

Receivables Management: Optimization of Problematic Business Process of the Telecommunications Company

Mikhail Sverdan, "KROK" University, Olga Korzachenko, Kyiv National Economic University

Abstract – Business process “receivables management” is a key position both in the system of financial management of the telecommunications company and its operating activities. The need for optimization of the business process is determined by its influence on financial performance. The paper considers the approach to optimize the business process within the framework of the Six Sigma methodology. To define accounts receivable probability, logit regression mathematical model has been proposed. The paper also considers the issue of the selection of terms for service payment in order to approximate the level of accounts receivable to the optimal value.

Keywords – receivables management business process, credit policy, business process optimization, Six Sigma, logit-regression model, mathematic model

I. INTRODUCTION

Telecommunications companies usually do not get money for the current account immediately, by providing their customers with a certain delay in payment in the form of commercial credit. It should be noted that a commercial loan is the form of credit extended by sellers to buyers in the form of deferred payment for goods sold, services rendered. The emergence of receivables is an objective result, due to the risk during the settlement between counterparties on the basis of business transactions. Accounts receivable may result in a working capital deficit and serve as a means of increasing of commodity circulation.

The main aim of each company is to obtain a positive financial result – profit. Income from services and accounts receivable are reflected in accounting using the accrual method. This is a situation, in which there is an increase in sales revenue and, therefore, profits, income taxes in the absence of receipt of funds in the account. Thus, without additional borrowing and the diversion of funds from other business processes, the company loses the ability to pay on time to budget for taxes and fees, to pay employees, as well as perform other operating expenses.

It should be noted that the receivables does not lead to negative results and reduction in economic efficiency, if the company can adjust and maintain it at an optimal level.

The necessity for optimization of the business process is determined by its direct influence on financial performance [2]. Maximizing profit is observed at a certain optimal value of accounts receivable. At the same time, the unjustified increase in accounts receivable involves the diversion of funds from the turnover and, thus, the decrease in profit. It should be noted that the low level of accounts receivable does not result

in a positive effect on the profitability of the company [14]. Practical experience shows that often the reduction in accounts receivable is caused by the lack of loyalty to the policy of corporate, non-commercial lending. This situation minimizes the amount of sales and impacts the financial result toward its reduction. Thus, the management of accounts receivable should be aimed at finding its optimal level under certain conditions of economic activity of an enterprise. The role of receivables management and the prevention of bad debt increase in payment crisis and at a time of late payment transactions.

It allows the telecommunications company to provide an adequate level of profitability, maintain a competitive position in the market. Thus, the issue of optimization of this business process appeared.

II. THE ANALYSIS OF ACCOUNTS RECEIVABLE MANAGEMENT IN THE UKRAINIAN TELECOMMUNICATIONS COMPANIES

Before discussing the optimization of the business process, it is necessary to consider the specifics of receivables management in the Ukrainian telecommunications companies. Note that the objects of research are companies, i.e., ISPs; the subject of research – the accounts receivable of the goods, services and the mechanism of its management and control.

However, the low level of maturity of process management in Ukrainian enterprises causes some problems in the management of accounts receivable. The generalized analysis of the telecommunications companies has allowed identifying some of the main problems the companies face when they manage receivables, namely: (1) the lack of unified understanding of accounts receivable and its components; (2) the lack of methods for determining the optimal level of receivables for the enterprise; (3) the lack of reliable information about the maturity of debtors, and (4) the lack of regulation of past-due accounts receivable; (5) the lack of differentiation techniques of service consumers; (6) transactions in the business process are distributed among different structural units, and there is no regulation of their interaction.

The purpose of receivables management for goods and services is to reduce the level of bad debts and stitched receivables, as well as increase accounts receivable turnover, that is, reduction in the term of service payment.

Reviewing the activities of telecommunications companies, whose business processes are based on the optimal structural model – the Enhanced Telecom Operations Map (eTOM)

release 9, it should be mentioned that the management of accounts receivable for goods and services regulated by the third level business process “Bill Payments & Receivables Management” (Table I). It should be noted that in the framework of the given business process, the management of accounts receivable is conducted by individual consumers.

Unit processes “Bill Payments & Receivables Management” constitute a significant part of process operations (“Operations”) and are located at the intersection of the second level processes, where: “Customer Relationship Management” – a horizontal process and “Billing & Revenue Management” – a vertical process.

As seen from Table 1, accounts receivable management for goods and services are related to the course of business and not to the group support of enterprise management “Finance Management”. This indicates an increase in the values of the test of the business process in the activities of telecommunications companies, focused on the needs of their customers.

In Ukraine, accounts receivable management is regulated by regulatory document P(s)BO 10 “Accounts Receivable”, approved by the Ministry of Finance of Ukraine on 20 October 1999. Within the enterprise, the methodology and organization of accounts receivable management is described in the Accounting Policy, which is approved by the enterprise supervisor.

Telecommunication companies use one of the two models of customer relationship: prepaid and postpaid [5].

The prepaid model is such a model of calculations with subscribers, which assumes that customers deposit funds to their personal accounts of the telecommunications service operator, which are then spent to pay for the received services.

The postpaid model is a model of calculations, where at first the operator provides services to a subscriber under the concluded contract, and then performs billing and invoicing for payment. The process of charging and billing is regular and usually covers the time specified in the contract. Counterparty is obliged to pay the amount charged for a specified period of time in the contract.

Ukrainian telecom companies (ISPs) are characterized by a postpaid model with a maturity of 20 days. The Internet access is no longer offered to the subscriber, or goes into a “sleep mode” after exceeding a certain level of his debt. Note that the

terms of payment and telecommunications services are identical for all clients – individuals.

III. OPTIMIZATION

Optimization of revenue management of business process should aim to overcome these negative trends and to implement measures to minimize risks associated with increasing levels of debt.

To optimize the business process, which is clearly determined within the structural model eTOM, at the stage of its analysis it is suggested using the Six Sigma methodology.

The Six Sigma methodology is aimed at the analysis and optimization of business processes, i.e., identification of discrepancies between the expected and actual results. This methodology involves defining and reducing the underlying causes by focusing on the output parameters that are critically important to consumers of the results of business processes, and of course, making the design constructive decisions, necessary for the efficient functioning of processes.

Six Sigma is an effective way to describe the business process and create a system of continuous improvement of operations, which are components of a business process. The main component of the Six Sigma conception is the use of statistical process control tools. Sigma is the standard deviation of a random value from its mathematical expectation, denotes the measure of variability of the business process.

Activity of the company is the estimated σ -level of its business processes. The business process, whose quality reaches 6σ , is only 0.00034% deviation. Traditionally, the standard deviation of the company is 3 or 4σ , despite the fact that as a result of such processes 100% of transactions are between 0.62% to 6.68% deviations or defects [3].

The concept of Six Sigma is based on the classic scheme of continuous improvement using the Shewhart-Deming cycle (Cycle PDCA): Plan (the formation of goals and objectives, identifying key parameters for success); Do (search for solutions to problems and implementation of the planned changes); Check (evaluation of the results and conclusions to achieve the objective of optimization); Act (making decisions on the basis of the obtained conclusions and continuous improvement). Subsequently, the PDCA cycle is transformed into the MAIC cycle: Measure - Analyze - Improve - Control.

TABLE I
BUSINESS PROCESS DECOMPOSITION

Process “Operations” – level 1			
	Vertical Process “Billing & Revenue Management” – level 2		
	Process – level 3	Process – level 4	Process Description
Horizontal Process A61 – “Customer Relationship Management”	A6108 – “Bill Payments & Receivables Management”	A61801 – “Manage Customer Billing”	Ensure effective management of the customer’s billing account related to the products purchased and consumed throughout the appropriate billing cycle.
		A61802 – “Manage Customer Payments”	Collect payments made by the customer and reconcile the payments to the invoices.
		A61803 – “Manage Customer Debt”	Collect past due payments from the customer.

Recently, certain stages of the cycle have been improved. However, the cycle DMAIC (D stands for the stage “define”) is more often used in practice [3, 16].

At the stage “define”, the project goals are set to optimize the selected business process. To do this, first of all, it is necessary to map a business process or its structural model, and clearly identify the main parameters, such as suppliers, inputs, outputs and customers. These measures will help to better understand the problem and to establish links of the business process.

It should be noted that the basis of the Six Sigma methodology is to determine the factors that you need to measure, analyze, improve and control for effective optimization results. Thus, at this stage, you should also identify the influencing factors of the business process, which establish a causal link between it and its results.

Note that the defect is one of the central categories of the Six Sigma methodology. The following defects of the business process “Receivables Management” can be distinguished: the bad debts in total accounts receivable; the accounts receivable turnover.

The fundamental principle of the Six Sigma philosophy is the belief that quality improvement cannot be achieved without measurement. The characteristics of the business process are investigated at the stage “measure”. It requires developing a system of indicators of the process. The phase result is the determination of defects of the process that can significantly affect the quality. Defects are measurable characteristics of the process or its results, which do not meet the requirements or expectations.

The phase “analyze” formulates optimization problems, studies the business process results through the approval of the evaluation criteria and identifies the causes of defects and the approaches to correct them. It includes the development of a number of hypotheses about the causes of the business process problems, research of the process and data, and confirmation or rejection of the hypotheses.

The main goal of the stage ‘improve’ is to implement the planned activities in the analysis of the causes of defects.

It is necessary to develop a plan for monitoring the changes in the process by means of statistical research, to identify and assess the effectiveness of the monetary measures implemented by the final stage of the cycle DMAIC.

The Six Sigma methodology is implemented using a set of statistical methods applied to each stage of the optimization cycle DMAIC.

The most problematic aspects of the application of the methodology to optimize the business process are studied in detail in this article. During the research, the attention is focused on:

- Development of indicator system to measure business process management and condition of accounts receivable for goods, services – for the stages “measure”, “analyze” and “control”.
- Decomposition and expansion of the business process “Bill Payments & Receivables Management” of third level of eTOM – for the stage “improve”;

- Adjustment of the credit policy rules of the company – for the stage “improve”.

IV. INDICATOR SYSTEM TO MEASURE THE BUSINESS PROCESS “RECEIVABLES MANAGEMENT”

In order to study the business process, it is necessary to form a set of special indicators to evaluate its condition [4, 15]. The analysis of indicators allows making conclusions on the functioning of the business process and deciding on the need for optimization.

It is based on the analysis of indicators of the business process, developing a complex of measures to improve it.

Indicators of business processes are considered to be qualitative and quantitative parameters that characterize the business process and its outcome. In turn, indicators of business processes are goal indicators and a means of evaluation progress in achieving the strategic goal activities.

The analysis of specialized sources indicates a lack of an integrated view of the problem of evaluating business process. In practice, only some characteristics of the business process are evaluated. Therefore, summarizing the above-mentioned factors and expressing our own opinion on the problem, the system of quantitative and qualitative indicators has been developed (Table 2) to assess the specific business processes of enterprises.

Note that the efficiency indicators of the business process, which is calculated as the ratio of receivables to its optimum value, deserve special attention.

It is assumed that the optimal level is set based on the following considerations: lower debt level is not possible, and it does not influence negatively the operation of the enterprise. However, in academic economic literature there is no single opinion on the definition of the optimal value of receivables. Naturally, each entity determines for itself the optimal level of receivables.

Determination of the optimal value of debt could be undertaken by the indicator of financial cycle that allows you to monitor the financial stability of the company. Planning the time of the financial cycle enables enterprises to control the ratio of their own and borrowed capital. Note that the smaller the financial cycle, the more effective the activity is.

Thus, by setting the desired value of the financial cycle the optimal amount of receivables for the accounting period is determined:

$$AR_{opt} = \frac{ACP \cdot S}{360},$$

$$ACP^t = FC - STP + CPR,$$

where AR_{opt} – the optimal average account receivables;

S – the sales income;

ACP – the average collection period, days;

FC – the financial cycle, days;

STP – the stock turnover period, days;

CPR – the creditor / purchases ratio, days.

TABLE II
INDICATOR SYSTEM OF THE BUSINESS PROCESS "RECEIVABLES MANAGEMENT"

No.	Type indicator	Group indicator	Indicator	Formula	Description
1	Quantitative	Time indicators	Average collection period (Days Sales Outstanding)	$365 / \text{Receivables Turnover Ratio}$	The average collection period refers to the average time lag between sales and collection measurable in terms of number of days. Prolonged collection period owing to delays and other reasons creates hazards in the way of sustaining business operations because of financial scarcity.
2			Doubtful Debt "Old"	$\text{Doubtful Debt} / \text{Income per day}$	It characterizes the "age" (days) of doubtful debt.
3		Technology indicators	Level of Process Automation	Expert estimation	It characterizes the use of software and information systems in the business process.
4		Cost indicators	Process Prime Cost		Prime cost is a way of measuring the total cost of the inputs needed to create a given output of the business process.
5			Average Accounts Receivable	$0,5 * (\text{Opening} + \text{Closing Receivables})$	Average accounts receivable looks at the accounts receivable balance at the beginning of the year and at the end of the year. These numbers can be found on a company's balance sheet in the assets section.
6			Doubtful Debt		Doubtful debts, as the name implies, are debts about which there is some element of doubt as to their collectability.
7			Bad Debt		A bad debt is an amount that is written off by the company as a loss to the business and classified as an expense because the debt owed to the company is unable to be collected, and all reasonable efforts have been exhausted to collect the amount owed.
8	Qualitative	Performance indicators	Receivables Turnover Ratio	$\text{Net Credit Sales} / \text{Average Accounts Receivable}$	Accounts receivable turnover ratio indicates how many times the accounts receivable have been collected during an accounting period. The higher the turnover, the faster the business is collecting its receivables.
9			Ratio of Receivables to Current Assets	$\text{Accounts Receivable} / \text{Current Assets}$	It shows the proportion of receivables in the amount of current assets of the company.
10			Ratio of Doubtful Debt to Receivables	$\text{Doubtful Debt} / \text{Accounts Receivable}$	It shows the proportion of doubtful debt in the amount of receivables of the company.
11		Efficiency indicators	Ratio of Receivables to Optimal Receivables	$\text{Accounts Receivable} / \text{Optimal Account Receivables}$	It characterizes the degree to the optimal level of receivables. Ideally, the indicator is equal to 1.
12		Quality indicators	Fragmentation	The number of organizational units / number of Functional Transitions	It characterizes the organizational complexity of the business process, which depends on the number of different departments or employees, participating in it.
13			Determination	Expert estimation	It characterizes the level of adequacy of the real process and its documentary description.
14			Flexibility	Expert estimation	It characterizes the degree of ability of the process to respond to consumers' needs, which may change the results (outputs).

O.I. Luchkov investigated the problem of determining the optimal amount of receivables. He considered the crediting period to be a combining factor of monetary policy and the optimal size of investment in debt. Receivables are proportional to the loan period, but this dependence is not linear. If you consider the simplified situation, we can say that the deviation in the lower side of the maximum value of debt is inversely proportional to the loan period. Determining the coefficient of proportionality between the credit period and receivables, the author tried to determine the optimal size of

the credit period and hence the optimum value of receivables [9].

However, in the proposed method there is no algorithm for calculating such important indicators as the coefficient of proportionality between the credit period and receivables [7].

For the cost approach, the optimal receivables are determined by the optimal credit period and reflected at the point of intersection of internal expenses and lost opportunities.

For the income approach, the optimal receivables are determined as the point of maximum profit function (or its financial result before tax) of receivables. This is accomplished through constructing a regression model based on empirical data.

V. ETOM BUSINESS PROCESS DECOMPOSITION

At the improvement stage of DMAIC cycle, it has been proposed to improve the eTOM structural model, namely the third level of business process “Bill Payments & Receivables Management” (Table 1), since there are no formal operations that precede the 4th level of process “Manage Customer Debt”, it is advisable to add such processes as:

- A61804 – “Receivables Analysis” – Creation and analysis of key financial indicators and indicators of receivables at the levels of the enterprise as a whole and individual consumers of services in particular.
- A61805 – “Customer credit policy” – Development of rules and payment for services.

VI. CREDIT POLICY OF THE TELECOMMUNICATIONS COMPANY

Credit policy – a certain set of rules that regulate the granting commercial credit and debt collection procedure. The base purchase motivation development of monetary policy is the differentiation of customers according to various parameters.

Creating a credit policy, guidelines reflect the conditions of a service within a client-oriented approach and the aims to improve operational and financial activity. The goals of credit policy are to increase the volume of services provided (sales income) in the short and long term, to achieve the desired level of turnover of receivables and to restrict soaring bad debts.

It is necessary to consider the most important and at the same time the least studied aspect of the credit policy of the company, namely, the assessment of debtors in order to determine the probability of individual consumer debt and to model rules for provided services to achieve the optimal level of receivables.

The determination of probability of accounts receivable collected from customers of telecommunications services is based on econometric modelling using logit regression.

It should be noted that logistic regression is designed to solve problems determining the value of a continuous dependent variable, provided that the dependent variable can take values in the interval from 0 to 1.

Thus, logistic regression serves as a statistical model used to calculate the probability of customer repayment for a defined parameter analysis of clients. Further calculation of the probability of repayment is to use dichotomous variable Y in the tasks of regression modelling. For this purpose, we introduce the so-called dependent variable that takes a lot of values in the interval from 0 to 1 and sets Q independent variables (called attributes, predictors or regressors) [11]. The probability of an event, such as repayment of debt, is calculated on the basis of the values of predictors.

Feasibility of using logit regression to determine the probability of repayment is determined by a number of advantages [12].

The binary choice model describing the dependence of the probability of cash receipts on customers of regressors is included in the model.

In this logit model of the probability of an event, namely the creation of debt is calculated using the general formula:

$$PZ_i\{Y_i=1|Q_{ik}\} = \frac{e^{Z_i}}{1+e^{Z_i}} = \frac{1}{1+e^{-Z_i}}$$

$$Z_i = \theta_{i0} + \theta_{i1}Q_{i1} + \dots + \theta_{ik}Q_{ik}$$

where PZ_i – the probability of formation of customer doubtful receivables, $PZ_i = [0; 1]$;

Y_i – the binary variable that describes the probability of the event:

$$Y_i = \begin{cases} 1, & \text{if the debtor fails to repay the debt;} \\ 0, & \text{if the debtor repays the debt.} \end{cases}$$

Z_i – the customer accounts receivable;

Q_{ik} – the indicator system of customer evaluation;

θ_{ik} – the parameters of linear regression Z ;

i – the customer ID, $i = [0; N]$;

N – the number of enterprise customers.

The indicator system of consumer evaluation is presented in Table 3 [8].

TABLE III
CUSTOMER'S INDICATOR SYSTEM

Customer Indicators	
Q_1	Doubtful coefficient
Q_2	Receivables turnover ratio
Q_3	Collection period
Q_4	Part of customer receivables in the total amount of receivables
Q_5	Part of doubtful receivables
Q_6	The importance of customer
Q_7	Part of total services provided
Q_8	Stability of service request

Thus, the probability of repayment by the client is the following:

$$P_i\{Y_i=0|Q_{ik}\} = 1 - PZ_i = 1 - \frac{1}{1+e^{-Z_i}}$$

Calculating the probability of receivables collection carried out for each individual customer of telecommunications service, it has been found out that the probability repayment for new customers is 1, i.e., new clients are conscientious payers within the policy of loyalty.

Development of the rules for providing telecommunications services and payment terms to certain customer group. The analysis of certain debtors enables their ranking in the group based on the calculated values of the probability of debt repayment for consumed telecommunication services and determining the conditions for granting and payment for services (Table IV).

Based on the defined terms of service (see Table IV), the expected value of cash receipts from customers are defined:

$$g = 1: D_{i_g}^t = P_i^t s_i^t;$$

TABLE IV

Customer Group, g	The probability of receivables collection, P_i^t	Terms and payment
1	$0,8 \leq P_i^t \leq 1$	Service is provided 100% payment delay
2	$0,6 \leq P_i^t < 0,8$	The service is provided advance payment of 30% of its value
3	$0,4 \leq P_i^t < 0,6$	The service is provided advance payment of 50% of its value
4	$0,2 \leq P_i^t < 0,4$	The service is provided advance payment of 70% of its value
5	$0 \leq P_i^t < 0,2$	The service is provided advance payment of 100% of its value

$$g = 2: D_{i_g}^t = (0,3 + 0,7P_i^t) s_i^t;$$

$$g = 3: D_{i_g}^t = (0,5 + 0,5P_i^t) s_i^t;$$

$$g = 4: D_{i_g}^t = (0,7 + 0,3P_i^t) s_i^t;$$

$$g = 5: D_{i_g}^t = s_i^t; i \in I^g,$$

where $D_{i_g}^t$ – the expected number of cash flows from g group of customers at the end of period t;
 s_i^t – the sales income from i customer at the end of period t;
 I^g – the set of customers that enter g group.

Then, using the amount of doubtful debt repayment from customers, we receive:

$$CF^t = \sum_{i=1}^N P_i^t dz_i^{t-1} + \sum_{g=1}^G D_g^t,$$

where CF^t – the expected number of cash flows from customers at the end of period t;
 dz_i^{t-1} – i client receivables at end of period t-1;
 G – the set of available choices of payments.

Note that the leverage in the credit policy of the enterprise is to stimulate advance payments for telecommunications services by providing discounts.

Discounts for early payments implies a reduction in the purchase price or sales, expressed as a percentage, which is provided in the case of payment for services at the time of providing them. This event encourages customers to pay bills as soon as possible. Discounts are beneficial both for the buyer and seller. The buyer directly benefits from the reduced cost of a service. In most European countries, the discount for advance payments accounts for 3%. Service providers receive an indirect benefit in connection with the acceleration of the turnover of funds invested in receivables, which, as inventories, represent immobilization funds.

In order to keep a stable market position, a highly competitive company needs to provide services based on the prepayment and postpayment models.

Thus, in case of providing discounts, the expected value of cash flows from customers is calculated as follows:

$$g=1: D_{cx_g}^t = \sum_{i=1}^{I_g} z_i (1-y) D_{i_g}^t;$$

$$g=[2;5]: D_{cx_g}^t = \sum_{i=1}^{I_g} (z_i (1-y) s_i^t + (1-z_i) D_{i_g}^t);$$

$$CF^t = \sum_{i=1}^N P_i^t dz_i^{t-1} + \sum_{g=1}^G D_{cx_g}^t,$$

where z_i – the binary variable that characterizes the fact of customer discounts:

$$z_i = \begin{cases} 1, & \text{if the client used the discount;} \\ 0, & \text{if the client did not use discount.} \end{cases}$$

y – the discount for a service, $y=[0;1]$.

When using this option of credit policy, the expected amount of accounts receivable is minimized under the influence of the stimulating effect of discounts, and the amount of advance payments is reduced.

VII. CONCLUSIONS

The issue of effective receivables management is of particular importance for telecommunications companies in the modern business environment since it causes the direct withdrawal of cash from circulation. The process “Receivable Management” should be based on the level of receivables in order to prompt action to bring it to the optimum state under certain conditions of the enterprise. Policy regarding receivables management, primarily, is aimed at expanding the supply of services, optimizing the

size of receivables and its timely repayment, efficient use of working capital to finance the development of enterprises.

Receivables management is implemented through the development of monetary policy, the effectiveness of which is determined by the actual level of receivables to its optimum value.

REFERENCES

- [1] Прикладная статистика. Основы эконометрики: Учебник для вузов: В 2 т. 2-е изд., испр. – Т. 2: Айвазян С. А. Основы эконометрики. – М.: ЮНИТИ-ДАНА, 2001. – 432 с.
- [2] John G Salek. Accounts receivable management best practices. – Hoboken, N.J.: John Wiley & Sons, 2005. – 214 p.
- [3] Брю Г. Шесть сигм для менеджеров. – Пер. с англ. В.Н. Егорова. – М.: ФАИР-ПРЕСС, 2004. – 272 с.
- [4] Шер А.В. Моделирование бизнес-процессов. – М: Весть-МетаТехнология, 2000. – 224 с.
- [5] Hunter, Jane M., Thiebaud, Maud E. Telecommunications Billing Systems: Implementing and Upgrading for Profitability. — N. Y.: McGraw-Hill, 2003. — 458 p.
- [6] Суслов В.И., Ибрагимов Н.М., Тальшева Л.П., Цыплаков А.А. Эконометрия: Учебное пособие. – Новосибирск: Издательство СО РАН, 2005. – 744 с.
- [7] Багрова І.В., Макєєва Н.С. Визначення оптимального обсягу дебіторської заборгованості // Економічний вісник НГУ. – 2006. – №4. – С. 30-40.
- [8] Корзаченко О.В. Оптимізація процесу управління дебіторською заборгованістю телекомунікаційного підприємства // Стан та перспективи розвитку фінансової системи України. Колективна монографія / Під ред. д.е.н., професора О.О. Непочатенко. – Умань: Видавець «Сочінський», 2012. – 324 с.
- [9] Лучков О.І. Визначення оптимального розміру дебіторської заборгованості // Актуальні проблеми економіки. – 2003. – №1. – С. 22-26.
- [10] Маслов С.И. Управление и прогнозирование дебиторской задолженности // Финансовая тема.– 1998.– № 10.
- [11] Масино М.Н. Методы и модели дефолта предприятий-заемщиков при принятии кредитных решений: автореф. дис. к.э.н: 08.00.13 / Масино Мстислав Николаевич. – СПб: С.-Петербург. гос. инженер.-эконом. ун-т, 2008. – 18 с.
- [12] Мурадов Д.А. Прогнозирование и оценка банкротства нефтегазовых компаний: автореф. дис. к.э.н: 08.00.05 / Мурадов Дмитрий Александрович. – Москва: Российском государственном университете нефти и газа им. И.М. Губкина, 2011. – 28 с.
- [13] Enhanced Telecommunications Operations Map. – [Online]. Available: <http://taskmap.com/eTOM%20-%20Assurance.htm> [Accessed: Oct. 2, 2012].
- [14] Аристархова М.К., Валиев Ш.Н. Повышение эффективности управления дебиторской задолженностью предприятия путем создания имитационной модели управления. – [Online]. Available: http://www.ogbus.ru/authors/Aristarkhova/Aristarkhova_1.pdf [Accessed: Oct. 2, 2012].
- [15] Ковалев С.М., Ковалев В.М. Методы анализа и оптимизации бизнес-процессов. – [Online]. Available: <http://www.betec.ru/index.php?id=06&sid=51> [Accessed: Oct. 2, 2012].
- [16] Спивак М.А. Применение концепции Six-Sigma при оптимизации бизнес-процессов. – [Online]. Available: <http://www.six-sigma.ru/?id=119> [Accessed: Oct. 2, 2012].

Mykhailo Sverdan works at the Chair of Finance and Banking, the university “KROK”, Kyiv. He has a degree of Candidate of Economic Sciences (2002). Fields of research include corporate finance, financial management and business process. E-mail: sverdanof@ukr.net

Olga Korzachenko is currently an Assistant at the Department of Information Management. She is a graduate student of the study program “Mathematical Methods, Models and Information Technology in Economics” at Vadim Getman Kyiv National Economic University. She received a bachelor’s degree (2007) and master’s degree (2008) in economic cybernetics from Vadim Getman Kyiv National Economic University. The fields of research include process approach, business process modelling, business-process-optimization, IT management, IT project management and finance management. E-mail: flames@ukr.net

Mihails Sverdans, Olga Korzachenko. Debitoru vadība: telekomunikāciju uzņēmuma problemātisko biznesa procesu optimizācija

Biznesa process "Debitoru vadība" ieņem svarīgu vietu telekomunikāciju uzņēmuma finanšu vadības sistēmā, kā arī uzņēmuma darbībā kopumā. Dotā biznesa procesa optimizācijas nepieciešamība tiek noteikta pēc tā ietekmes uz finansēm. Rakstā tiek noskaidrots, pie kādām noteiktām optimālām debitoru summas parāda vērtībām ir novērots peļņas palielinājums. Tajā pašā laikā nepamatotas palielināšanas rezultātā no tirgus tiks novirzīti līdzekļi un samazināsies peļņa. Zemas debitoru parādu līmenis ne vienmēr pozitīvi ietekmē uzņēmuma rentabilitāti. Praktiskā pieredze rāda, ka bieži vien arī debitoru samazinājums ir saistīts ar lojalitātes politikas trūkumu pret uzņēmumu klientiem, atteikšanās no rekomiāliem aizdevumiem, kas savukārt samazina pārdošanas apjomu. Šajā rakstā aprakstīts biznesa procesa "Debitoru vadība", optimizācijas pieeja metodikas "6 Sigma" ietvaros. DMAIC cikla ietvaros piedāvāts optimizācijas darbību komplekss, proti: biznesa procesa atbilstības novērtējuma sistēmas izstrāde, tipveida shēmas eTOM paplašināšana, un kredīta politikas noteikumu modeļošana. Tiek atzīmēts, ka galvenais elements biznesa procesā "Debitoru vadība" ir kredītu politika, kas tiek īstenota uz klientu orientētas pieejas ietvaros. Ņemot vērā finanšu un ekonomisko nestabilitāti, efektīvi īstenota kredītu politika nodrošinās uzņēmumam debitoru līmeņa tuvošanos optimālai vērtībai, samazinās bezcerīgo debitoru izveidošanās risku (tie, kas par pakalpojumiem nav samaksājuši savlaicīgi), kā arī nodrošinātu klientu datu bāzes papildinājumu. Pētījums pievērsās pakalpojumu apmaksas diferenciacijai atkarībā no iespējamās klientu maksājumu parādu veidošanās. Lai noteiktu iespējamību, piedāvāts lietot logit regresijas matemātisko modeli, kas ir balstīts uz debitoru novērtējuma datiem - klientu pakalpojumiem.

Михаил Свердан, Ольга Корзаченко. Управление дебиторской задолженностью: оптимизация проблемных бизнес-процессов телекоммуникационного предприятия

Бизнес-процесс «Управление дебиторской задолженностью» занимает ключевую позицию как в системе финансового менеджмента телекоммуникационного предприятия, так и в его операционной деятельности. Необходимость оптимизации данного бизнес-процесса определяется его влиянием на финансовый результат деятельности. При определенном оптимальном значении суммы дебиторской задолженности наблюдается максимизация прибыли. В то же время, неоправданное ее увеличение влечет за собой отвлечение средств из оборота и, соответственно, снижение прибыли. Низкий уровень дебиторской задолженности также не всегда положительно влияет на прибыльность предприятия. Практический опыт показывает, что зачастую снижение дебиторской задолженности возникает вследствие отсутствия политики лояльности к заказчикам услуг предприятия, отказа от коммерческого кредитования, что, в свою очередь, минимизирует объемы продаж. В статье рассмотрен подход к оптимизации бизнес-процесса «Управление дебиторской задолженностью» в рамках методологии «6 сигма». В пределах цикла DMAIC предложен комплекс оптимизационных действий, а именно: разработка системы показателей оценки бизнес-процесса, расширение типовой схемы бизнес-процессов eTOM, а также моделирование правил кредитной политики. Отмечено, что ключевым элементом бизнес-процесса «Управление дебиторской задолженностью» является кредитная политика, осуществляемая в рамках клиентоориентированного подхода. В условиях финансово-экономической нестабильности внедрение эффективной кредитной политики обеспечит предприятию приближение уровня дебиторской задолженности к оптимальному значению, минимизацию рисков возникновения безнадежной дебиторской задолженности и своевременную оплату за услуги, а также прирост клиентской базы. Исследование фокусируется на дифференциации правил предоставления и оплаты услуг в зависимости от вероятности образования дебиторской задолженности у клиента. Для определения вероятности предложено использование математической модели логит-регрессии, которая основывается на данных проведенной оценки дебиторов – заказчиков услуг.