



Journal of Business and Social Science Review
Issue: Vol. 2; No.5; May 2021 pp.27- 35
ISSN 2690-0866(Print) 2690-0874 (Online)
Website: www.jbssrnet.com
E-mail: editor@jbssrnet.com
Doi: 10.48150/jbssr.v2no5.2021.a3

Verification of business consumers through credit rating

Katarína Čulková, Slávka Žvandová

Katarína Čulková
Fakulta BERG, TU Košice
Letná 9
042 00 Košice
Tel.: 055/602 3116

Abstract:

The goal of the contribution is to search if the companies use rating agencies for management of consumer's relations. The goal is achieved through the analysis of present state of receivables management in analyzed enterprise together with monitoring of the receivables, evaluated by activity indexes, such as turnover of receivables. The results are presented by determination of risky receivables of the enterprise. The results serve for financial management with aim to find out measurements and recommendations for improving of relations with consumers.

Key words: Receivables, rating, rating agency, consumer

Introduction

Rating is generally characterized as determination of risk of not meeting the obligation, resulting from the liabilities that are made by independent rating agency. Correspondent agency rates the enterprise and consumer by correspondent rating rate. This rate presents expression of the business partner ability to meet debt liabilities. Generally it means to pay for the products in time and in full measure (Vinš a Liška, 2005). The task of rating agency is to observe strict rules. Its goal is to provide rating does not have impact to the interest conflicts. Moreover rating agency follows up quality of rating methodology and results of the rating. The basic process of credit risk evaluation of business partner means credit analysis (Liang, et al., 2021; Akins, 2018). The credit analysis presents analysis of the credit provider abilities and disposal information of business partner, which help to strengthen market position (Dor, et al., 2021). Its aim is evaluation of credibility and willingness to observe liabilities, resulting from the agreement. Evaluation of business risk can be done mainly according to the financial and economic indexes, financial stability of the consumer and according to the consideration of the risk to sale with credit.

Credit analysis is orientated mainly to the evaluation of payment risk of the business. According to the results of the credit analysis enterprise can divide its consumers to the groups according to the bonity (Rezňáková, 2010). Such evaluation can be expressed by simple rate that means probability that evaluated subject meet in agreed time and sum its liabilities. Final evaluation expresses by the way of rating rate from rating scale. In this case enterprises have a possibility to search bonity of the evaluated subject from the view of rating level. Any business presents certain risk and therefore rating is considered as a tool for measuring and decreasing of such risk.

Standard credit rating cannot be considered as investment recommendation, its basically analyses only fundamental quality of the given subject (Benmelech and Dlugosz, 2009). In some cases it can present also structure and fundamental quality of the given subject. During its evaluation rating is not dealing with other types of the risk.

Methodology

The goal of the contribution is to search if the enterprise use for the management of consumers relation services of rating agencies, offering possibility to verify the consumer, mainly in case consumer is not in debt register with aim the enterprise could avoid the relations with not reliable consumers and to suggest process of consumers verification and establishment of credit risk of the business. To achieve the goal we used following tools.

Monitoring of receivables

Monitoring of the state and development of receivables is different in any enterprise. But there is necessary any enterprise orientates the monitoring to the following of the average level of receivables, time of payment (or turnover of receivables) on the total assets. Moreover there is necessary the enterprise would evaluate cost connected with receivables management. Monitoring of the receivables expresses the activities that are orientated mainly to the following:

- Registering and control of the receivables volume,
- Identification of the most proper relation between volume of receivables and volume of the sale,
- Evaluation of the receivables payment,
- Analysis of the turnover of receivables,
- Analysis of the time of receivables payment

During of the receivables monitoring there are used indexes, such as turnover of receivables and turnaround time. Both indexes belong to the rate (activity) indexes, presented basic methodological tool of the financial analysis. Activity indexes informs of the intensity of the invested means to the business, which means how is the investment means uses and how rapidly its turning. Activity indexes are mostly considered as flow index through sale in certain period. The indexes inform of the intensity of the individual assets (capital) elements using. The shorter is turnaround time and the higher is the speed of turnover, the better is the business.

Analysis of the receivables through rate indexes

Speed of turnover (receivables turnover rate) can be expressed as the rate of the sales and average volume of receivables. By this index enterprise can measure number of receivables turnovers during given period. The positive situation is in case the value is growing. The calculation is as follows:

$$\text{Receivables turnover rate} = \frac{\text{sales}}{\text{receivables}} \quad (1)$$

Generally it means the higher is turnover rate, the bigger is the value of the index, the more rapidly can enterprise receive its receivables (Hrdý and Krechovská, 2013).

Turnaround time means rate of average value of the receivables to average daily sales. The rate expresses how long the assets of the enterprise is in the way of receivables, resp. how long period is necessary fo covering of the receivables payment (average payment period) (Valach, 1999).

$$\text{Receivables turnaround time} = \frac{\text{receivables}}{\text{sales}} \cdot 365 \quad (2)$$

The index expresses payment discipline of the consumers. It means the time, when the enterprise wait averagely from the day of the sale (time of invoice setting) to the day of the payment. Positive development of the index is in the case of the values decreasing. In this case it means the time of receivables payment is shortening (Sedlačiková and Volčko, 2012).

Analysis of the receivables development in time

Generally receivables express the right or demand of the enterprise to demand payment from the consumer. Receivables have credit character and are registered in the assets in the balance sheet. Development of the receivables in time is necessary due to the finding of the increase or decrease by various control processes with aim to avoid rising of possible risk due to the not payment of the invoice in agreed time.

Algorithm of the receivables management

Management of the receivables can be characterized as an activity of the enterprise, orientated to the optimal orientation of the receivables. The subject of the receivables management is volume of the receivables, their structure (according to the various criteria), liquidity of the receivables, subject of the receivables (here belong selection of the consumer) and risks, connected with receivables (as for example disability to pay or fraud). To evaluate effective management of the receivables in the enterprise we used algorithm of the receivables management.

Management of receivables, as well as management of all other elements, is very necessary for any enterprise. Receivables present important element that have influence to the financial situation of the business, influencing also its property and financial structure. In extreme cases receivables presents over 50% of the total assets value, connected with correspondent risk. Therefore, care of the prevention and providing of the receivables means necessity, since if the enterprise does not save structure of its receivables and would not effectively manage the receivables, it could cause increasing risk of the business. Management of the receivables is not considered as simple process, but it consists of several steps and processes.

Material and data

Development of receivables in time is made according to the data from balance sheet and loss and profit statement, provided in 2015 – 2020. The data, elaborated in table and graph result from the accounting and internal documents of the analyze company GEO Slovakia, ltd. The company is orientated to the services of geophysical measurements and electromagnetic measurement, supporting tomography. The company solves tasks from the area of engineering geology, hydrogeology, geo technique, waste economy and environmental technologies.

Results

In GEO Slovakia, ltd., there is effective management of the receivables (including verification of the business partners), resulting from the following.

A. Receive of the order or agreement contract

Original of the contract is given to the economic department and the copy is provided to the correspondent worker, caring for the order. In the frame of this period there is verified formal accuracy of the order (the data of the consumer, etc.).

In case the consumer has business relation also in past time and payment discipline of the consumer is without problems, the order is not verified. On the other hand in case of new consumers or consumers, when their payment discipline was problematic in the past time, the consumers are verified through database finstat.sk to find out if they are not debtors from the view of taxes or insurance. In such situation the payment is demanded in ahead.

B. Realization of works and their finalization

Works from the side of order is made by protocol, which means, there are recorded protocols about works made. Such protocol presents the base for invoices or for possible lawsuit due to the receivables payment, at the same time it presents also the base and evidence of the consumer agreement with the work content. Such protocol is signed by consumer either personally during achievement of the services or protocol are electronically sent to the consumer and backwardly consumer signed the protocol and send back the scan by email.

C. Invoice of the works

The base for invoices is higher mentioned protocol that must be signed by competent person from the side of consumer. The invoice is sent to the consumer either personally (demanded by signature on the invoice) or by post – always by recommended mail.

D. Payment of invoice or urgency to pay

Standard term of invoice payments is 14 days. In case of agreement or demand from the side of consumer the term of payment can be longer (for example 60 days). In the frame of economic department there are continuously registered payments of invoices to the accounting software approximately once per month.

The company prints the results of the software together with the list of unpaid invoices. Invoices to approximately 30 days after terms of payment are not solving, since after the term enterprise contacts the debtor. Any order has created individual element, to which enterprise stocks economic documents, connected with the order – order, protocol of works made, invoice and any other economic documentation of the order, as well as information when the debtor was contacted and what he mentioned in connection to the invoice payment.

E. Debt collection

In case the payment of invoice is over 6 month, and debtor in spite of telephonic or email warnings does not react, the enterprise announces the debtor that in case the receivable would not be immediately paid, it will be transited to the lawyer and solved by legal form. The enterprise has external lawyer for solving of such situation.

Registration of receivables, control of total volume of receivables

Receivable are rising in case there is relation between the enterprise and other enterprises in the frame of business activity according to the agreed contract. Such contract must have written form. Receivables are accounted in accounting group in account 31 – Receivables.

Tab. 1 Total volume of receivables in GEO Slovakia, ltd. to k 31th December (2015 – 2020) in Eur

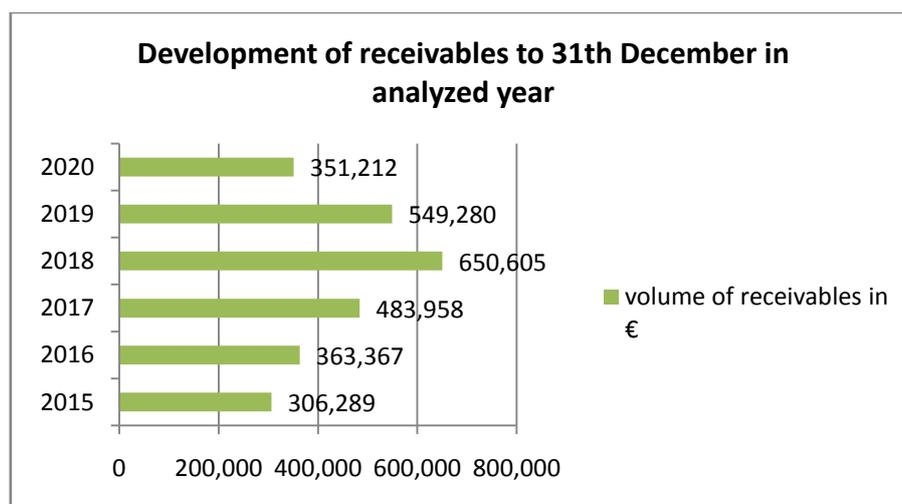
Year	2012	2013	2014	2015	2016	2017
Receivables	306 289	363 467	483 958	650 605	549 280	351 212

Source: own processing according to the internal data from GEO Slovakia, ltd.

Table 1 illustrates total development of receivables volume in the enterprises in the analyzed period. The highest volume of receivables was registered in the enterprise in 2018 with sum 650 605 eur. On the other hand the lowest volume of receivables was registered in 2015 in sum 306 289 eur. According to the obtained data we can state the development of receivables has growing trend till 2018. Smooth decrease was in 2019 and little rapid decrease was in 2020.

In comparing volume of receivables in 2018 with receivables volume in 2019 we can see the volume in 2019 decreased by 15,570. Also in second situation when comparing receivables volume in 2019 with situation in 2020 the volume decreased by 36,06% and against 2018 the volume decreased yet by 46,02%. Total development of receivables is illustrated by Figure 1.

Figure 1. Total volume of receivables in GEO Slovakia, ltd. in 2015 - 2020



Source: own processing according to the internal data from GEO Slovakia, ltd.

Registration of risky receivables

Risky receivables is considered as the receivables when there is a risk that the debtor would not pay (totally or partially) the receivables due to the insolvency. GEO Slovakia, ltd. registers its risky receivables, as mentioned in Table 2.

Table 2 Review of risky receivables in GEO Slovakia, ltd.

Debtor	Sum in €	FV
GasOilengineering, a. s.	4 999,92	2011 - 092
EKOPLASTIKA SLOVAKIA, spol. s r. o.	2 184	2013 - 041
URANPRES, s. r. o.	1 458,71	2012 - 163
ITARES spol. s r. o.	337,53	2010 - 307
Virtus, a. s.	15 681,81	2009 - 118
JNT s. r. o.	600	2015 - 224

Source: own processing according to the internal data from GEO Slovakia, ltd.

Table 2 illustrates list of debtors of the analyzed enterprise. First company GasOilengineering, a. owes 4 999, 92 Euro and the company is in liquidation. Company EKOPLASTIKA SLOVAKIA, ltd. owes 2 184 Euro and in 2017 is in restructuring. The restructuring was not successful and in 2018 the company is in liquidation. URANPRES, ltd. finished restructuring, in the frame of approved restructuring plan. In the sense of the plan the company pays agreed sum (10 x 24, 05 Euro). ITARES ltd. owes the least sum - 337, 53 Euro. From March 2015 the company is in liquidation till present time. Company Virtus, a. s. has a high debt against the analyzed company - 15 681, 81 Euro. The company is in the process of the liquidation. Following table gives review of the receivables of the enterprise GEO Slovakia, ltd. after terms of payment, to which enterprise does not create allowances.

According to the data from the table 3 we can see review of receivables after term of payment, when first company is sudop TRADE, ltd. owing 26 609, 39 Euro. In present time management of the GEO Slovakia, ltd. contacted successfully representatives from sudop TRADE, ltd. to pay the debts to 1,5 month. In second company EKO OR ltd.(owing 2 064, 72 Euro) there is judicial enforcement. The company JNT ltd. owes 600 Euro. GEO Slovakia, ltd. acknowledged claim by decision of the court with application from 28th January 2020.

Table 3 Receivable after time of payment, not presented allowances

Debtor	Sum in €	FV
sudop TRADE, spol. s r. o.	26 609,39	2010-031
EKO OR s. r. o.	2 064,72	2010-155
JNT s. r. o.	600	2015-224

Source: own processing according to the internal data from GEO Slovakia, ltd.

Analysis orientated to the receivables turnover

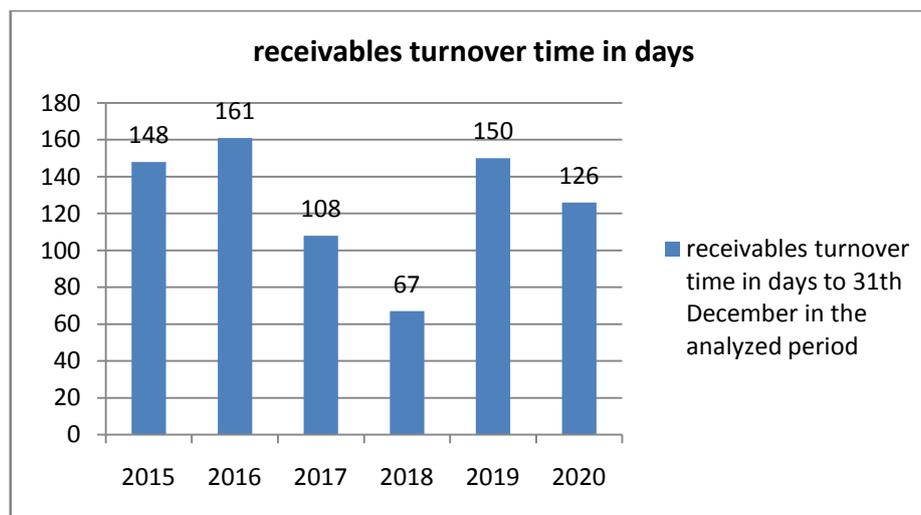
Following part of the contribution deals with financial rate indexes of receivables development in GEO Slovakia, ltd. Table 4 illustrates total development of turnover time in the analyzed period.

Tab 4 Receivables turnover time to 31th December in 2015 - 2020

Year	Unit	2012	2013	2014	2015	2016	2017
Receivables	€	306 289	363 467	483 958	650 605	549 280	351 212
	€	754 426	824 430	1 640 349	3 558 052	1 335 514	1 016 522
Time of receivables turnover	dni	148	161	108	67	150	126

Source: own processing according to the internal data from GEO Slovakia, ltd.

By the way of the index we can evaluate how effective the company uses its property. It means how many days the invoices are paid. To calculate the index, we resulted from the balance sheet, mainly from information about short term receivables and sales on services.

Figure 2. Receivables turnover time to 31th December in days in analyzed period

Source: own processing according to the data from GEO Slovakia, ltd.

Among important index during monitoring of the receivables belongs also the index of receivables turnover. The index provides the information about capital binding in time in receivables. The goal of any enterprise is to make such decisions to lead to minimizing of the index (Agha and Faff, 2014). In analyzed period we found following: in 2015 the company expected 148 days for covering of its receivables. In 2016 the enterprise registered highest value of receivables turnover, presented averagely 161 days. Gradually in 2017 and 2018 there was registered decrease of the index to 108 days in 2017 and to 67 days in 2018. The situation was caused by decreasing of total receivables and sales. In 2019 the enterprises waited 150 days for covering of its receivables and in 2020 it was rather less – 126 days.

It means the lowest value of the index was registered in 2018 – 67 days. In comparing with 2019 there was growth of the index by 124%. The negative situation was caused by decreasing of sales from 3 558 052 Euro to 1 335 514 Euro and by growth of receivables from 549 280 Euro to 650 605 Euro.

Demanded and recommended value of the index is in the analyzed enterprise standard 14 days. According to the achieved results we can say the values of the index are too high and therefore considered as negative values. Longer values of the index are mostly in situations, caused by ongoing problems of payment disability of the Slovakian companies.

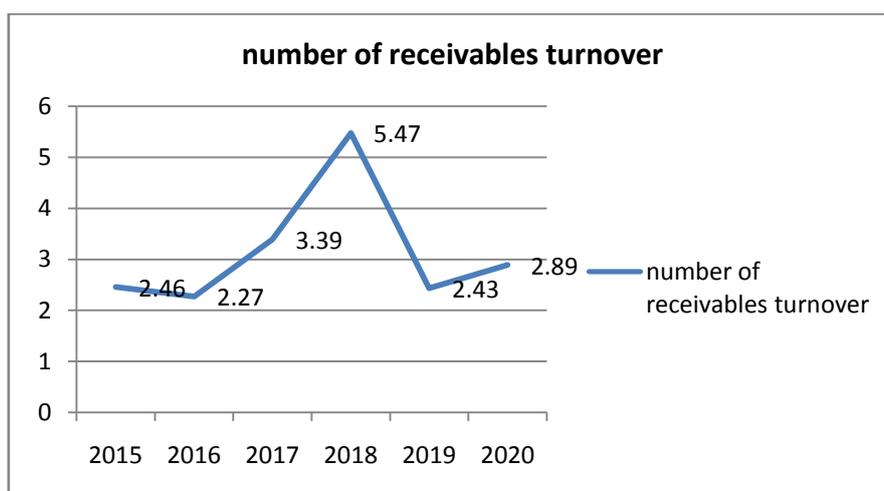
Analysis orientate to the speed of receivable turnover

The index is calculated as the rate of sales to receivables. The index gives information about number of turnovers, which means how rapidly the receivables are changed to the monetary means. The higher is the value of the index, the more rapid is business subject receiving its money from receivables (Melicheriková, 2014).

Tab. 5 Speed of receivables turnover in the analyzed period

Year	2012	2013	2014	2015	2016	2017
Receivables in €	306 289	363 467	483 958	650 605	549 280	351 212
Sales in €	754 426	824 430	1 640 349	3 558 052	1 335 514	1 016 522
Speed of receivables turnover	2,46	2,27	3,39	5,47	2,43	2,89

Source: own processing according to the data from GEO Slovakia, Ltd.

Figure 3 Speed of receivables turnover in the analyzed period

Source: own processing according to the data from GEO Slovakia, Ltd.

According to the data in Table and the Figure we can state that during the analyzed period the highest number of turnovers was registered in 2017, with total volume of receivables 650 605 Euro and sales 3 558 052 Euro, which means receivables were changed to money 5,47 times. On the other hand the lowest number of turnover was registered in 2016 with value 2,27. In 2016 the receivables were changed to money only 3,39 times. It was caused mainly by growth of the receivables from 363 467 Euro in 2016 to 483 958 Euro, which means 33% growth. In the next years the index in 2019 changed receivables to money 2,43 times and in 2020 2,89 times. From the results we can state that in 2017 and 2018 there was registered improvement of the receivables management, but following years 2019 and 2020 registered again decrease of the index.

Discussion

Present state of the receivables monitoring in the analyzed enterprise showed there is no regular rating, not including detail analysis of the state and development of the financial rate indexes, evaluating development of the receivables. The highest attention the enterprises give only to the receivables in period of its enforcement, which presents unnecessary growth of the costs. Due to the mentioned we recommend following activities in time of receivables monitoring:

- Daily** register new receivables and to control the state and payment time of existing ones. In case the receivables are not paid, there is necessary to contact the debtor to make a payment. For new consumers there is proper to determine their bonity.
- Weekly** there is necessary to give the management of the enterprise report of the receivables after payment time to find out proper solutions.
- Monthly** there is necessary to follow up and to evaluate state and development of the receivables. We suggest the enterprise uses indexes of financial analysis. According to such indexes the enterprise would be able to evaluate time and speed of receivables turnover. According to the suggested regular monitoring the enterprise could avoid later enforcement of receivables.

Further the enterprise could use credit rating to verify its debtors by the way of rating evaluation (Bhandari and Golden, 2021).

In the practice there are various approaches to the debtors' evaluation, for example according to the clients' bonity, according to the payment of receivables, according to the risk of receivables payment, or the enterprise could use services of rating agency (Hand and Henley, 1997; Denis and McKeon, 2012). In the frame of business partner selection the enterprise should be concentrated to the clients' bonity. It means the selection is made according to the collection of information about the consumer. According to the receivables payment we suggest the enterprise could create groups of consumer according to the risky receivables – groups A-D as follows:

- **Risk group A** – very good consumers, paying invoices to 14 days,
- **Risk group B** – good consumers, paying invoices to 60 days,
- **Risk group C** – weaker consumers, paying invoices longer than 60 days,
- **Risk group D** – risky consumers, paying invoices longer than 90 days,
- **Black list** – problematic consumers, paying invoices longer than 180 days (Schelleová, 2001).

Conclusion

The main goal of the contribution was to verify the debtor of the enterprise through credit rating. According to the available sources rating could serve for independent evaluation with aim to find out through complex analysis of the all known risk of the evaluated company, if the company is able and willing to pay its receivables in time and in total sum.

During the analysis we resulted from the data of the analyzed enterprise, making analysis of present state of receivables management, monitoring and registration of receivables. Consequently we determined most risky receivables of the enterprise. From financial rate indexes we make analysis of time and speed of receivables turnover. The results of the analysis show to the high values of receivables turnover time, which is considered as negative situation. In the frame of the speed of the receivables turnover we can state the smooth improving of the receivables management. According to the results the enterprise should improve management of the receivable, beginning by the regular receivables monitoring and using of credit rating.

Acknowledgement

This research was funded by KEGA-006-TUKE-4/2019.

References

- Agha, M., Faff, R. 2014. An investigation of the asymmetric link between credit re-ratings and corporate financial decisions: Flicking the switch with financial stability. *Journal of Corporate Finance*, Vol. 29, p. 37-57.
- Akins, B. 2018. Financial reporting quality and uncertainty about credit risk among ratings agencies. *Accounting Review*, Vol.93, No 4, p. 1-22.
- Benmelech, E., Dlugosz, J. 2009. The credit rating crisis. *NBER Macroeconomics Annual*, Vol.24, 2009.
- Bhandari, A., Golden, J. 2021. CEO political preference and credit ratings. *Journal of Corporate Finance*, Vol.68, Article No 101909.
- Denis, D.J., McKeon, S.B. 2012. Debt financing and financial flexibility evidence from proactive leverage increases. *Review of financial studies*, Vol.25, No 6, p. 1897-1929.
- Dor, A.B., Guan, J., Zeng, X. 2021. How do credit markets react to earnings releases? Empirical analysis and implication for investors. *Journal of Fixed Income*, Vol.30, No 3, p. 47-65.
- GEO Slovakia, s. r. o. [online]. Košice, 2012 [cit. 2016-03-13]. Available at: <http://www.geoslovakia.sk/o_nas.php>
- Hand, D.J., Henley, W.E. 1997. Statistical classification methods in consumer credit scoring: A review: *Journal of the royal statistical society. Series A: Statistics in Society*, Vol.160, No 3, p. 523-541.
- Liang, T., Zeng, G., Zhong, Q. 2021. Credit risk and limits forecasting in E-commerce consumer lending service via multi-view-aware mixture-of-experts nets. *WSDM 2021 - Proceedings of the 14th ACM International Conference on Web Search and Data Mining* 3 August 2021, Pages 229-237 14th ACM International Conference on Web Search and Data Mining, WSDM 2021; Virtual, Online; Israel; 8 March 2021 through 12 March 2021; Code 167734
- Melicheríková, Z. 2014. *Management of Receivables* (in Slovak). Košice: EQUILIBRIA, s. r. o., 2014. 140s. ISBN 978-80-8143-135-7.

- Reznáková, M. 2010. *Management of payment ability of the company* (in Czech). Praha: Grada Publishing, a. s., 2010. 192s. ISBN 978-80-247-3441-5.
- Sedliačiková, M., Volčko, I. 2012. *Controlling of receivables in theory and practice* (in Slovak). Zvolen: Edičná rada TU vo Zvolene, 2012. ISBN 978-80-228-2412-5.
- Vinš, P., Liška, V. 2005. *Rating*. Praha: C. H. Beck, 2005. 109s. ISBN 80-7179-807-X.