

The significance of insolvency statistics and the regression analysis thereof – the example of the Czech Republic

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Abstract: - The study concerns the problem of statistical data and the regression analyses thereof, primarily on the example of the Czech Republic, which, for the purposes of the models used, has been supplemented by data concerning groups of developed countries. The authors proceed from the assumption that information on the efficiency of insolvency processes is important for understanding the functioning of the entire economic system of a given region, insofar as the efficiency of these processes are known to entrepreneurial subjects and therefore becomes a part of their decision-making processes. Therefore, it is especially decisions concerning risks that are influenced, which leads to this efficiency becoming a part of prices and other fundamental market circumstances. Then, on the basis of international comparisons, mathematical models (regression analysis) examine the mutual dependency between yields from insolvency proceedings, costs of these proceedings and duration of proceedings. A critique of source data then leads to the expression of a need for high-quality national statistics, and the possibilities of gaining such information is demonstrated on the example of the Czech Republic.

Key-Words: - Collection of receivables, creditor, debtor, insolvency, statistics, regression analysis

1 Introduction to insolvencies in the Czech republic

At present, Act No. 182/2006 Coll. on Bankruptcy and its Settlement Methods, usually referred to in legal circles and professional literature as the Insolvency Act (InsA), is in force in the Czech Republic. Although this act was enacted as early as 2006, it took effect on 1 January 2008. This regulation replaced Act No. 328/1991 on Bankruptcy and Settlement.

The question as to why satisfaction for creditors reached such low levels during bankruptcy proceedings (the number of settlements were minimal) was the main theme of discussion on insolvency law in the CR throughout the nineties and in the subsequent period until the taking of effect of the Insolvency Act. A conglomerate of partial questions were at issue: for instance, the inadequate rights of creditors, the slow pace of legal proceedings, the possibility of obstruction from the sides of debtors and certain creditors. Certain fundamental facts were declared even back then: Court proceedings on the basis of the act on bankruptcy and settlement were risky for

creditors, their rights are not adequate and their property is not protected in the period prior to declaration of bankruptcy and not even later. Besides evident problems in the area of financial economics, this also entailed a reputation risk for the Czech Republic.

During this period, a thought construct appeared, based on the conviction that strengthening creditors' rights would lead, thanks to their increased interest in the results of insolvency proceedings and to their more effective decision-making, to greater efficiency of the process as a whole. In theory, this conclusion is quite logical. However, the relationship does not work entirely according to theoretical expectations.

The above-mentioned thought was based too heavily on faith in the basic hypothesis and did not take into account other realities, especially the motivation of individual participants of insolvency proceedings (for more, see [1] pp. 28–56). The first five years of the usage of InsA did not bring about changes that we could call fundamental – not even in the behaviour of creditors. It is quite evident that InsA is a more

suitable legal framework and opens a substantially greater space for more creative, faster and more effective solution of debtor bankruptcy than what was the case with the Act on Bankruptcy and Settlement. On the other hand, however, even this considerable improvement of the legal framework did not produce the expected results.

One of the reasons is the fact that participants of insolvency proceedings are often not willing to enter the proceedings and participate therein – among other things, because their experiences with the insolvency system do not guarantee recoverability of the funds expended on proactive collection of receivables through insolvency proceedings. Creditors do not adjust their behaviour according to theoretical expectations, but primarily according to the probability of collecting at least an interesting part of receivables in comparison with expended transaction costs (see [1] pp. 52–55). In this decision process we have, on the one hand, transaction costs necessary for a particular subject to actively check and support insolvency proceedings; on the other hand, there is also the potential return from the proceedings. Given this choice, of course, active participation in insolvency proceedings loses.

The question, however, is how this state of passive resistance or rational apathy elicits macroeconomic costs. We proceed from the assumption that such costs exist and are not marginal. Creditors' endeavour not to expend further funds on enforcing receivables (given the fact that the creditor expects higher costs than satisfaction from this activity) in fact entails transferring these costs into the economic system as a whole. This occurs in various ways, such as calculation of risks into price, lowering the creditor's profit and other mechanisms. This generally entails reducing the efficiency of the whole system.

2 Deceptive international comparison

Our problem with judging the efficiency of insolvency proceeding can be called lack of information. This phenomenon has been described previously for the Czech environment

– for instance, from the perspective of regional and field division of debtors [2], possibly from the perspective of our information on incidental proceedings conducted simultaneously with insolvency proceedings [3], or from the perspective of possible prediction on the development of numbers of insolvency proposals and declared bankruptcies [4]. A fundamental analysis of the problem has been given in other works [5]–[7]. As regards Czech official statistics, these enabled until recently (until the publication of the explanatory memorandum to the amendment of the Insolvency Act in April 2013) only a comparison of numbers of insolvency cases, a basic distinction according to whether a physical person or business was at issue, whether the proposal was dismissed or otherwise concluded prior to the declaration of the debtor's bankruptcy; it is also possible to work with the number of declared bankruptcies, permitted reorganizations and permitted debt clearances. In these outputs, however, there is no information whatsoever as to the outcomes of such proceedings, i.e. the extent to which creditors are satisfied, what are the costs for insolvency administrator fees and so forth. This means that we have certain information on the legal and administrative aspect of matters, but only minimally on economic circumstances.

As regards international comparisons, only data issued regularly by The World Bank and International Finance Corporation institutions [8] are available under their Doing Business project. According to these data, yields for creditors from insolvency proceeding have sharply increased, the length of proceedings has decreased and costs expended on the parts of creditors for the course thereof have decreased. These results, however, are divergent from reality. This is logical – in the case of Doing Business, these are not the results of exact research on the course of insolvency processes, but the estimates of experts addressed in individual countries. Labelling this comparison as statistics is imprecise and misleading; on the other hand, the methodology for gaining data is stable, and if one can judge from available information, it is the same for all countries included in the survey. In principle, these

figures are gained through experts from individual fields responding to questions concerning a model case of insolvency proceedings. This, however, means that their responses (however serious and able the experts may be) do not bear testimony on insolvency processes as a whole in the given country, but on the expected outcome of insolvency proceedings in one imaginary, but specific case. The difficulty therefore lies in the fact that the “typical bankrupt” is not a typical bankrupt whatsoever, at least not in the environment of the Czech Republic. It thus transpired that these figures are perhaps suitable for comparing the efficiency of various systems together and for showing basic trends in individual states; but they do not in any way speak of the real situation in a representative way.

National statistics are mostly unavailable even in other states, and if some figures do appear, they can be compared only with difficulty. The conventions of individual legal amendments, the procedures of insolvency proceedings and individual mechanisms are in fact so divergent that it is practically impossible to carry out a common comparison. An example: Certain states have restrictions as to which entrepreneurial subjects can enter the bankruptcy process. The issue is mostly that they have to be large enough. Cases of smaller companies and entrepreneurs are settled at levels lower than that of the court and according to other regulations.

Year	Duration of proceedings	Recovery rate	Cost (% of estate)
2002	9.2	15.4	19
2003	9.2	15.4	19
2004	9.2	16.8	18
2005	9.2	17.8	18
2006	9.2	18.5	15
2007	6.5	21.3	15
2008	6.5	20.9	15
2009	6.5	20.9	15
2010	3.2	55.9	15
2011	3.2	56.0	17
2012	3.2	56.3	17
2013	3.2	56.3	17
2014	2.1	65.0	17

Table 1 - Duration of insolvency proceedings in years and recovery rate in percentages of investment volume and cost (% of estate) – Czech republic, 2014

Source: The World Bank, IFC 2014; the stated year marks the period in which *Doing Business* is issued; this publication, however records information belatedly, as the data are collected approx. half a year in

advance, so a publication dated 2014 records the opinions of experts valid as at the half of 2013

2.1 Regress analysis of gained data – their meaning and aim

The data above (see Table I) shows that the professional public has welcomed the enactment of the Insolvency Act and, based on experience, they are convinced that the utilization percentage and other parameters of insolvency proceedings have been significantly improved thanks to the new legislation. It must, however, be understood here that *Doing Business* is a project which, on the basis of expert appraisals, estimates specific data on a model case of insolvency proceedings; therefore, no data gained by this method can be confused with statistics or with the usual state in a given region.

There is nevertheless some point in further analysing these data. They enable comparison of the state among individual countries, while it can be assumed that, to at least a significant extent, they capture the performance of insolvency proceedings not only in relation to the model case, but also generally. This means that if the data in *Doing Business* suggest a higher utilization percentage in a specific state as against another, this is a situation that is normal also in other cases and that this system will be more effective also as a whole.

The given assumption thus enables one to carry out a regression analysis of data files whilst taking into account the fact that the found figures capture the specific situation of insolvency processes which, when compared together, can also function as a method of distinguishing which system is generally more effective and which is less so.

The search for connections and relationships between individual variables also has a dimension that can be used in practice and when conceiving real economic decisions, especially those of a legislative and political character. Proving the relationship between individual parameters of insolvency proceedings opens the way to such changes in insolvency acts and procedures of insolvency laws that lead to lower risks on the parts of creditors. These lower risks then manifest

themselves in the general benefit for the economic system. The first consequence will be that the above-mentioned risks cease to be implemented to such a high degree into prices and other parameters of the market environment; the main consequence, however, will be the growth of the efficiency of the economy as a whole thanks to the fact that its funds will be allocated more effectively.

In the given case, we will be interested in the common relationships between crucial data found in the above-mentioned way – that is, between duration of proceedings, recovery rate and costs (expressed as a percentage of estate).

2.2 The mutual position of costs of proceedings and yields for creditors

It would logically be possible to assume that there will be a certain relationship between recovery rate and costs and duration of proceedings, i.e. time. Such a conviction stems from the logical assumption that higher costs that are necessarily paid from the yields from the debtor's monetized property (as no other monetary source even exists) must in a corresponding manner reduce satisfaction for the creditor. At the same time, it seems probable that shorter proceedings will also be characterized by lower costs and thus higher yields. This would then mean that higher costs (expressed as percentage of estate) will be more frequent there where insolvency proceedings are lengthier and bring a lower recovery rate. However, this relationship was not confirmed by the regression model or, more precisely, it was not always confirmed in each time period.

The explanation is simple, however – the true amount of the recovery rate need not be influenced only by the amount of insolvency proceeding costs, but also by numerous other issues. For instance, the state of the asset markets generally, then especially the state of the real estate market or that of engine equipment. Of course, if the asset markets are low, then the adage “the shorter the proceedings, the better, as it brings lower costs and more funds will remain for the creditor” need not apply. In such a situation creditors could, on the contrary, wait until the situation

on the market improves and later utilize the possibility of selling at a higher price. In the same way, more careful preparation for monetization, even if it entails prolonging the whole proceedings, could produce a higher yield and at the same time not increase the costs of the proceedings in any fundamental way.

The specific or, on the contrary, general orientation of the debtor's business could also be fundamental. If the debtor's production is special or unique, its supplies will be very difficult to monetize. On the other hand, supplies of building materials or some other commodities will be easier to monetize, and a competitive situation is more likely to arise among interested parties, pushing the prices higher. Furthermore, it applies that, in many countries, the insolvency administrator's fee and other items that together make up the costs of insolvency proceedings are only very approximately regulated by truly enforced property. Especially where smaller insolvency proceedings are concerned, they are either fixed or make up a significant amount of the enforced sum and only then are their proportion to yield from monetization gradually decreased. These are all factors which entail a casting into doubt of the direct relationship between costs for insolvency proceedings and yield for creditors from these proceedings.

If we use the data from Doing Business 2014, then it was not possible to find a clear dependence between costs and yields and likewise duration of proceedings in the group of developed countries (OECD). Yet by using data a year older, the relationship would be relatively weak or poorly marked, but definable. It thus appears that even though this relationship should at first glance function on the level of “the higher the costs, the lower the yields,” it need not necessarily be so always and under all circumstances.

Despite this, an interesting graph presents itself for analysis:

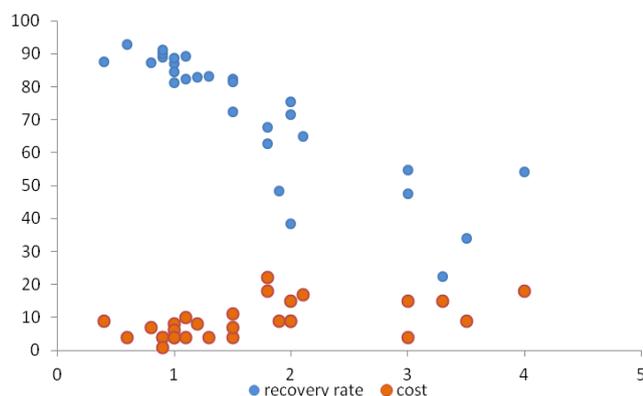


Fig. 1 Costs and recoverability from insolvency proceedings in dependence to duration of insolvency proceedings in OECD countries in 2013 (costs in percentage of estate, recoverability in percentages from investments, duration in years)

Source: The World Bank, IFC 2014)

Although the regression analysis does not, as we have already mentioned, show a definable relationship, the graph nevertheless shows that there is some dependence here – at least visually. There can be no doubt that prolonging of time on the lower axis reduces the recovery rate. With costs, the relationship is not as clearly readable and we rather intuitively sense that, although a range of divergent points can be seen, the basic fact is visible – costs tend to increase with a prolonging of the duration of the course of proceedings. But here we see a large number of divergences from the series, which makes finding mathematical connections of relationships highly problematic. This is connected with the above-mentioned difficulties in the area of costs, which are to a large extent determined or pre-determined by the setting of legal regulations for remuneration of insolvency administrators, for their costs and numerous other circumstances.

2.3 A simplified model of the relationship of costs of proceedings and yields for creditors

We reach an interesting conclusion if we simplify the model and create a relationship only between costs and yields. To illustrate, Table II shows the value of costs and yields for certain countries from the “OECD country” group.

Year	Duration of proceedings	Recovery rate	Cost (% of estate)
Finland	0.9	90.2	4
UK	1.0	88.6	6
Germany	1.2	82.9	8
USA	1.5	81.5	7
OECD	1.7	72.3	9
Italy	1.8	62.7	22
Sweden	2.0	75.5	9
Czech republic	2.1	65.0	17
Poland	3.0	54.8	15
Slovakia	4.0	54.1	18

Table II - Duration of insolvency proceedings in years and recovery rate in percentages of investment volume and cost (% of estate) – certain OECD countries

Source: The World Bank, IFC 2014

Countries and the average of OECD states are here arranged from the lowest duration of proceedings and we see that the recoverability for the creditor (with a few small differences, where the only greater one is the case of Sweden) is arranged identically. What is fundamental is that the costs for proceedings too have arranged themselves for us in ascending order – as could be expected. Here the divergences are somewhat greater, but we can say once again that there are not a fundamental number thereof. Here we see, for instance, a relatively marked disproportion in Italy, which stands out from the basically homogenous series. Once again, it can be seen that although it is not possible to formulate a precise relationship between time on the one side and costs with yields on the other side, this more complex model of three parameters would apply also for certain countries or certain periods.

Nevertheless, as was expected, we can find a clear dependence at least between actual costs and yields, which is precisely shown by the following calculations contained in Fig. 2 and Table III.

In the graphic representation, we see that the greatest concentration of the highest placed points (each point represents one of the countries of the OECD group) tends to occur close to the vertical axis, which means there, where costs of insolvency proceedings are low. As the distance from the vertical axis increases (i.e. with an increase of costs), the points shift

lower, which signifies a reduction of the recovery rate. Even here, one can identify several states whose results do not fall precisely into this line, although their divergences are within the scope of standard statistical deviations. In the following Table III, this relationship is mathematically confirmed in the scope of a regression model.

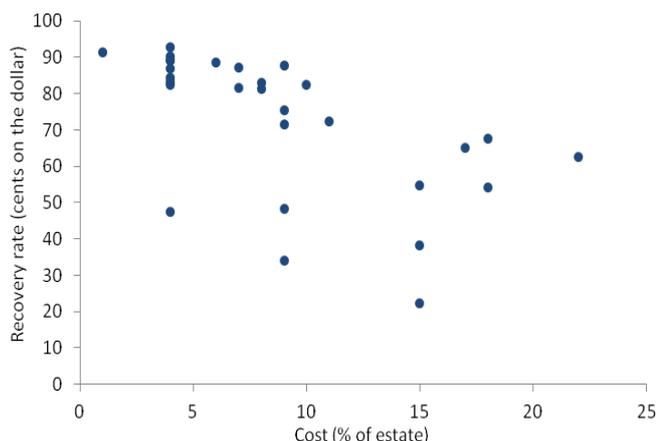


Fig. 2 Costs and recoverability from insolvency proceedings in OECD countries in 2013 (costs in percent of estate, recoverability in percent of investment)
Source: The World Bank, IFC (2014)

Dependent variable: RECOVERY RATE				
Included observations: 29				
Variable	Coefficient	Std. Error	t-Stat.	Prob.
C	91.22459	5.771052	15.80727	0.0000
COST	-2.124374	0.555586	-3.823665	0.0007
R-sq.	0,351280	Adj. R-sq.	0,327253	
F-stat.	14,62041	Prob.	0,000704	
DW stat.	1,876597			

Table III - Results of regression analysis of recoverability from insolvency proceedings in dependence to costs of insolvency proceedings in 2013 in OECD countries

Table III depicts the mathematical results of regression analysis of recoverability from insolvency proceedings in dependence to costs of insolvency proceedings. The model can be written in the form:

$$est\ recovery\ rate = 91.22 - 2.12\ cost \quad (1)$$

from which it follows that increase of insolvency proceeding costs from property by one percentage point increases the recoverability from investment from these

proceedings by 2.12 of a percentage point. It follows from a regression coefficient (-2.12) estimate and from the correlation coefficient ($r = -0.59$) that this is in fact an indirectly proportional relationship. All tests were carried out on a five-percent significance level.

2.4 Natural conclusions stemming from the regression analyses

Understandably, one can discuss the issue of costs of insolvency proceedings from various angles, which also often occurs. One of the traditional lines of argumentation used by certain participants of insolvency proceedings (in the given context especially insolvency administrators and professionals participating in insolvency proceeding processes) is the statement that higher quality is connected with higher costs.

This is in fact a logical construction. The administration of the debtor's property in the process of insolvency – for instance, when bankruptcy is declared on a debtor's property – is truly a highly expert matter requiring vast economic and legal knowledge. Moreover, this is an activity for which considerable moral integrity is required for a truly responsible and honourable performance. It thus applies that the significant remuneration is in order and defensible in the given context. Likewise, it can also be said that overly poor rating of the activity of the insolvency administrator and other professionals active in the insolvency process would have a fatal impact on the quality of performance of this activity.

From this perspective, it is certainly correct to state that the remuneration of insolvency administrators cannot be lowered and their costs are a given, as these are truly outlaid costs. Only a minimum of acts and materials are covered across the board, and these are not substantial sums.

A similarly correct statement, however, is that from a macroeconomic perspective and from the perspective of a general justice of sorts, as well as from the perspective of public interest, it is necessary that creditors expect the highest possible enforced sums in the scope of insolvency proceedings so as to cover the majority of their receivables or so that the

creditors damages are the lowest possible. This is an entirely legitimate notion, given that only such a standard outcome of insolvency proceedings will entail a general reduction of risks felt in the entrepreneurial sector – whether from the financial area or that of real economics. If, in connection with insolvency proceedings (and now we have primarily proceedings in the entrepreneurial field in mind), we speak of public interest, this is a consistent fulfilment of the basic postulate that a debt has to be repaid. If society succumbs to the notion that liabilities can be avoided, including by such methods as removing assets from the reach of creditors, it cannot function in an economically healthy way. Its conduct will repeatedly be infected by moral hazard, irresponsibility and other realities.

3 Examination of real results in the Czech Republic

As we have mentioned several times, the surveys from *Doing Business* used in the previous analyses are not in fact statistics. These are professional estimates on how a specific country would fare in a model case of insolvency proceedings. It was thus necessary to proceed differently in order to ascertain creditors' true yields from insolvency proceedings.

The aim of the scientific study of the Insolvency Research team was to ascertain real data on insolvency proceedings insofar as these data could become a basis for ascertaining real impacts of entrepreneurial subject defaults in the economic environment of the country; and only given knowledge of such impacts, their range and seriousness, would it be possible to define such directions in the legislative process that would at the same time lead to the fulfilment of what seems at first glance to be to completely incongruous assignments. The first is the increase of yield for the creditor, but at the same time so as to not lead to a reduction of real remuneration of insolvency administrators.

The only way towards such a goal is a fundamental change of insolvency law moving in the direction of debtors being forced to declare their bankruptcy sooner, at a time when their assets have not been rendered worthless in

attempts to maintain the indebted subject or when they have not been removed from the business and placed out of the reach of the creditors. This would lead to a new state where the monetization of the debtor's property would yield significantly higher funds. Then the same percentage-defined remuneration of the insolvency administrator would entail higher real incomes. A space would thereby emerge for reduction of percentage rates of remuneration of insolvency administrators. Most importantly, however, the higher remuneration for the administrator would not entail lowering payment to the creditors – they might gain a higher sum (although the proportion of this sum to the total of enforced receivables would be lower), but their bill for carrying out the bankruptcy or other procedure would grow.

Because only a minimum of data exists for the Czech Republic from official resources, ascertaining them meant that it was necessary to proceed to an analysis of available information on individual cases of insolvency proceedings and deduce a general concept on the course of insolvency proceedings therefrom. A database gradually forms on the principle of gradual gaining of data from individual proceedings; this contains all cases of insolvency in the Czech Republic, specifically those in which a debtor's bankruptcy was declared, the method of settling the bankruptcy was decided and, at the same time, the insolvency administrator's closing report was approved; in other words, where the proceedings were essentially completed (subsequent actions are then purely administrative and change nothing in the real results of the proceedings). At the same time, proposals that did not reach this phase because they were rejected, suspended or dismissed by the court (according to Section 142 to 146 InsA) were also examined.

3.1 Parameters of the sample examined and discussion on the sample

In total, 615 cases of insolvency proposals were scrutinized and processed in the period spanning the second part of 2012 and the first months of 2013; this is 7.77 percent of all proposals filed in the observed period (from 1

January 2008 to the beginning of October 2012) and at the same time such cases where the proceedings reached approval of the insolvency administrator's closing report, in some cases proposals that were dismissed, suspended or rejected. Of course, we now speak only of those filings that were aimed at trading companies or entrepreneurs. The sample as such was selected at random and every tenth case was investigated in the order in which the insolvency proposals were presented to the court.

3.2 Some general remarks on statistical recording of insolvency processes

Here there are several aspects of a more general nature to which attention should be drawn in so far as they can, under a certain arrangement, entail a divergence of results gained (on the basis of this sample) from future results stemming from scrutiny of one hundred percent of all insolvency cases. It is especially here where the definition of insolvency proceedings and what exactly we understand by this concept are at issue. In general, insolvency proceedings are understood rather as being a longer system of steps in time, with the proviso that decisions are made during these proceedings regarding the debtor's property and steps aimed at satisfying creditors are taken. Ultimately, this broadest understanding of the situation resonates with the definition of the term insolvency proceedings as it is given in the Insolvency Act itself. "For the purposes of this act it is understood that (...) insolvency proceedings are court proceedings, the subject of which is the debtor's bankruptcy or threatening bankruptcy and its settlement method." (Quoted according to [9] p. 3, [13])

However, in real practice (as the presented survey has, moreover, shown), a significant amount of insolvency proceedings do not at all reach the phase of steps where the debtor's property would be touched and which would move in the direction of satisfying the creditor, i.e. which would be a settlement of a debtor's bankruptcy and would thus correspond in its content to what we consider to be insolvency proceedings. In reality, a large number of proceedings are suspended or otherwise terminated still before the debtor's bankruptcy

is even declared, or, bankruptcy is declared in a significant number of cases, but the proceedings do not continue even so, the reason being the non-existence of relevant property on the part of the debtor. This is a considerable methodological problem from the angle of statistics that would bear witness to the whole and comprehensively describe events taking place in the context of insolvency proceedings.

If we were to, for example, apply figures gained from completed bankruptcies to all filed insolvency proposals to assess satisfaction of creditors, our result would not say anything about how well the insolvency system works. If a significant percentage of insolvency proposals were rejected due to faults, for instance, there would be no point in applying these cases to the issue of yields for creditors. On the other hand, if we applied the yields of these bankruptcies only to those bankruptcies where satisfaction of creditors occurred, we would also produce completely unrealistic statistical results. These would not respect cases where no relevant property stood against receivables.

3.3 Fundamental parameters of results

In Table II, we can observe the basic division of these cases that give us a certain primary concept especially on how insolvency proceedings run when they commence. When individual cases were being examined, however, it was found that terms from Section 142 InsA were used imprecisely on the parts of insolvency administrators; as a result, it cannot be precisely determined from available documents how precisely this paragraph was used. Section 142 makes a distinction in individual points as to:

- rejection of an insolvency proposal due to faults,
- suspension of proceedings due to lack of conditions for proceedings which cannot be removed or which could not be removed,
- suspension of proceedings due to revocation of the insolvency proposal,
- dismissal of the insolvency proposal,
- dismissal of the insolvency proposal for lack of debtor property (for more, see [9] p. 291).

It would subsequently be necessary to interpret the data gained and attempt (on the basis of

experiences from cases where the use of the above-mentioned section was defined precisely) an interpretation of the other cases so as to be able to continue in the analysis of the results of the survey.

	Number of cases	Percentage of the whole
Total number of cases in the sample	615	100.00
Proposals rejected due to faults	93	15.13
Suspended proceedings (e.g. revocation)	56	9.10
Dismissal on general grounds	126	20.48
Dismissal for lack of property	153	24.88
Bankruptcy declared	179	29.11
Minor bankruptcy declared	8	1.30
Reorganization declared	0	0.00

Table IV - Basic results from a survey of insolvency cases
Source: Insolvency register, own findings, own calculations

From the legal point of view, the following departure points provided the basis for analysis:

- In a case of rejection, the procedure is defined more precisely in Section 128 of the Insolvency Act; it is assumed that the court acts in this manner if the proposal does not contain all the prerequisites. A seven-day deadline as of filing the proposal is designated for rejection or for the court to summon the plaintiff to supplement the proposal.
- Suspension of proceedings is defined by the civic court code on a general level, and Section 108 is specified for the purposes of the Insolvency Act; there, a case where the plaintiff does not pay a deposit for the expenses of insolvency proceedings is stated as being one of the main causes for suspending proceedings.
- Cases of revocation are then settled by Section 130. In fact, this category included also other cases of insolvency proceedings which are not dealt with by Section 427 InsA (the main interests of the debtor are in other EU countries and the debtor does not have business premises on the territory of the Czech Republic on the date when the proposal is filed), possibly other variants

where the court discovers problems in the issue of local competence or jurisdiction or, on the contrary, discover a problem in the competence of the plaintiff.

As for the analysis of data gained, the most important variant transpired to be the non-payment of the deposit for costs of proceedings on the part of the plaintiff – in all probability the creditor in the given context, although perhaps peripherally it could also be the debtor (it is, however, uncertain why it would file a proposal against itself if it were unwilling to pay the deposit, which is a thoroughly predictable requirement from the court before the proceedings are continued, i.e. prior to a declaration of bankruptcy).

If we wanted to somehow interpret the situation where a plaintiff does not pay a deposit, we must then assume that, in such a case, the plaintiff does not expect any relevant debtor property to be found, and thus does not expect that the deposit will be returned (although a receivable equal to the receivable behind the property base is at issue, which entails preferential status). The plaintiff probably arrived at the opinion (during the period between the filing of the proposal and the moment when it was summoned to pay a deposit) that the debtor has no marketable property, which is why it desists from further proceedings. Or perhaps it did not concern itself with the issue of the debtor's property and had no information about it, but expected that one of the other creditors would be willing to pay the deposit – none, however, can be found that could be convinced of the existence of relevant debtor property. In such cases, however, we can assume that the debtor in fact does not have any property at all that could cover the plaintiff's or other creditor's costs (at least the deposit paid). This remark is very important for the general interpretation of the problem of insolvency proceedings in the Czech environment. On the basis of these assumptions, we have considered the above-mentioned cases to be of the type where lack of debtor property was ascertained.

This means that we can consider rejections of proposals (in one hundred percent of these rulings, in principle) to be cases that, in their consequences, do not bear testimony regarding the facts which interest us – i.e. on the

utilization percentage of insolvency proceedings, their efficiency, length and especially on the insolvency situation in Czech economy generally. Suspended proceedings may not “basically” commence, but they do give a signal as to the extent to which debtors’ businesses enter into insolvency proceedings without any meaningful property that would give creditors hope for at least partial satisfaction of their receivables.

Rejection of an insolvency proposal and suspension of proceedings are procedural rulings, while in both cases commencement of insolvency proceedings may occur, but in a case where a proposal is rejected, it is still debatable whether we can understand the actual filing of the proposal and its subsequent rejection as information on a debtor’s state of insolvency, and we can even doubt whether (in certain cases of suspension) the debtor is in fact a debtor in the sense of the Insolvency Act. In reality, it would be best to exclude these cases from statistical surveys completely, as their only predicative ability is information on the administrative burdening of the courts.

Sections 143 and 144 InsA concern cases of dismissal and dismissal for lack of debtor property. In both cases, judgment on merits and negative judgment at that are at issue. Dismissal as such has, in turn, a relatively complex structure, and it is not simple to deal with an interpretation of such a court ruling. Most importantly, this is a case where it cannot be certified that the plaintiff and at least one other person has a payable receivable against the debtor. It is evident at the first glance that a significant number of possibilities can exist here, from cases where we are the witnesses of a bullying proposal and the debtor is not necessarily in insolvency whatsoever and does not fulfil conditions for declaration of bankruptcy, to the variant where the singularity of the plaintiff and non-existence of another creditor becomes apparent. This is highly unlikely in reality, but not impossible.

Dismissal can occur even in cases where the debtor proves that its inability to repay (not over-indebtedness) is the result of illegal activity of a third party or when the state or a higher territorially administrative whole

vouches for its receivables. The first variant is not unusual; we can consider the second to be a special case.

Where dismissed proposals are concerned, we can thus speak mostly of a situation where the plaintiff has not corroborated the relevance of its receivable or when the debtor is able to cast this receivable into doubt (or it is, for instance, the subject of a lawsuit between the debtor and creditor and the insolvency proposal is a step which is meant to induce the debtor to be more accommodating in this lawsuit). But more careful observation of specific cases shows that, even in this case, there are a certain percentage of cases which we could interpret as situations in which the debtor is objectively in bankruptcy, and it can even be expected that it does not have any relevant property at its disposal, but it stalls its bankruptcy (or rather, formal declaration of bankruptcy) using various methods – for instance, casting all of its receivables into doubt. In an entire aggregate of dismissed proposals according to Section 143, we are therefore faced with an interpretational problem once again. This group of insolvency proceedings in fact do not bear clear witness on insolvencies and, especially, do not bear testimony as to the debtor’s situation or qualities of the proceedings, but is rather a report on general relations in the economic space of the country. We cannot really judge whether the debtors in these insolvency proceedings are not the victims of bullying or whether they are in fact bankrupt, but are defending themselves against declaration of bankruptcy thanks to formal errors on the parts of the creditors.

Cases dismissed for lack of debtor’s property are, by contrast, quite evident. Further expenditure of creditors’ funds or court energy makes no sense or insolvency proceedings as a collective procedure when collecting receivables loses meaning here. Cases of declared bankruptcies, minor bankruptcies and, finally, reorganization that do not appear in the given sample are similarly indubitable. Their singularity has, however, already been shown earlier (especially [10], [11], but also [6], [14] and [15]).

3.3 The second level of data analysis

On the basis of the above-stated data from Table II, we can now form a secondary model of the examined insolvency proceedings. This modified data enables us to examine the efficiency of insolvency proceedings as such, as in this way, we are able if need be to separate insolvency proposals and insolvency proceedings where the debtor is in fact not bankrupt, the debtor's bankruptcy cannot be proved, or the proposal was filed without justification.

	Number of cases	Percentage of the whole
Total number of cases in the sample	615	100.00
Rejected proposals and suspended proposals (inconclusive proposals and similar)	213	34.64
Proposals terminated variously due to non-existence of debtor property	215	34.95
Proposals settled by one of the methods for settling bankruptcy	187	30.41

Table V - Basic results from the examination of insolvency cases

Source: Insolvency register, own findings, own calculations [5] pp. 97–98

Table III presents us with findings that are in themselves valuable and, without doubt, interesting. Most importantly, 69.59 percent of cases of insolvency proposals (rejected proposals or suspended proceedings plus proposals terminated in various ways) do not even reach the phase which we consider to be insolvency proceedings as such, where the insolvency administrator and court take steps moving in the direction of satisfying creditors' claims. It is clear that, in view of the administrative demandingness of the whole system, this fact markedly reduces the efficiency of the insolvency process and increases its costs, because even though proceedings do not take place here, it is nevertheless necessary to exert a certain administrative effort for this filing to be

correctly officiated. We are also witnesses to the situation where more than a third (34.64 percent) of the entire number of insolvency proposals raises doubts as to whether a bankrupt debtor truly exists, whether the Czech courts are locally pertinent for settling an incidental debtor bankruptcy or whether these proposals have such serious faults that proceedings make no sense. This is an extremely high figure and it is worth noting that even if certain facts emerge that devalue the whole insolvency proposal, the debtor is made public (in the insolvency register, which, however, mostly means that business partners usually take notice of this fact), and until a decision is taken regarding further steps, Sections 103 and 111 InsA (where effects concerning the start of insolvency proceedings are described) apply fully to it (the debtor).

The survey thus (at least in its present stage) confirms the hypothesis according to which an enormous number of debtors enter the insolvency process at a time when their businesses (or when persons doing business) no longer possess any relevant property. Here we could probably find reasons why creditors (despite indisputably higher-quality legislation) are still highly distrustful towards insolvency proceedings and why they frequently do not exert the expected activity.

3.4 The third level of analysis – obtrusive filings

If we were to look at the efficiency of insolvency proceedings in the country in terms of the results summarized in Table III, we would have to declare that any attempt to increase their quality is faced with the considerable burden of “obtrusive” proposals that do not and cannot lead to satisfaction of creditors and thus to fulfilment of the sense of insolvency proceedings. Furthermore, we must declare that a part of these proposals (but not a substantial part from the perspective of whole numbers) are motivated with the intention to bully and, from the creditor's point of view, are meant to replace other procedures when collecting receivables – for instance, an individual attempt at collection via forfeiture. In

certain cases, proposals that were probably filed under unethical competition (aimed at damaging a competing subject on the market) have been recorded. Such proposals are usually connected with a debtor's attempt to gain a public tender and are meant to cast into doubt its ability to meet its commitments.

The number of cases in which creditors are doomed in advance to a one hundred percent loss from a receivable devalues any endeavour towards practical impact (increase of returns for creditors) through improvement of legislation. This is especially marked if we agree to a more careful scrutiny of data that were ascertained on such proceedings where steps towards satisfaction of creditors (i.e. towards monetization or at least an attempt at monetizing the debtor's assets) were truly taken. A total of 187 of such cases appeared in our sample, of which the vast majority were bankruptcies and, to a minimal extent, minor bankruptcies. As regards reorganization, not even one case appeared in our sample.

With knowledge of previous conclusions of the survey, it is in fact not surprising that in 93 cases of insolvency proceedings, when a debtor's bankruptcy was settled by bankruptcy or minor bankruptcy, no satisfaction of creditors occurred and the deposits paid or the monetization of the debtor's property sufficed only to cover the expenses of the proceedings and, in some cases, not even these expenses, so the state covered a part thereof. This made up 49.73 percent of the whole, i.e. of the total number of declared bankruptcies or minor bankruptcies.

If we added this number of 93 cases (in which lack of debtor's property was gradually discovered during insolvency proceedings) to the already ascertained 215 cases from Table III, our total number of proceedings in which the debtor's property did not suffice for partial (even minimal) satisfaction of creditors would already reach 308, which is 50.08 percent of our examined sample (615 cases). If we also accept the thesis that, of those 615 cases, 213 cases (see Table III, the row of proposals rejected or suspended) de facto did not fulfil conditions for settlement through insolvency proceedings (or

were bullying), the proportion of these cases in fact increases to 76.61 percent.

Therefore, up to two thirds of insolvency proceedings conducted in the Czech Republic on the basis of legitimate insolvency proposals were of the sort where debtor's property no longer exists and creditors receive no satisfaction whatsoever.

3.5 The fourth level of analysis – rate of return

In the preceding comparison, we worked in a basic sample even with insolvency proceedings where no ascertainment of the volume of receivables occurred; we are thus unable even to estimate what sum the creditors lost and we are also unable, therefore, to finish calculating an estimate for the entire sample of insolvency proceedings. In the following passage, we focus on an analysis of the rate of return for creditors in those cases where business failure was declared and the debtor was declared bankrupt (or a minor bankruptcy was declared). This means that we now speak of cases where the debtor has some property at its disposal or where a creditor was willing to pay a deposit for the proceedings' expenses and risk (besides its receivable) further loss of money. In the second case, payment of a deposit suggests that the creditor has some information about the debtor's situation.

In our sample, we discovered a total of 187 cases where the debtor was declared bankrupt or a minor bankruptcy was declared. In the context of these insolvency proceedings, receivables amounting to a total of 245.1 million crowns for secured creditors and 2,224.3 million for non-secured creditors were claimed and recognized, i.e. a total of 2,469.4 million for both groups of creditors together. In comparison with the volume of recognized receivables, the yield from monetization is essentially marginal. A total of 89.4 million crowns was paid out, of which 61.2 million was paid to secured creditors and 28.2 million to non-secured creditors. The average satisfaction of debt thus reached 3.62 percent. In the context of these proceedings, secured creditors were satisfied at a rate of 25 percent of their claimed

and recognized receivables, non-secured creditors at a rate of 1.26 percent.

	Number of cases/volume	Percentage of the whole
Total number of cases in the sample	187	100.00
Cases in which creditors are satisfied	94	50.27
Cases where creditors are not satisfied	93	49.73
Volume of recognized receivables total (mil. CZK)	2 469.4	100.00
The volume of recognized secured receivables (mil. CZK)	245.1	9.93
The volume of recognized, non-secured receivables (mil. CZK)	2 224.3	90.07
Total paid out to creditors (mil. CZK)	89.4	100.00
Paid out to secured creditors	61.2	68.46
Paid out to non-secured creditors	28.2	31.54
Total pay-out ratio (paid out/receivables)	89.4/2 469.4	3.62
Pay-out ratio to secured creditors (paid out/receivables)	61.2/245.1	24.96
Pay-out ratio to non-secured creditors (paid out/receivables)	28.2/2 224.3	1.26

Table VI - The final result model of satisfaction of creditors

Source: Insolvency register, own findings, own calculations

The very low rate for non-secured creditors is not surprising as it was never assumed that the result should be somehow wildly divergent here. In certain partial studies, the rate of return was estimated even lower; InsolCentrum, for instance, gives two possible figures – 1.99 percent or 6.22 percent (these are data from proceedings that took place during 2011), which are made public in a very partial way on the server insolcentrum.cz). However, the rate of less than 25 percent for secured creditors is clearly the greatest surprise in the survey. An interpretation of this result is quite complicated. However, it seems to be a summary of various aspects, where especially two are crucial:

- The crisis – in essence, the economic recession and the drop in asset values connected thereto has been continuing throughout the time the Insolvency Act has been fully functional, which also concerns to the entire extent the manner of securing loans, i.e. pledging of real estate. This crisis has, moreover, deepened in time, which leads to the effect of insufficient securing of loans.
- Glut of supply – the growing number of bankruptcies of entrepreneurial subjects leads to a glut of collateral, while demand is poor due to the recession. This does not apply only with real property, but also with machinery and other movables.

The problem of low rates of return for secured creditors is in all probability not connected with legislation, as this is accommodating to creditors in this case. This creditor has considerable control of the manner in which the collateral is sold, it has the possibility to influence costs for maintenance of the collateral and further costs connected thereto (for instance, approve expenditures for securing and insuring the real estate), the insolvency administrator's fee is transparent and can be estimated fairly clearly.

4 Conclusion

One of the main characteristics of the insolvency process in the Czech Republic in the post-2008 era has been the obvious lack of assets in the balance sheets of debtors, which hinders any sensible outcome of insolvency proceedings. This is also the reason why the level of satisfaction achieved by creditors, both secured and unsecured, has been very low, with cases where the government has to cover the cost of the proceedings with public money not being so rare. An extensive statistical research carried out on a representative sample of insolvency proceedings initiated after the Insolvency Act took effect (after 01 January 2013) has revealed that the creditors satisfy a mere 3.62% of their registered and recognized claims. While secured creditors see 24.96% of their claims satisfied, unsecured creditors recover only 1.26% of their total claims. These numbers are in stark contrast with international comparisons, according to which the level of

recovered claims in the Czech Republic reaches more than 50% (56.3% in 2012).

Thanks to the usage of international comparative data and regression analysis, it has also been proven that the costs of insolvency proceedings negatively affect the yields for creditors (i.e. the fundamental sense of insolvency law as a whole) in a significant way. From further presented evidence, it thus follows that an increase in costs for proceedings is counterproductive, even if it occurred with an entirely praiseworthy aim of ensuring higher remuneration for the insolvency administrator. The only rational possibility of repairing the state of affairs is to rework legislation in a way that would force debtors to enter the insolvency process fundamentally sooner than is the case at present.

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