STREAMLINING THE MANAGEMENT OF CORPORATE ACCOUNTS RECEIVABLE*

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The paper assesses the importance of corporate receivables to the financial position of companies nowadays. The process of streamlining corporate accounts receivable relates to maintaining their value within such limits which would be sufficient to ensure covering short-term corporate accounts payable without having to resort to additional sources of financing. The contents of the research paper is presented in two logically connected parts. Part one reviews the methods and approaches to corporate accounts receivable management which have been established in financial theory. Part two presents an analysis of the accounts receivable of six Bulgarian public companies. According to achieved financial results, each company has been positioned within a matrix illustrating the correlation between accounts receivable and sales volumes, following the Gentry-De La Garza model. The views of the authors on related issues are based on the conducted research and are presented as research findings and conclusions.

Keywords: corporate accounts receivable, sales revenue, public companies

МОНИТОРИНГ УПРАВЛЕНИЯ ДЕБИТОРСКОЙ ЗАДОЛЖЕННОСТЬЮ ПРЕДПРИЯТИЯ

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The authors use as synonyms the concepts firm, corporation, business enterprise and company. The same applies to the concepts of inventory and production inventory. The authors have adopted this approach to avoid using repeatedly the same financial terms.

Настоящая статья посвящена исследованию влияния дебиторской задолженности на финансовое положение современных компаний. Рационализация требований к управлению дебиторской задолженностью связана с необходимостью поддержания ее величины в пределах, достаточных для покрытия краткосрочных корпоративных обязательств без необходимости привлечения дополнительных источников финансирования. В статье рассмотрены вопросы выработки политики платежей, соблюдение которой позволит сохранить нормальное финансовое состояние компании. Исследовано влияние роста дебиторской задолженности на дополнительные издержки компании и, как следствие, на ее финансовые результаты. Работа состоит из двух частей, логически связанных между собой: в первой рассматриваются методы и подходы, сформулированные и обоснованные в финансовом менеджменте в части управления дебиторской задолженностью компании; во второй – на фактических данных проведен анализ дебиторской задолженности шести болгарских публичных компаний, каждая из которых в соответствии с достигнутыми результатами позиционируется в матрице, отражающей взаимосвязь между дебиторской задолженностью и объемом продаж на примере Gentry и Garza. Позиция авторов по исследуемой проблеме сформулирована на основе результатов проведенного анализа данных и изложена в заключительных выводах.

Ключевые слова: корпоративная дебиторская задолженность, выручка от продаж, публичные компании.

Introduction

The rational management of corporate accounts receivable leads to an increase in cash; ensures the prompt payment of accounts payable and reduces costs of attracting additional capital. It is therefore essential that each corporate entity maintains the level of its accounts receivable at a sufficient level to prevent delays in cash inflows or missed opportunities for selling the products of the company. In our research, we analyse some methods of managing corporate accounts receivable, which makes it possible to rationalize their value.

Due to the financial crisis, intercompany indebtedness has grown immensely over the past few years, which has had a dramatic effect on the economic situation in the country. The main drivers of economic growth, companies, are key agents in the process of creating products of labour that are the primary source of income to economic agents, i.e. the state and households. Within this context, the issue of corporate accounts receivable and their management has become a major one. Hence, ***the objective of this paper*** is to make a critical analysis of contemporary methods of managing corporate accounts receivable and to apply and test a technology for streamlining the accounts receivable of Bulgarian public companies.

The efficient management of short-term company assets is a prerequisite for maintaining the solvency of business entities and raising their financial stability. In some cases, maintaining a high turnover of current assets and ensuring the prompt collection of accounts receivable enables companies to pay their short-term accounts payable without having to use any alternative sources of short-term financing. Therefore, the analysis of current assets refers mainly to their major elements, such as: inventory, accounts receivable and cash, and seeks to identify their optimum level in terms of desired profitability and the risk inherent to them [1]. Management of current assets is an element of the operating cycle of companies measured in the number of days from purchasing production supplies to the moment of receiving the money for products sold.

Within the specified time period, the sub-process of corporate accounts receivable management is essential, since it determines the efficiency of corporate activity and is a major source of the cash necessary to maintain the pace of production even.

Corporate accounts receivable are managed by applying various approaches to the analysis of their value, some of the major ones [1, p. 114] being:

• *The method of accounting documents* – this method is based on the data presented in the financial statements of companies and provides information about estimated cash inflows and outflows in terms of corporate accounts receivable and accounts payable;

• *The equilibrium approach, which is based on the time value of money* – this approach relates to the use of commercial credit, when the cash flows from operating activities exceed financing costs;

• *The ratio method* which is based on employing different financial ratios to establish the condition of and changes in the value of corporate accounts receivable;

• *Timing of debtors' indebtedness* – this approach is based on the preparation of tables which indicate the timing of accounts receivable. These tables are used to record the moment of cash inflows currently and during previous periods;

• *The method of financial ratios* which further elaborates the method above. It involves recording the share of cash inflow from sales which will be received during the current period and the share of the transaction value which is recorded as an account receivable.

I. Aspects of the Management of Corporate Accounts Receivable

The integrated management of short-term investment requires maintaining a high turnover of current assets, so as to ensure sufficient liquidity for covering the current and long-term payments of the company. The success of a business depends on maintaining the turnover of current assets at a level ensuring sufficient capital to meet cash discounts on purchases, to keep low the cost of collection and losses and to maintain a reasonable standard of efficiency [2, p. 112]. The management of corporate accounts receivable is of crucial importance to that process. Rational management of accounts receivable provides funds for investing in assets to ensure the smooth running of production. Accounts receivable may most broadly be defined as the cash which companies expect to receive from their customers for the products they have sold. Financial theory and practice identify different types of accounts receivable according to the collection schedule [3]:

• *Current accounts receivable* are the accounts receivable which business entities expect to collect during the regular operating cycle and within the current reporting period;

• *Fixed-term accounts receivable* are the accounts receivable on transactions for which the company has negotiated payment in installments;

• *Arrears* are accounts receivable formed after the term of payment set in the contract has expired. They are also referred to as 'doubtful' accounts receivable, since companies may doubt the possibility to collect them in full;

• *Write-offs* – these are accounts receivable which will positively not be collected due to a significant default on the term of the transaction.

This classification of corporate accounts receivable equips financial managers with information about the structure of accounts receivable and the appropriate actions they

need to initiate in terms of their management. Arrears, for example, entail a substantial risk. Hence, the bigger the value of arrears, the worse the liquidity of the company will be due to the delayed turnover of assets. In this case, the company will need additional funds, and the risk of uncollectibility will be higher, which will hinder the regular performance of the enterprise.

The existence of accounts receivable is a must in market economy, and credit sales are becoming increasingly popular. Therefore, scientists across the globe have been paying greater attention to different methods of managingaccounts receivable in an effort to identify an instrument for reducing the collection periods of such payments and optimizing corporate performance.

The technique employed to classify accounts receivable according to the number of days a payment has been defaulted with[1] has become extremely popular in financial theory [4, p. 8]. The size of fines and sanctions in each group is determined according to the the number of days a payment has been defaulted with. Leitch and Lamminmaki employ a similar approach in their research of the correlation between the number of days a payment has been defaulted with and the possibility to collect the accounts receivable of the company [5]. Their analysis has established a positive correlation between credit sales and the aging schedule of accounts receivable. It also provides supporting evidence that credit sales are positively correlated with the rate of collectability. In a research dealing with the management of accounts receivable, Enzhu Li [6] points out that in the contemporary economic environment many companies cannot manage their accounts receivable properly, and it is therefore necessary to design a system of overall and systematic analysis of problem issues in risk management and the reasons underlying that risk.

Lixin and Jiao [7] also deal with that problem and present a detailed system for managing the accounts receivable of small and medium-sized enterprises. They analyse contemporary methods and concepts which relate to the risk diversification of corporate accounts receivable management based on their research of the problems existing in small and medium-sized enterprises. They propose a four-component internal company system of accounts receivable management (see fig. 1) which aims to ensure total control over each stage of a commercial transaction.

A certain correlation has been established between the volume of sales and the accounts receivable of companies. As a matter of fact, the sales policy is determined by two major components: crediting the customers who buy the products of the company and the sums which the business entity has to pay to its suppliers. Therefore, streamlining the accounts receivable of a company enables business entities to ensure the cash required for running their production smoothly and to reduce the risk of additional external financing. A good method for identifying the correlation between sales volumes and the value of accounts receivable is that proposed by Gentry-De La Garza [8]. In their research, the authors elaborate further Gallinger and Ifflander's findings [9] and present the correlation between the two variables through a matrix (fig. 2). There are nine possible situations illustrating changes in the sales volumes and in the accounts receivable of companies.

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[1]The categorization includes 5 (five) time intervals which reflect the aging of the accounts receivable as follows: 0 days; 0–30 days; 30–60 days; 60–90 days; more than 90 days.
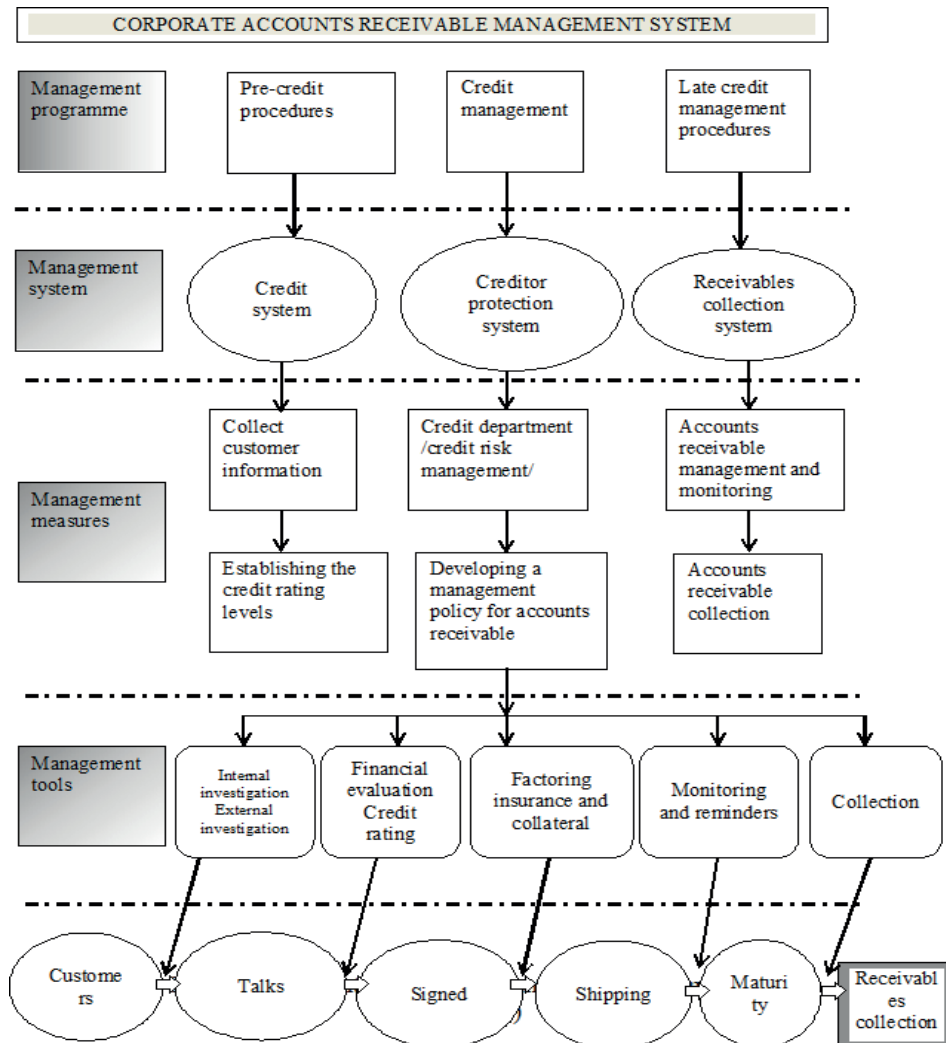
Fig. 1. Corporate accounts receivable management system [7, p. 386].

	Sales volumes		
	Increase	No change	Decrease
Increase	8	2	5
No change	7	1	4
Decrease	9	3	6

(Left axis label: **Accounts receivable**)

Fig. 2. Matrix of the correlation between the accounts receivable and the sales volume of companies.

Quadrant one (1) of the matrix presents a situation in which there is no change in the sales pattern or in the collection experience of the company. The change in the accounts receivable illustrated in quadrant two (2) might be due to some change in the collection experience of accounts receivable. The increased value of accounts receivable may, for example, result from a more lenient credit policy of the company due to the deteriorated financial position of customers and their inability to make payments in due time. This, in turn, results in lower collectability, yet it does not affect the sales volume achieved previously. Alternatively, the

decrease of accounts receivable illustrated in quadrant three (3) might be due to the stricter credit policy of companies forcing their customers to make their payments duly, which does not result in a lower sales volume, either.

In quadrants four (4) and seven (7), the increase or the decrease in the sales volume does not affect the accounts receivable of the company. This situation occurs when the entire volume of sold products is paid at the moment of delivery, i.e., entries in the accounts receivable remain the same regardless of positive or negative changes in the sales volume.

Quadrant eight (8) illustrates a situation in which both analysed variables increase simultaneously. There is a simultaneous increase in the sales volume and in the value of accounts receivable, which might be accounted for by the credit policy of the company. A lenient credit policy affects sales negatively, which in turn results in increased demand and hence, in growing sales. Increased demand generates a larger sales volume and leads to an increasing amount of accounts receivable, thus posing the threat of losses incurred due to the lower collectability rate in future. As a matter of fact, the method of payment has a direct impact on the accounts receivable.

Quadrant six (6) illustrates a situation in which a strict credit policy is observed, and as a result there is a negative trend in the values of accounts receivable and of sales volume. The implications of the credit policy may be twofold. On the one hand, a strict credit policy may result in lower volumes of sales and accounts receivable, while credit sales may lead to increasing accounts collectible, yet they may also increase the risk of bad debt. A lower sales volume may be the result of implementing a stricter credit policy, which will result in lower sales volumes and accounts receivable.

Quadrants five (5) and nine (9) illustrate the effect of two opposing forces upon the sales volume and the value of accounts receivable. In quadrant five (5), there is an increase in accounts receivable as a result of a lenient credit policy, which results in lower sales volumes in the long run. Whether there will be an upward or downward trend in the change of accounts receivable, depends on which has a stronger impact – the decreasing demand for the products of the company or the credit policy of the business enterprise. Quadrant nine (9) illustrates the most favourable policy to be implemented by a company, i.e., there is a simultaneous decrease in corporate accounts receivable and an increase in the sales volume, which is due to the increased demand for the products of companies and prompt payments made by their customers.

In summary of the correlation presented between sales volumes and corporate accounts receivable in the matrix, it is possible to identify the credit policy implemented by a company and the analysis instruments employed by the financial manager. Hence, financial managers need to employ various methods of monitoring the collectability of corporate accounts receivable.

An issue logically related to the management of corporate accounts receivable is how financial managers should combine the terms of the corporate credit policy and the sales policy of the company. As a matter of fact, the rational management of accounts receivable ensures the collection of accounts receivable through consistent, intelligent and efficient credit collection policies [10, p. 172]. Combining the implementation of corporate policies with the execution of the requirements set in them makes it possible to collect the accounts receivable without violating related legal requirements. We should note that Bulgarian legislation has adopted stricter measures to combat late payments on commercial transactions in compliance with

the requirements set in Directive 2011/7/EU[2]. According to the Directive, 'Many payments in commercial transactions between economic operators are made later than agreed in the contract or laid down in the general commercial conditions. Although the goods are delivered or the services performed, many corresponding invoices are paid well after the deadline. Such late payments negatively affect liquidity and complicate the financial management of undertakings. They also affect their competitiveness and profitability when the creditor needs to obtain external financing because of a late payment. The risk of such negative effects increases dramatically in periods of economic downturn, when access to financing is more difficult[3].

The collection of accounts receivable may be defined as a continuous and consistent process, the implementation of which requires designing a specific policy to meet the objectives of the business enterprise. The type of policy that will be implemented by a company depends on a number of factors, the major ones of them being: the type of business; the values of sales and earnings; the level of competition; the financial position of customers, etc. Hence, designing a system for collecting corporate accounts receivable is of paramount importance. Such a system should be based on the choice of instruments which will be most efficient in producing the desired effect on the collection of accounts receivable within a specific period [2, p. 118].

II. Streamlining the Management of Accounts Receivable in Selected Bulgarian Public Companies

The system presented below is a further elaboration of the methods and models for managing corporate accounts receivable we have analysed so far and consists of three stages (fig. 3), each of them based on approaches which have been well established in economic practice: the method of accounting data (based on collecting and processing data from financial statements and then analysing the condition of corporate accounts receivable); the method of ratio analysis (i.e., designing a system of ratios to be employed as an instrument for evaluation of corporate accounts receivable) and positioning companies in the matrix of accounts receivable and accounts payable according to the Gentry-De La Garza model.
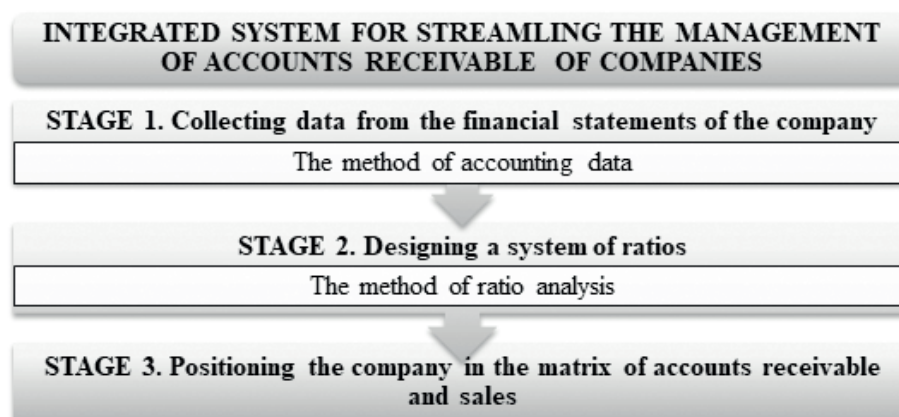
Fig. 3. Integrated system for streamlining the management of accounts receivable of companies.

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[2]Directive 2011/7/EU of the European Parliament and of the Council, Art. 2, Para. 4. (2011, February 23). Retrieved April 13, 2016, from http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:048:0001:0010:bg:PDF.
[3]The Directive defines payments not made within the contractual or statutory period of payment as 'late payments.

Our selection of companies to be included in the scope of our analysis is in line with the requirement to focus on companies whose activity is mainly in terms of production and sale of products (i.e. real goods and services). We have therefore chosen five companies with the SOFIX index and left outside the scope of our research holdings and commercial banks.

In our research, the system for streamlining corporate accounts receivable is tested on Bulgarian public companies which are included in the SOFIX index of the Bulgarian stock exchange. Financial data about these corporate entities is publicly accessible, which makes possible the empirical analysis of their accounts receivable within a specified time period. Testing the system will enable financial managers to streamline their policies improve the liquidity, solvency and financial stability of companies.

STAGE 1. Collecting data from the financial statements of the company

To implement the first stage of the system it is necessary to have data from two major financial documents of business entities – the balance sheet and the income statement. Based on the data obtained from these documents, key indicators are calculated to evaluate the condition of corporate accounts receivable. We need to emphasize, though, that the companies we analyse in our research operate in different spheres and sectors, which determines the different values of their short-term assets, inventory, accounts receivable and accounts payable.

A financial analysis of corporate balance sheets reveals that there are two major categories of assets – long-term assets and short-term assets. In line with the objectives of our analysis, the focus of our attention is on short-term assets. These include inventory, accounts receivable, investments and cash (National Accounting Standard 1 – Presentation of financial statements, 2005[4]). As evident from any corporate balance sheet, accounts receivable are a major category in the group of highly liquid assets for a large part of manufacturers and wholesalers [10, p. 172].

It is therefore necessary to calculate the value of corporate accounts receivable as a share of the sum of their short-term assets (Table 1).

Table 1. The share of accounts receivable in the sum of short-term assets of analysed companies

No.	Company	2010	2011	2012	2013	2014	2015
1.	Neochim PLC	34%	39%	32%	45%	34%	16%
2.	Monbat PLC	63%	60%	58%	57%	61%	60%
3.	Albena PLC	58%	77%	72%	49%	53%	54%
4.	Sopharma PLC	63%	71%	78%	69%	69%	61%
5.	M+S Hydraulic PLC	34%	33%	35%	43%	38%	33%
6.	Chimimport PLC	60%	68%	68%	72%	59%	69%

The values of the accounts receivable of the analysed companies within a five-year period indicate that in 67% of the cases (i.e., 4 out of 6 companies) the value of accounts receivable exceeds 50% of the total sum of short-term assets. This confirms the statement made earlier that accounts receivable have the biggest share in the group of highly liquid assets. The significant value of the entries made in accounts receivable clearly indicate the importance of this category of corporate assets. Therefore, the next stage in their management requires analysis and evaluation so as to establish the condition of and trends in analysed companies.

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[4]Natsionalen schetovoden standart 1 – Predstavyane na finansovi otcheti. National Accounting Standard 1 – Presentation of financial statements (2005, April 7). SG. No. 30.

STAGE 2. Designing a system of ratios

Financial managers often employ the ratio analysis method, despite the disadvantage that the method can only provide information about the condition of accounts receivable as of a particular moment, i.e., the moment of preparing the balance sheet. Financial ratios are based on correlations between the items in financial statements. They facilitate the interpretation of the correlations between balance sheet items and identifying trends in the development of companies [11, p. 22]. Due to their nature, corporate accounts receivable are an extremely dynamic category. It is therefore possible that their condition at a later moment might totally differ from the condition registered earlier. Nevertheless, the ratio analysis method is widely employed as it is based on the stability of corporate assets.

Analysis ratios are selected according to the significance of the information they provide to financial managers and the possibility to adequately evaluate the value and the condition of corporate accounts receivable. We should note that financial literature abounds in numerous versions of the ratios presented here [5, p. 5; 1, p.114; Analysis of Receivable Management[5], p. 199] . Each of them is used to analyse some aspect of corporate accounts receivable. Our choice of ratios was influenced by the objectives of our research. Each ratio is calculated on an annual basis over the entire analysed period (from 2011 to 2015) (Table 2).

Table 2. Ratios employed in the analysis of corporate accounts receivable
[12, p. 307; Balance Sheet Ratios[6]]

| *Accounts receivable turnover*	Sales/(Average size of accounts receivable)	Measures the rate at which accounts receivable are being collected on an annual basis.
Average collection period in days	360/Accounts receivable turnover	Converts the accounts receivable turnover ratio into the average number of days the company must wait to be paid.
Accounts receivable/Accounts payable ratio	Accounts receivable/Accounts payable	Indicates the ability of the company to pay its current liabilities through its accounts receivable.

The ratio of Accounts receivable turnover is a key efficiency ratio applied to corporate policies on the collection of accounts receivable. The ratio measures how fast accounts receivable are turned into cash. The ratio measures how many times a business can turn its accounts receivable into cash, i.e., how many times the cycle of accruing and collecting accounts receivable is repeated within a year [12, p. 307]. The key role of that ratio is also due to the fact that it is used to measure the efficiency of the accounts receivable collection policy. Although there are no strictly defined margins for the value of the ratio, it is generally accepted that the higher the value, the longer the period of the commercial credit provided by a business entity.

According to the requirement on the high rate of accounts receivable turnover, the best performing company is Albena PLC, which maintained the highest values of turnover rate ranging between 8,754 and 18,601 times. M+S Hydraulic PLC and Monbat PLC rank second and third with nearly equal values of the turnover rate. The average turnover rate maintained

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[5]Analysis of Receivable Management (n.d.). Retrieved January 22, 2016, from http://shodhganga.inflibnet. ac.in/bitstream/10603/723/11/11_chapter%206.pdf.
[6]Balance Sheet Ratios (n.d.). Retrieved January 30, 2016, from https://www.suu.edu/business/sbdc/pdf/balancesheetratios.pdf.

during the period by M+S Hydraulic PLC was 6,352, while that of Monbat PLC was 4,850. Sopharma PLC maintained a relatively steady turnover of nearly 1,500 over the entire period. The lowest rate of turnover was registered by Neochim PLC and Chimimport PLC, which ranked at the bottom with values of 71 and 39 times (see fig. 4). As a result of the conducted analysis it is possible to identify four contingent groups of companies. The only company in group one is Albena PLC with the highest rate of turnover. M+S Hydraulic PLC and Monbat PLC are in group two with their relatively high rates of turnover. In group three, there is only one company, Sopharma PLC. Neochim PLC and Chimimport PLC are in group four, their rate of turnover being the lowest. The analysed ratio directly correlates to the number of days which a company needs to collect its accounts receivable. The higher the value of the accounts receivable turnover rate, the fewer the days which the company needs to collect its accounts receivable, which also indicates an inverse relationship.
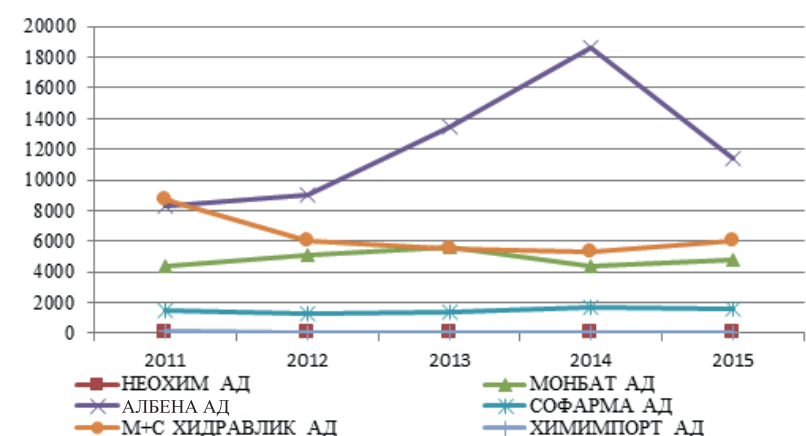

Fig. 4. Turnover of the accounts receivable (y-axis – turnover rate) of Bulgarian public companies [НЕОХИМ АД – NEOCHIM PLC; МОНБАТ АД – MONBAT PLC; АЛБЕНА АД – ALBENA PLC; СОФАРМА АД – SOPHARMA PLC; М+С ХИДРАВЛИК АД – M+S HYDRAULIC PLC; ХИМИМПОРТ АД – CHIMIMPORT PLC].

The ratio of the average collection period in days converts the accounts receivable turnover rate into the average number of days in which a company expects to collect its account receivables. The ratio is also known as days of credit sales and indicates the number of days which a company needs to collect its accounts receivable from credit sales. Their number is calculated by dividing the days within a calendar year into the accounts receivable turnover rate [12, p. 308]. A comprehensive and accurate analysis of accounts receivable requires that the average collection period be compared to the collection periods of other companies in the sector. When the collection period is longer than those in previous reporting periods or than those of other companies operating in the same sector, companies need to make adequate adjustments to their policies in terms of credit sales, accounts receivable monitoring and collection.

An increase or decrease in the value of the ratio indicates two major trends – towards an improvement or a deterioration of the collection policy or some change in the financial situation of a company's customers. As the inability of customers to pay the sums they owe does not depend directly on companies, the focus of attention should be shifted towards the financial management policy of the company and corporate governance.

Due to the inverse relationship between the average collection period ratio and the ratio of accounts receivable turnover, Chimimport PLC is the company which needs the fewest days to
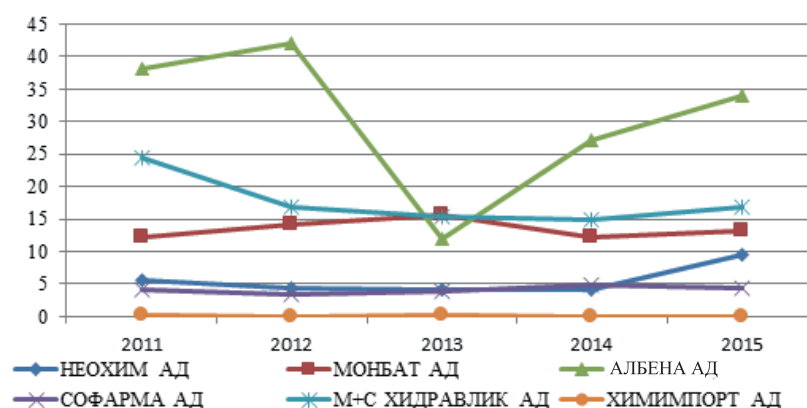
Fig. 5. Average collection period of accounts receivable (y-axis – days)
of Bulgarian public companies.

collect its accounts receivable – 0.11 days. The highest value of the ratio is the one registered by Albena PLC. There was a trend towards an initial increase of the ratio in the period from 2011 to 2012, followed by a dramatic decrease from 42 days (in 2012) to 12 days (in 2013). Nevertheless, even the value of 42 days for the ratio does not pose a threat to the liquidity of the company, since the accounts receivable are collected within the current quarter of the year. We should note the dependency between the accounts receivable and the liquidity of a company: the higher the size of corporate accounts receivable, the poorer the liquidity of a company. Credit sales reduce cash inflows and thus lead to a decrease in available cash. In other words, the customers of a company benefit from its cash without being charged an interest for that. Monbat PLC and M+S Hydraulic PLC registered roughly equal values over the entire analysed period within a calendar month (of 30 days). The values registered by Sopharma PLC and Neochim PLC were favourable, too. On the one hand, this was due to the high rate of accounts receivable turnover, while on the other hand that was the result of the restrictive credit policy implemented by the companies. The average value of the ratio for Sopharma PLC was 4.15 days, and that of Neochim PLC was 5.57 days.

Another key indicator of the collection policy of accounts receivable directly relates to corporate liquidity. The Accounts receivable/Accounts payable ratio reveals the ability of companies to cover their short-term accounts payable with the value of accrued accounts receivable. The value of that ratio indicates whether the accounts receivable of the business entity are managed rationally. It also correlates to corporate solvency: the lower the rate of accounts receivable turnover, the lower the solvency of the company, since accounts receivable are one of the potential sources of funds for making corporate payments.

In business practice, the amount of accounts payable normally exceeds the amount of accounts receivable due to the specific nature of some short-term accounts payable (such as payment of salaries and wages; social security contributions; taxes, etc.). Therefore, the accounts receivable are efficiently managed only when that ratio is below one (1), thus ensuring the higher liquidity and financial independence of the enterprise.

Values slightly above or below one (1) are also acceptable for that ratio, as they will not pose a threat to the performance of the company. However, values higher than one (1) indicate

that the company cannot collect its accounts receivable within short periods and allows its customers to benefit from corporate capital without being charged an interest.

The graphical presentation of the data (see fig. 6) illustrates the trend in terms of the correlation between corporate accounts receivable and payable.
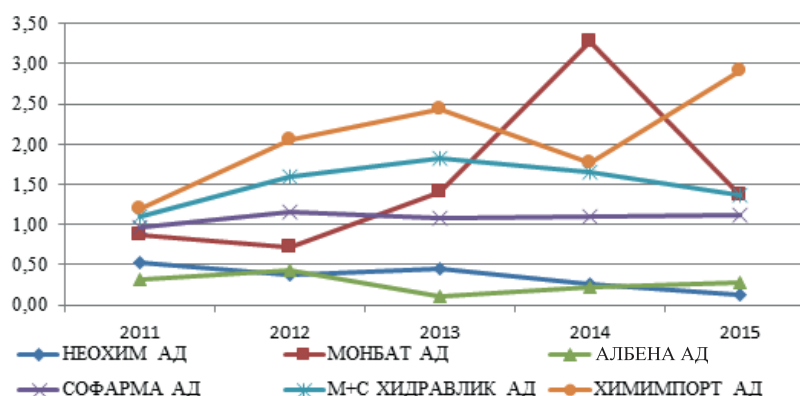

Fig. 6. Accounts Receivable/Accounts Payable of Bulgarian public companies.

According to the criterion set, Sopharma PLC is the company in the most favourable situation, the value of its ratio fluctuating around one (1) over the entire analysed period (from 2011 to 2015). Albena PLC and Neochim PLC are the other two companies which performed well, the value of the ratio being below one (1) throughout the entire period and decreasing steadily. A similar policy indicates efficient management of accounts receivable and the ability of companies to fully cover their current account payable through collected accounts receivable. According to the applied criterion, Chimimport PLC was in a less favorable situation, and so were M+S Hydraulic PLC and Monbat PLC over the last years of the analysed period, there being a trend towards a continuous growth of the ratio which significantly exceeded the optimum level equaling one (1). A similar policy forces companies to seek additional sources of financing (bank loans) due to the insufficient revenue from sales for covering their liabilities within the reporting period. In general, this poses a threat to the financial stability of business enterprises and is indicative of inefficient and irrational management of accounts receivable and/or an excessive increase in corporate liabilities and therefore requires that adjustments to the financial policy of the company be made.

STAGE 3. Positioning the company in the matrix of accounts receivable and sales

Implementing the final stage of the integrated system for assessing corporate accounts receivable is based on the Gentry-de La Garza matrix of the correlation between corporate accounts receivable and the volume of sales. The objective is to position each company in a quadrant of the matrix according to the trends in the development of those two key ratios. It would thus be possible to judge whether the policy of each company needs to be changed and identify an appropriate line for its development in future.

The trends towards an increase or a decrease of both variables are identified by applying a comparative analysis to the values of the accounts receivable and sales volume of Bulgarian public companies in each of the years included in our research period (from 2011 to 2015). These trends are monitored by modeling the trend line presented in fig. 7 and fig. 8. This enables
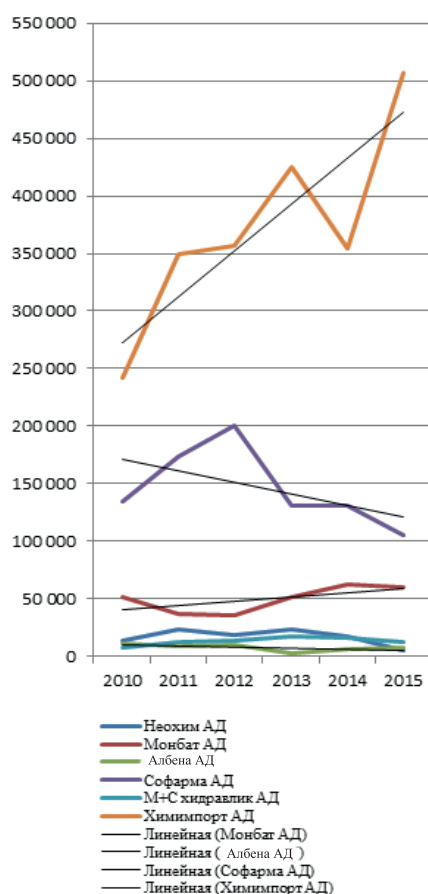
Fig. 7. Trends in the accounts receivable of Bulgarian public companies.
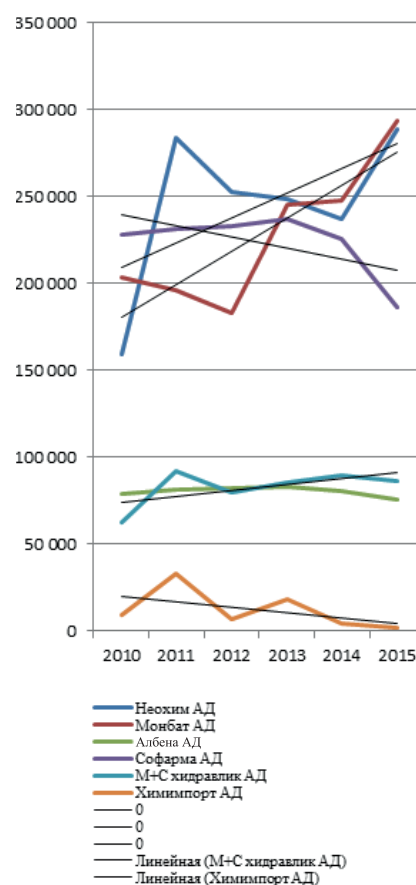

Fig. 8. Trends in the sales of Bulgarian public companies.

us to pinpoint the position of each company in the matrix (fig. 9) based on the considerations presented in the research of Gentry-De La Garza [8, p. 29].

Adopting the Gentry-De La Garza matrix for Bulgarian public companies supports the view stated earlier that Neochim PLC is the company with the most rational management of accounts receivable. The company is positioned in quadrant nine (9) which presents the most favourable situation combining an increase in corporate sales and a decrease in corporate accounts receivable. This situation renders the company successful on the market and reliant on the loyalty of its customers, which boosts the demand of the company produce.

		Sales volume		
		Increase	No change	Decrease
Receivables	Increase	**8** **Monbat Plc**	**2**	**5** **Chimimport Plc.**
	No change	**7** **M+S Hydraulic Plc.**	**1**	**4**
	Decrease	**9** **Neochim Plc.**	**3** **Albena Plc.**	**6** **Sopharma Plc.**

Fig. 9. Positioning of Bulgarian public companies in the matrix by studying the correlation between their accounts receivable and sales volumes.

M+S Hydraulic PLC is positioned in quadrant seven (7) which describes a situation of increasing sales volumes and a constant value of the accounts receivable. As we have already noted, a similar situation is present when the total volume of products sold is paid for at the moment of their delivery, i.e., entries in the accounts receivable remain the same despite the change in the sales volume. The accounts receivable of the company remain steady, which increases the number of days in which payments are defaulted.

Monbat PLC is positioned in quadrant eight (8) where the situation is one of a simultaneous increase in the sales volume and in the value of the accounts receivable. A similar situation occurs when companies change their credit policies and encourage their credit sales. In this case, every unit of produce is sold on commercial credit, and both values grow simultaneously at the same rate.

Quadrant six (6) presents a situation in which companies employ a stringent credit policy, which results in a negative trend in the values of accounts receivable and sales. This is the quadrant where Sopharma PLC is positioned. As a matter of fact, this situation may occur when a company fails to collect its previous accounts receivable and does not make new sales, thus exposing to risk both its liquidity and solvency.

Albena PLC is positioned in quadrant three (3) where accounts receivable decrease while the volume of sales remains steady. This might be due to a tighter credit policy which requires customers to make prompt payments. On the other hand, a company may improve its collection policy on previous accounts receivable without making any new sales. This is a favourable situation, though only in the short run, since cash inflows on accounts receivable accrued earlier compensate for the lack of new sales. In the long run, a similar situation would result in lack of funds, which poses a threat to corporate liquidity and solvency.

Chimimport PLC is positioned in quadrant five (5) which indicates a situation of increasing accounts receivable as a result of a lenient credit policy, thus leading to a declining sales volume in the long run. This is considered to be the least favourable situation, which supports the observations we made earlier about the policy employed by Chimimport PLC.

Conclusion

In their effort to recover swiftly from the negative consequences of the economic crisis, companies operating in the production sector need to ensure the rational management of their short-term assets. A major issue, therefore, is the efficient management of their accounts receivable. Our research provides a compilation of different methods and models for managing corporate accounts receivable which have been verified by both financial theory and economic practice as adequate approaches to designing the credit and collection policies of business entities. In terms of this, the designed system for the management of accounts receivable enables financial managers to make adequate adjustments to their credit policies. In conclusion, we should note that the collection policy of a company does not depend on internal company solutions only, but also relates to the financial position of its customers, the strength of the competition, the market conditions and the economic situation in the country where the company operates.

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