the problems of its obligations by additional borrowed source attraction.

6 Acknowledgements

The work is performed according to the Russian Government Program of Competitive Growth of Kazan Federal University.

References

1. Robert Carbaugh. International Economics, 10th edition.
2. Atrill P. McLaney E. Management Accounting for Decision Makers. 2014.
3. McLaney E. Atrill P. Accounting. An Introduction.
4. Brigham, H. Fundamentals of Financial Management.
5. Accounts receivable: accounting, analysis, assessment and management: textbook / ed. by Sutyagina V.Yu., Bespalova M.V. - Moscow: INFRA-M.2017: 216 p.
6. Maltsev AS, Gorbatova LV. Optimization methods for company liquidity management. Financial Management.2016;3:p.168.
7. Voiko A. Accounts receivable and the formation of organization financial results. Financial newspaper. Regional issue. 2013;27:14-18.
8. Dementieva NM. Accounts receivable and accounts payable: accounting and write-off procedure. Accounting in budgetary and non-commercial organizations.2015;3:28-30.

9. Smachilo V, Dubrovskaya E. Management of receivables. Journal "Financial Director".2013;5: p. 22.
10. Khakhonova NN. Methodological aspects of accounting and analytical support development for cash flow management. / N.N. Khakhonova, S.A. Ukolova - Rostov-on-Don: Publishing House of the Russian State University of Economics (RINH), LLC "AzovPechat".2013:220.
11. Sohrabi M. The Relationship between Non-Financial Innovative Management Accounting Tools and Risk and Return of Iranian Stock Market Listed Companies. Dutch Journal of Finance and Management.2017;1(2):40. <https://doi.org/10.29333/djfm/5816>
12. Piteira M, Costa CJ, Aparicio M. Computer Programming Learning: How to Apply Gamification on Online Courses?. Journal of Information Systems Engineering & Management.2018;3(2):11.
13. Mazana MY, Montero CS, Casmir RO. Investigating Students' Attitude towards Learning Mathematics. International Electronic Journal of Mathematics Education.2019;14(1):207-231. <https://doi.org/10.29333/iejme/3997>
14. Saurykova ZM, Ybyraimzhanov K, Mailybaeva G. Implementation of interdisciplinary relationships in education on the basis of science integration. Opción.2018;34(85-2):353-385.
15. Magu TO, Agobi AU, HITLER L, Dass PM. A Review on Conducting Polymers-Based Composites for Energy Storage Application. Journal of Chemical Reviews. 2019 Jan 1;1(1, pp. 1-77.):19-34.
16. Moosavi-Zare AR, Zolfigol MA, Khaledian O, Khakyzadeh V, Farahani MD, Kruger HG. Tandem Knoevenagel–Michael-cyclocondensation reactions of malononitrile, various aldehydes and dimedone using acetic acid functionalized ionic liquid. New Journal of Chemistry. 2014;38(6):2342-7.
17. Jafari M. The Prediction of Adsorption Properties of a Solid Phase-Microextraction Fiber by Chemometrics methods. Advanced Journal of Chemistry-Section A. 2019 Mar 1;2(3. pp. 184-265):203-15.
18. Rasouli N, Salavati H, Movahedi M, Rezaei A. An insight on kinetic adsorption of Congo red dye from aqueous solution using magnetic chitosan based composites as adsorbent. Chemical Methodologies. 2017 Jun 1;1(1. pp. 1-86):74-86.
19. Sharma S, Sharma R, Sharma AK. Synthesis, characterization, and thermal degradation of Cu (II) surfactants for sustainable green chemistry. Asian Journal of Green Chemistry. 2017 Oct 1;1(2. pp. 56-141):130-41.
20. Morozova EN, Morozov VN, Tverskoi AV, Zabolotnaya SV, Kaliuzhnaya EV. Peculiarities of the influence of cyclophosphamide and imunophan on the processes of apoptosis and necrosis in Peyer's patches of rats' small intestine. EurAsian Journal of BioSciences. 2019 Jul 7;13(2):803-6.