

## Receivables Management and Possible Use of Information Technologies

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#### ABSTRACT

This paper is focused on receivables management and possibilities how to use available information technologies. The use of information technologies should make receivables management easier on one hand and on the other hand it makes the processes more efficient. Finally it decreases additional costs and losses connected with enforcing receivables when defaulting debts occur. The situation of use of information technologies is different if the subject is financial or non-financial institution. In the case of financial institution loans providing is core business and the processes and their technical support are more sophisticated than in the case of non-financial institutions whose loan providing as invoices is just a supplement to their core business activities. The paper shows use of information technologies in individual cases but it also emphasizes the use of general results for further decision making process. Results of receivables management are illustrated on the data of the Czech Republic.

## Keywords

receivables management,
registers of financial,
institutions,
insolvency register,
Czech Republic,
electronic invoicing,
scoring

DOI: 10.20897/lectito.201632

#### 1. INTRODUCTION

Receivables are one kind of enterprise's assets displayed in a balance sheet which are generated through enterprise's sales activities. Receivables are legally enforceable claims for payment. A customer does not pay directly because of using invoices but the payment is done within an agreed time frame. According to International Financial Reporting Standard (IFRS) 9 receivables are obviously a part of portfolio of financial assets measured at amortized costs (Strouhal et al., 2014: 110). Receivables have on one side their advantages, on the other hand they are also connected with many disadvantages (Brealey et al., 2011: 761). Their advantages are based on the competition environment when payment conditions create one part of a competitive advantage and they enable another financial source for the customer. The disadvantages are connected with risk of non-payment, late payment which has to be financed by other financial links.

There are many researches done in the field of enforcing of receivables which can exist in two main kinds - individual and collective enforcing. These researches focus especially on the level of satisfaction, recovery rate of receivables because forfeiture proceedings in the case of the individual enforcing and insolvency proceedings in the case of the collective enforcing are enforcing of the last instance. The recovery rate of receivables is very low in these special cases. When a creditor is not secured then the recovery rate is only in percents (Placek et al., 2014; Smrcka et al., 2015a and Smrcka et al. 2015b).

During recent years our research team have taken attention especially to a theme connected with insolvency register and its efficiency leading to data processing and enforcing of receivables (Smrcka, 2013 and Smrcka, 2015c). The main aim of these activities is to improve the environment and achieve higher recovery rates of receivables for creditors. Due to problematic receivables the affected creditors do not have revenues from their business activities. It could have a significant impact on their following running a business when they have to find additional resources for financing the problematic receivables.

This problem is much broader than only the last instance as forfeiture proceedings and insolvency proceedings. Therefore we have decided to turn our attention to the broader topic as receivables management. The task for

management does not start with insolvency proceeding but it starts with signing a contract itself. On one side there is an enterprise which plays a role of a creditor. This enterprise is holding the receivables in its assets' structure. On other side there is a subject which plays a role of debtor who is holding payables in its capital structure. Further characteristics depend on the kind of the contract between these two parties. An object of the contract can be strictly financial as a loan, mortgage or leasing or based on non-financial business activities as selling services or products. Financial institutions use other approaches leading to signing the contracts than classical enterprises whose business model is based on the selling of products. The debtor can be natural as well as legal person, non-entrepreneur as well as entrepreneur etc. The paper will discuss on the next pages the role of information technologies in receivables management for different business parties and it will provide as well as suggestions and recommendations for better receivables management.

### 2. RECEIVABLES MANAGEMENT

Receivables management does not stand alone because it is a part of turnover cycle and working capital management which involves management of inventories, receivables, cash management as well as payable management (Hyrslova et al., 2010: 255). Increased attention to working capital management has proven advantage during last economic crisis in the Czech Republic. It is proved in Scholleova (2012) that enterprises managing working capital cycle would have had a higher chance to overcome the last global crisis which was caused by external economic conditions. The general receivables management can be described by five steps as in Brealey et al. (2011: 760), especially for non-financial enterprises. The first step is deciding the length of the payment period or discounts for clients paying in advance, on the time of delivery or before the end of classical payment period. The second step is a decision about the contract itself because the classical contract can be accompanied by a guarantee as a bank guarantee, warrantor or securitization by tangible assets. The third step is an assessing client's creditworthiness which can be done by the enterprise itself or passing that to special parties as credit or rating agencies. The step four is establishing credit limits leading to minimization of problematic receivables but non-affecting flows from customers. When the payment has a delay or the customer does not want to pay or is not able to pay then the process of enforcing receivables will start.

These general five steps provide a basis for a decision making process in the case of each client. For each client the five step process should be done originally respecting the general limits decided for a whole enterprise. For small clients the beginning of the process can be done automatically and interventions come only in the case of troubles. For large clients the full process should be done carefully and not automatically because it is a decision problem which is not well structured. The use of the information technologies can be applied in each step but a range depends on the specifics of the contract and the product.

# 2.1 The Possibilities of Use of Information Technologies

The quality of receivables management and the level of the use of information technologies also depend on the situation if the creditor is systematic or non-systematic. In the case of systematic creditor the process would be more sophisticated and compliance. A specific case of systematic creditors are financial institutions which can play a role of banking or non-banking institution. The objects of their contracts are different kinds of loans as mortgage, consumer credit, credit cards, banking account overdraft or leasing etc. The financial institutions have the most sophisticated process of receivables management and the highest possible level of the use of information technologies in this process as well.

Financial institutions. The information technologies play their irreplaceable role in the assessing client's creditworthiness. The financial institution collects information about the client. First it is always the size of the asked loan. In the case of natural persons it would be age, marriage status, number of dependents, size of regular income, value of assets used for a guarantee etc. In the case of legal persons it is the length of history existence, field of economic activity, value of assets used for a guarantee etc. Worthy variable is a client's history. It is more profitable to enter into a contract with a party with which you have already had a common history. The client has had some kind of account or the client paid off the previous loan etc. Unfortunately there are many financial institutions on the market and the common history would lead to impossibility to get new customers. The customers would be 100% loyal to their financial institutions. The real situation in the market economy is different because the customers can choose or switch their financial institutions almost without limitations. It would lead without monitoring the personal situation that the customers have too many loans at several financial institutions. The financial institutions would not know the real situation of their clients and they would be exposed to a higher risk of late payments or even non-repayment of the loans. The core business would be affected and financial

institutions would have to ask higher interest rates to cover costs connected with enforcement of receivables or bad loans which have to be write off at the end.

The reaction to this possible situation is registers which contain clients' history about loan contracts. There are two main kinds of registers in the Czech Republic (Rajl, 2012). The first register is Banking Register set up in June 2002 by the enterprise CBCB – Czech Banking Credit Bureau, a.s. This register functions for banks and building banking societies. The second register is Non-banking Register set up in June 2005 by the enterprise Leasing and loan credit bureau, z.s.p.o. This register functions for leasing providers, factoring enterprises, credit companies and other entities having a relationship creditor-debtor. Since beginning 2006 both registers have started mutual exchange of information. Both registers are technically provided by the enterprise CCB – Czech Credit Bureau which is owned by the international group CRIF. CRIF is the leading provider in the continental Europe one of the biggest providers of credit registers and systems for credit decision making process in the world. Figure 1 proves that the solution used in the Czech Republic by CRIF is also usual worldwide. Covered countries are represented by a dark color.

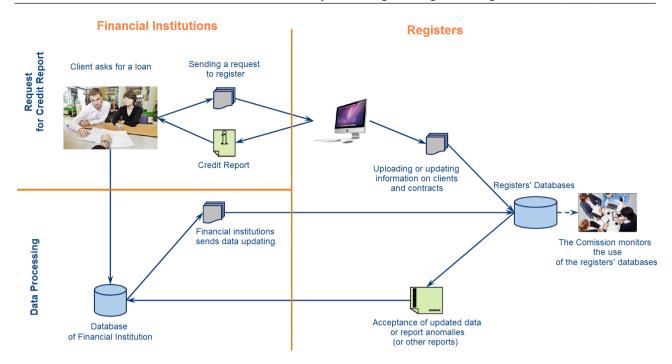


Figure 1. CRIF in the world, source: based on CRIF Lending Solutions

The both registers work on the same bases and assumptions. The main difference is that Banking Register contains all information about loan contracts in the banking sector because all banks operating in the Czech Republic are involved. On the other hand Non-banking Register contains only information about loan contracts entered at the register's partners. According to estimations Non-banking Register should contain between 80-90% about all non-banking loan contracts. It is caused by the situation that some financial providers are not members of register partnership. The reasons can be different as the size of loan provider or lower transparency of this provider.

Both registers work technically similar. The assessing of client's creditworthiness can be displayed by figure 2. The client asks for a loan. The financial institution sends a request to register which generates a credit report. The credit report contains a historical debtor profile. There is information about all available credits, size of month repayments and especially reports about late repayments. For good functioning it is necessary to upload and update data in the register regularly how it is showed in the part data processing on the figure 2.

Figure 2. Register functioning, source: based on Rajl (2012)



Non-financial institutions. The position of non-financial institutions is less clear because their business in the comparison with financial institutions is different. Receivables are generated in the connection with the main activity as selling goods, own products or providing non-financial services. The main business is not to provide this kind of short-term loans or in case of intensive investment units long-term loans but to provide the good, product or service. The payment conditions which set up the lending situation are part of the contract and they are reaction to business environment for creation or sustaining corporate competition advantage. The decision of non-financial institutions if they should provide a credit and for how long time depends first on the factor if they have already had a common history with the discussed business partner.

Common history means that these two partners already traded with each other and they have had common experiences in the past. The enterprise should have reports reflecting existence of payment with delays and other obstacles as paying other amount, losing invoice etc. These reports can exist in many forms. For a small and partly middle sized companies the records can be in the paper form or in the simple form of Excel sheet showing the payment history. In the case of large companies this thing has to be solved more sophisticated because the number of customers is rocketing with the comparison of small companies. The payment history is a part of corporate information system which connects invoice system, accounting, cash management, ordering system, warehouse data and many other which are not directly relevant for our purposes.

Sophisticated enterprise information systems are common for large or partly medium sized enterprises. On the other hand such systems are an exception for small enterprises and even individual entrepreneurs. When these entities have not implemented enterprise information system as ERP or SAP it does not mean that they should not have the evidence about common history with trading partners and parties. According to research of Association of Small and Medium-Sized Enterprises and Crafts CZ (2013) the usage of SAP system increases especially in the large enterprises but the dominated platform for data processing is Microsoft SQL Server (59%). research of Association of Small and Medium-Sized Enterprises and Crafts CZ (2013) showed also in which kinds of IT enterprises planned investments. 12% planned investments in hardware and 11% in software upgrade or enterprise resource planning systems. The common trading history is advantage and it does not depend if it is in the smart system or on the paper or in individual entrepreneur's mind.

If we come into contact with a customer without common history we are in the harder position because we do not have any experiences, any relevant data which would help our decision making process. Classical business enterprises do not have registers as financial institutions but they can use services of rating and scoring agencies. These services can be used only once for evaluating a specific business partner. Other possibility is that these services are used permanently as an access to the database which can be seen as an alternative to registers of financial institutions.

Evaluation done once means that the enterprise asks rating/scoring agency for assessing a specific business partner. The specialized credit scoring agency in the Czech Republic is Bisnode Česká republika, a.s. Worldwide active is company Dun & Bradstreet which is able according to information on its webpages to provide Industry standard report for moderate risk assessment for 409 \$ (Dun & Bradstreet, n.d.). These agencies take into account many variables and characteristics of the evaluating enterprise. The result is a report which contains a classification

of the evaluating enterprise. The classification can be done by rating scale (AAA-D), by colors of traffic light (green means make a deal, yellow is not clear, red is a danger and contract should not be closed) or by a percentage on the 100% scale which shows the security.

There are serious differences between scoring and rating. Rating is much more detailed with broader outlook than scoring. It takes into account not only data from financial statements but also information about management, product quality and promotion accompanied by external data about market conditions, macroeconomic determinants etc. Rating is based on quantitative as well as qualitative data. The final evaluation does not have usually clear technical quantified structure because the final evaluation is often done by committee voting. On the other hand scoring is much more quantified process based especially on quantitative data derived from financial accounting statements which are publicly available in most developed economies.

The scoring of these specialized agencies is based on the use of information technologies. These enterprises collect data about other entrepreneurial entities and then they evaluate it using different models. With an effort to convince customers the enterprise Bisnode Česká republika, a.s. illustrates its scoring with used variables (Bisnode, n.d.). These variables and questions are if the evaluated enterprise does not have debts, how the enterprise pays its invoices, if it has assets, what the values of cash liquidity and financial ratios are, how the comparison with the last time period is, if the enterprise generates profit or loss, the regional impacts, the industry branches impacts, the enterprise's history, existence of subsidiary company in troubles, who the owners and management are, the company's size and results from the insolvency register. These factors are collected and processed in a system by a scoring model. Unfortunately these models are not publicly known because they are part of company's know-how. It is not clear which approach is used, how the criteria are measured, weighted together etc. The scoring does not use only financial information derived from financial accounting statements but also qualitative data which characterize enterprise's management, environment, product etc. Processing these large amounts of data is now possible thanks to available information technologies. Without these technologies the approaches for assessing could not be so sophisticated and using multivariate approaches.

Other possibility is to have permanent online access to a corporate database. This kind of corporate database usually contains financial accounting data and payment specification (on time, delay or even insolvency/bankruptcy). This database can have a supplement as the traffic light (or similar evaluation) which evaluates each enterprise by colors according the level of risk. The traffic light is based on the agency's model which takes into account some factors which we have already discussed. When the corporate database contains that traffic light (or similar evaluation) the client does not know the relationships used for a creation of the evaluation. These relationships are part of know-how of database's provider. The used model/method/approach can be but also does not have to be relevant, reliable or accurate and therefore it does not have to provide good suggestions for decision making process. This supplement does not have to be always included. It means that final evaluation has to be done by the company itself based on the data displayed in the database.

## 2.2 The Results of Using Information Technologies

Results of using information technologies in receivables management do not have only conclusions as the evaluation of specific evaluated business unit. The gained results can be more generalized. We can illustrate that by the figure provided by Bisnode. The figure shows the division of entrepreneurial entities among different classes of risk in the Czech Republic. Other division could respect regional or industrial disparities. The general results enable faster decision making process when we evaluates a new subject. We can use a faster evaluation for subjects from non-problematic regions and industry sectors. On the other hand we can take more attention to subject coming from problematic sectors or regions.

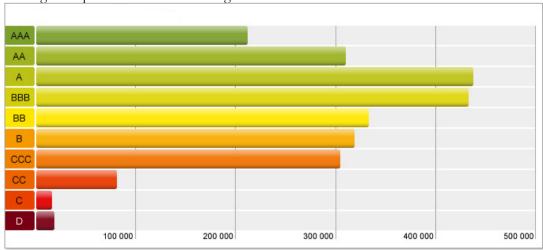


Figure 3. The number of entrepreneurial entities according their level of risk in the Czech Republic, source: based on Bisnode (n.d)

General conclusions can be got also from registers used by financial institutions. The results could be observed in the division according to regions, age groups, gender etc. Although the biggest group of bad debts is connected with age groups 35-44 and 45-54 (61% of debts in default and 59% of defaulting debtors from all age categories), these age groups do not have the highest level of default risk (Kislingerova et al., 2013 : 47). It is caused by the situation that these age groups use the debts the most. Another age groups have the highest level of risk - the youngest and oldest age group how it is proved by figure 4.

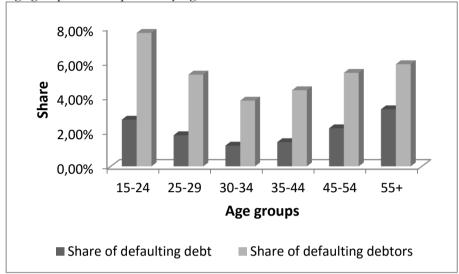


Figure 4. Defaulting debts, source: based on Kislinegerova et al. (2013)

## 2.3 Recommendations

Using information technologies itself does not mean that there would not be mistakes in the business partners' choices. Management should respect following recommendations (Smrcka et al., 2016). On one hand we have available data and scoring reports on the other hand we have to respect results provided by the reports. These results have to be incorporated part of decision making process and they cannot be omitted due to specific conditions. In other words the information has to be use consistently. If the relationship between company and a new business starts the process does not finish with the evaluation at the beginning. The new business relationships have to be monitored and these data have to be collected for further use. The monitoring is especially important in the case that problems would occur and the business partner dos not fulfill conditions based in the contract and invoice. The company has to regularly monitor if the payment discipline of the business partner is not worsening. The monitoring is easier when the corporate information system enables connection of ordering system with invoices and banking account or cash register showed in financial accounting. If the company does not own a sophisticated IT solution as the corporate information system (especially case of SME) still the company should monitor the payment discipline of its customers. The worse payment discipline can cause serious troubles in operation management and it may result in secondary insolvency.

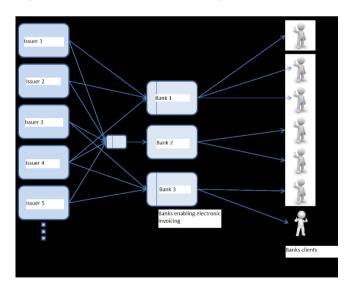
It does not matter if there is information system or just simple paper evidence but the outputs have to influence decision making. If the payment discipline gets worse there has to function alert which would warn the company. First the company can start a communication with a partner. The problem can be only technical as not arrived invoice, unreadable invoice or incorrectly entered payment. It also can be much serious as that the company does not want to pay or is not able to pay. Then the process of enforcing receivables starts. The alert function is also necessary for not starting new contracts with someone with bad payment discipline or for modification of conditions as paying directly and not using invoice time period.

One recommendation can also be to use a standard of electronic issuing of invoices. It is a way how to avoid obstacles with invoices. The invoices do not have to be clear or enough readable because of not enough high quality printing. They do not have to arrive on time or on right place. The last thing is a possibility of human mistake when responsible person fills a bank order. It is filled most in an application of online banking nowadays. It can be proved by the research of Association of Small and Medium-Sized Enterprises and Crafts CZ (2015) that the applications of online, internet electronic or mobile banking are regularly used. It is not only a case of large enterprises but also MSEs and as well as individual entrepreneurs. Precise figures are mentioned immediately. Small and medium sized enterprises have a positive relationship to electronic communication in ways as online banking

(96%), electronic forms (65%) or invoices (65%). Only 1% of SMEs mentioned that they do not use any form of electronic communication. Individual entrepreneurs also use electronic communication but especially in the way of online banking (90%), proportion of electronic forms and invoices is lower and reaches 48%. 6% of individual entrepreneurs mentioned that they do not use any form of electronic communication because they do not need it. The reasons why SMEs and individual entrepreneurs prefer electronic communication are quickness and simplicity which overweight reasons as money saving, environment pressure and clearness. In the favor of electronic invoices most used kind of payment is cashless transaction. 90% of SMEs use dominantly cashless transactions for payments as well as receipts. The payments dominate for 92% of SMEs. On the other hand the importance of cashless transactions in the case of receipts is lower because it is used dominantly only by 88% of SMEs. The individual entrepreneurs have a lower share of cashless transactions. For payments it is a preferred kind of transaction for 65% of the individual entrepreneurs and for receipts only for 60% of the individual entrepreneurs. It is caused that final customers pay cash immediately with goods' delivery or with services' providing. The character of goods and services has to be taken into account. The individual entrepreneurs mostly sell smaller goods and cheaper services to their customers. The discrepancy between SMEs and the individual entrepreneurs is caused by the environment, enforcement of law, trust and level of frauds.

The standard of electronic issuing of invoices have been prepared by Association of Small and Medium-Sized Enterprises and Crafts CZ cooperated by Czech Bank Association (CBA, 2015). The first version was published in April 2014 and last update came a year after in April 2015. Electronic issuing is a modern way how to transfer documents as invoices which can be used for taxation purposes as well. The possibility of using electronic form instead of physical form is enabled by the Czech legal framework system. The main aims if the standard of electronic issuing of invoices are simplification of electronic communication and invoicing between suppliers (issuers) and customers (recipients) and ensuring of uniform open access to electronic invoicing system for all related counterparties. The transfer of payment instructions is possible without an intervention of human factor and therefore the risk of human mistake done during the retyping payment instructions is significantly decreased or even limited to zero. On the other hand it increases the level of comfort for the client/customer (or in case of documents receiver) who only check automatically generated payment order in online banking and then sends the order by standard payment authorization process. But it is not everything yet. The standard of electronic invoices enables also transferring of other related documents than only invoices. The transfer of documents takes place in the system of online banking. Commercial banks are perceived as transparent institutions whose level of security is one of the highest and therefore their systems can be used for transfer of invoices and other related non-invoicing documents. The platform of online banking is secure but also enables archiving of documents on one place which is accessible almost from everywhere via internet network.

Figure 5. Model of electronic issuing of invoices, source: based on CBA (2015)



The schema of electronic issuing of invoices is illustrated by figure 5 which shows the connection among issuers and receivers via system of online banking provided by individual commercial banks. The model is based on the following requirements. Transfer of invoices and other related documents from suppliers to customers via online banking systems has to be standardized. The standard of electronic invoices is based on the current available and used technologies and respecting current conditions of B2C electronic issuing of invoices. Any user must not be restricted. The standard has to enable the transfer of the necessary and most used attributes of domestic cashless payments. Electronic banking enables the transfer of files not exceeding 400kB. The files can be e-invoices

containing payment instructions or e-documents without payment instructions as contract deals, confirmations, information etc. Commercial banks can accept documents and files only in specified formats. The possible formats are pdf file with metadata and simplified format B2C-ISDOC 6.0 or higher or ISDOC 6.0 or higher. The identification of the document or in other words distinction between e-invoice and e-document in the case of ISDOC formats is possible from main (root) element <Invoice> or <CommonDocument>. In the case of pdf with metadata the distinction is possible according <DocumentType> whose valie is 1 for e-invoice and 0 for e-document not containing payment instructions which can be specified further. The documents can be also downloaded but there is a limitation of maximal amount of files. The issuer is able to download maximally 500 new issued documents of the specified kind or format. The maximal amount can be decreased after issuer request. The individual customization enables to use current technologies for SMEs and individual entrepreneurs who have not heavily reinvested in their hardware and software solutions during recent years.

## 2.4 Information Technologies in the Last Instance of Receivables Management

As last instance of receivables management it is meant the situation when all classical methods how to be paid failed. Classical methods are represented as phone calls, letters, personal meetings with a defaulting debtor. Classical methods are followed by last instance of individual or collective enforcement of receivables. In the case of individual enforcement we do not connect with other entities who are also affected creditors because they do not exist or we prefer individual solution. It ends up in court which order forfeiture proceeding. The proceeding is done by a distrainer's office. Collective enforcement is also connected with a court trial but the process is usually much more difficult due to more affected creditors. The defaulting subject finishes in insolvency which is done by insolvency administrator.

The results of forfeiture proceedings as well as insolvencies should be publicly available because it can protect other entities to come into a business with an ailing defaulting partner. The insolvency register meets this condition although it has many shortcomings discussed by Smrcka (2014) and Smrcka (2015c). To get data about forfeiture proceedings is not easy because they are not publicly available for free as in the case of insolvency register. The environment is less transparent and clear for creditors who are not enough protected. Getting data about efficiency of executions is hard never ending work (Smrcka et al., 2015b). There are some registers/systems which work on the paid principle as Centrální evidence exekucí (CEE, n.d.) and Centrální registr dlužníků (CRD, n.d.). In the case of Centrální evidence exekucí the each question is charged (60 CZK per piece) even when the answer is negative (the person is not included in register). When you realize that evaluated person is included you have to pay a new fee to get information about the specific forfeiture proceeding. That helps to create environment which is based on insufficient data and it protects more defaulting debtors than creditors.

According to research of Association of Small and Medium-Sized Enterprises and Crafts CZ (2014) the amount of available data generally increases and therefore there is also a need for enterprise protection. The protection and limited access to data is questionable in the case of the register Centrální evidence exekucí organized by Chamber of Executors. Creditors should have the access to information about their problematic or doubtful debtors or potential debtors. Unlimited access is in the case of the insolvency register in the Czech Republic. The insolvency register is focused on insolvency proceedings, in other words collective enforcement of receivables. The register Centrální evidence exekucí is focused on individual enforcement of receivables. The access to the insolvency register is possible from web platform without any fees and even without registration or logging by user account. Unfortunately there are available the data about individual cases and almost any aggregated data about insolvency proceedings.

There are information about the amount of insolvency proposals, their kinds (without proposal how to insolvency proceeding, personal bankruptcy, reorganization and liquidation) and their division according to justice court areas (Kislingerová, 2012). There are not aggregated information about affected industry branches, enterprises' size according property, turnover or number of employees, results of insolvency proceedings as number of creditors, length of collective enforcement, level of satisfaction (how many percent of receivables have been enforced) etc. These pieces of information would be very useful for law upgrading, comparison of time development and seeing efficiency of entrepreneur environment. Although we have many technologies available nowadays as never before we are not able to aggregate information. One case of insolvency proceeding contains dozens of documents which are ordered according to time of publishing but their titles are not unified (even more documents can have the exactly same name). The documents do not have the similar structure. Many documents and reports are prepared by insolvency administrators and agents. Although the law describes the required parts and details each insolvency administrator has its own style and preferred structure. The reports are not always clear and you as user have to compare and combine several reports to come to the right conclusion. Last thing which is against computerized data processing using IT is that the reports are usually in pdf version but many of them are

not saved originally as pdf. It means that the original documents were scanned and this scanned version (sometimes not fully readable) was uploaded to the insolvency register. Against data processing based on IT there are several reasons as above mentioned scanned documents and reports in the insolvency register, not unified documents' structure and titles. According to time and money funds available we are not able to create any database which would enable to aggregate information for further data mining. Therefore the research team of University of Economics, Prague have processed the data manually. It has a consequence that only representative samples have been processed. For the future aggregated data processing would be possible in the case of not scanned documents and unified structure of the reports prepared by the insolvency administrators. It would enable to monitor time development, justice and insolvency administrators' efficiency and impacts of the environment. It is possible to conclude that the insolvency register is opened available source of information about individual insolvency proceedings for everyone but unfortunately the results are not enough transparent in the case of aggregated insolvency proceedings. Nowadays available technical solutions do not enable fast computerized data processing.

### 3. CONCLUSION

This paper was focused on the receivables management and possibilities how to use information technologies for improving efficiency and results of this process. The specific situation was illustrated on the case of the Czech Republic. Firstly the importance of receivables management is emphasized. Then there are detected phases in which information technologies can be applied. Possibilities how to use information technologies differ if the business entity is a part of financial or non-financial sector. In the case of financial institutions the decision making process setting up the existence of receivables is more sophisticated, structured and regularly replicated and therefore also the use of information technologies is an obvious part of this decision making process. For non-financial institution the process setting up the existence of receivables is a part of broader activities. These activities are connected with the core business as selling bought goods, selling own produced products or provide non-financial services.

Monitoring of maturity of debts helps to sustain recovery rate of receivables on the highest possible level (of course in connection with evaluation business partner before running a common business). Reporting about maturity of debts enables to generalize recommendations which groups are more prone to default. These groups should be checked more before signing a contract. The groups can be characterized by the region, size, business sector, age, gender etc.

**Acknowledgments.** The paper is processed as one of the outputs of the research project "Research of insolvency practice in the CR, with the aim of forming proposals for changes in the legislation that would enable increased yields from insolvency proceedings for creditors, which would contribute towards increasing the competitiveness of the Czech economy", registered at the Technological Agency of the Czech Republic under the registration no. TD020190.

### REFERENCES

- Association of Small and Medium-Sized Enterprises and Crafts CZ (2013) 19. průzkum AMSP ČR Investice malých a středních podniků do IT. Available at: http://www.amsp.cz/uploads/Pruzkumy/Vysledky\_19.\_pruzkumu\_AMSP\_CR\_tisk\_.pdf (Accessed 23 April 2016).
- Association of Small and Medium-Sized Enterprises and Crafts CZ (2014) 24. Průzkum AMSP ČR Investice do IT a práce s daty ve firmách. Available at: http://www.amsp.cz/uploads/Pruzkumy/Vysledky\_pruzkumu\_Investice\_do\_IT\_a\_prace\_s\_daty\_ve\_firmac h.pdf (Accessed 23 April 2016).
- Association of Small and Medium-Sized Enterprises and Crafts CZ (2015) 34. průzkum AMSP ČR Elektronické zpracování dat. Available at: http://www.amsp.cz/uploads/dokumenty\_2015/Pruzkumy/Vysledky\_34.pruzkumu\_AMSP\_CR\_Elektronic
- ke\_zpracovani\_dat.pdf (Accessed 22 April 2016).
  Brealey, R. A., Myers, S. C. and Allen, F. (2011). <u>Principles of Corporate Finance.</u> New York: McGraw-Hill/Irwin. Bisnode (n.d.) Bisnode Scoring. Available at: http://www.bisnode.cz/produkt/bisnode-scoring/ (Accessed 10).
- November 2015).
  CBA (2015) Standard elektronické fakturace. Available at: https://www.czech-ba.cz/sites/default/files/standard\_cba\_elektronicka\_fakturace\_duben\_2015.pdf (Accessed 24 April 2016).
- CEE (n.d.) Centrální evidence exekucí. Available at: https://www.ceecr.cz/ (Accessed 12 November 2015).
- CRD (n.d.) Centrální registr dlužníků České rpeubliky. Available at: https://www.centralniregistrdluzniku.cz/ (Accessed 9 November 2015).

- CRIF (n.d.) CRIF Lending Solutions. Available at: http://www.crif.com/site/en/Pages/default.aspx (Accessed 15 November 2015).
- Dun & Bradstreet (n.d.) International Pricing List. Available at: https://creditreports.dnb.com/webapp/wcs/stores/servlet/InternationalPricingList?compCtry=CZ&custCtr y=US&storeId=11154&catalogId=71154&categoryId=15053&intProd=intProd&parent=%5bobject%20Win dow%5d&popup=true&cmeid=IOS200549 (Accessed 8 August 2014).
- Hyrslova, J. and Klecka, J. (2010). Ekonomika podniku. Prague: Vysoká škola ekonomie a management.
- Kislingerova, E., Richter, T. and Smrcka, L. et al. (2013). <u>Insolvenční praxe v České republice v období 2008-2013</u>. Prague: C.H. Beck.
- Kislingerova, E. (2012). Lack of Insolvency Related Information as a Factor Limiting the Reform of the Insolvency System, in D. Pavelková, J. Strouhal and M. Paseková (eds.) Advances in Finance & Accounting, UTB Zlín, 20-22 September. Athens: WSEAS Press, 180-185.
- Placek, J. and Louda, L. (2014). Research of interdependencies of some variables determining the quality of insolvency proceedings, in: M. Culik, (ed.) Managing and Modelling of Financial Risks 7th International Scientific Conference Proceedings (Part III.), VŠB-TU Ostrava, 8 9 September. Ostrava: VŠB Technická univerzita Ostrava, 648-656.
- Rajl, J. (2012) Jak si vybudovat finanční historii. Available at: http://ksg.vse.cz/wp-content/uploads/2012/11/Rajl.pdf (Accessed 8 November 2015).
- Scholleova, H. (2012). 'The Economic Crisis and Working Capital Management of Companies'. <u>Theoretical and Applied Economics</u>, 20, (2), 79-92.
- Smrcka, L., Schönfeld, J. and Malý, T. (2015a). 'Results from Researching Insolvency Processes in the Czech Republic', <u>International Advances in Economic Research</u>, 21, (1), 123-124.
- Smrcka, L. and Placek, J. (2015b). The Impact of Territoriality of Court Bailiffs and Its Qualification in the Czech Republic, in: G., Lee, and G. Schaeffer, (eds.) 4th International Conference on Social Sciences and Society, Paris, 19-21 May. Bellflower: Information Engineering Research Institute, 189-194.
- Smrcka, L. (2013). The Problems of the Insolvency Register in the Czech Republic from the Perspective of Information Technology, in A. Rocha, A. M. Correia, T. Wilson and K. A. Stroetmann, (eds.) Advances in Information Systems and Technologies, Olhao, 27-30 March. Heidelberg: Springer, 10 pp.
- Smrcka, L. (2015). The Project of Electronic Monitoring of Insolvency Proceeding Results in the Czech Republic: Utilization of IT Reduced Information Asymetry among Economic Subjects, in. A. Rocha, A. M. Correia, S. Costanzo and L. P. Reis, (eds.) Advances in Information Systems and Computing, New Contributions on Information Systems and Technologies, Ponta Delgada, 1-3 April. Heidelberg: Springer, 317-327.
- Smrcka, L., Camska, D. ad Placek, J. (2016). The Role of Information Technologies in Receivables Management, in A. Rocha, A. M. Correia, H. Adeli, L. P. Reis and M. Teixeira, (eds.) New Advances in Information Systems and Technologies, Recife, 22-24 March. Cham: Springer, 411-420.
- Strouhal, J., Bonaci, C.G. and Mustata, R. (2014). <u>International Accounting Practices</u>. <u>University of Economics</u>. Prague: Oeconomica Publishing House.