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FAILURE TO RECOVER BY LEGAL REORGANIZATION PROCEEDINGS

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# Characteristics of the process supersede characteristics of the debtor explaining failure to recover by legal reorganization proceedings

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## **Abstract**

The progress within the process to produce a reorganization plan signals strongly the risk of the confirmed plan not getting consummated. The study is based on legal proceedings according to the Finnish Company Reorganization Act (comparable to chapter 11 in Bankruptcy Act in USA). The sample consists of all the cases (the net amount is 85 cases) where the courts confirmed the plan in the year 2000. For normality of the progress there will be constructed an indicating variable. This variable is put as an independent variable in the failure predicting LR-model developed by Laitinen [2007]. In result, a new model has been acquired where the set of independent variables describing characteristics of the debtor has been superseded by our normality-indicator. There is only one exception. The indicator of the debtor being a limited company explains partly the failures along with the normality of progress in the process. A conclusion of the results is that characteristics of the reorganization process should always be considered when predicting or explaining success (failure) to recover from a financial distress.

**Keywords:** reorganization, failure, financial variables, non-financial variables, logistic regression analysis, recovery, legal proceedings, consummation, confirmation, bankruptcy

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## 1. Introduction

Business failure has been a research domain for some 40 years (Balcaen & Ooghe [2006]). Special emphasis has been put on failure prediction models. Early origin of business failure research goes back to thirties (Van Caillie & Dighaye [2002]). Out of the prediction tradition there emerges aspiration to move from prediction to prevention of business failure (Crutzen & Van Caillie [2007]).

Reorganization provision in bankruptcy legislation is for enterprises a promise to prevent ultimate failure – under certain provisions. USA has created this legislative innovation already in 1898. Present formulation passed as Bankruptcy Reform Act in 1978. During recent years equivalent regulation has been passed in many countries – at 1993 Finland was one of the early followers, but however nearly 100 years behind USA. Chapters 11, 12 and 13 contain the reorganization provisions of the bankruptcy act in USA (usually referred only to Ch 11). Laitinen [2007] has called the Finnish equivalent the Finnish Company Reorganization Act (FCRA).

Settling on Ch 11 (or equivalent) manifests business failure according to most of definitions of the failure in business failure literature. Accordingly, the debtor gets legal protection for rehabilitation. The protection offers in many respects powerful means to get recovery started. The reorganization of the business under legal protection challenges business failure prediction (prevention) models. In spite of external aid for the rehabilitation, rate of success of the reorganization plans is at the level of 50% (see for example Laitinen [2007], Jensen-Conklin [1992], Baldiga [1996], LoPucki & Doherty [2002]). This is considered low, so that there exists natural demand for the failure prediction also for these occasions.

Laitinen [2007] approaches the issue as business failures are approached traditionally. The set up for his study has been the following: Consider variables available during time to confirm the reorganization plan. How good prediction models for failure can be constructed by those variables (discussed in chapter 2, below)? The approach is thus very much similar to MDA models with the static information.

In the USA there still is going debate on usefulness or harmfulness of Ch 11 for market economy after applying it and its predecessors for over 100 years. This might be outcome of the fact that many fundamental questions are unanswered. In spite of long tradition to apply Ch 11 (or its predecessors), research activities on the subject have been modest. Elsewhere research has been near to non-existent. In addition cross-fertilization from business failure discipline to Ch 11 has been negligible. In chapter 9, we discuss some interesting findings based on this US evidence.

The focus of the present study is on Laitinen [2007] findings. We construct a new conceptual variable to describe progress of the process to create and confirm the reorganization plan (chapters 3 and 4). We insert this variable together with variables by Laitinen [2007] into logistic regression model in order to explain failure (chapter 5). In result, we see that the new variable supersedes nearly every variable in the models by Laitinen [2007]. When a reorganization plan has been confirmed for a limited company, failure rates stay different to other legal form for obvious reasons (chapter 8).

This study operates on the cases, where reorganization plan has been confirmed in Finland in 2000 according to FCRA. The sample is nearly identical to the sample in Laitinen [2007]. Courts confirmed 91 reorganization plans during that year. In eight plans there were two debtors, man and wife, doing business together. Total amount of confirmations is 105 containing all the debtors and in addition also in addition formal confirmations for business entities that have only relevance for taxation. We consider as outliers the liquidation plans and the one where the entrepreneur died in the midst of the consummation of the plan. Effective sample size is 85 cases. The reorganization plan will be labelled as a success if it has been consummated or it continues at the end of the year 2006. Otherwise, it is a failure.

## **2. Failures of reorganization plans - findings in Laitinen [2007]**

The study of Laitinen [2007] tries to find a good model to predict failure (or success) of the reorganization plans confirmed through legal proceedings. Three regression models have been generated on different set of variables with a little varying sample size because of some missing values. The essential result is that non-financial variables decisively improve predicting ability of a regression model to predict failure.

Available for the study there are about 200 variables in the sample of 89 cases. The first model whose predictive ability will be tested uses only financial ratios as independent variables. The available variables are pretty much similar we have seen in traditional business failure prediction models. The set in Table 2.1 will be sorted out for the logistic regression model as the outcome of stepwise method with backward elimination. The predictive accuracy of this model is at level of 42%. Laitinen [2007] considers this low.

- 1. Profit*
- 2. Profit to net turnover*
- 3. Equity to asset*
- 4. Total debt to net turnover*
- 5. Asset to net turnover*
- 6. Inventories to asset*

*Table 2.1: The best set of financial variables to predict failure*

In addition to financial variables there are also available variables describing other aspect of the debtor and its distress. There also are available some characteristics of the reorganization plan. Some 30 of there variables have been correlated to failure statistically significantly. By forward stepwise method variables in the Table 2.2 comprise the best set of independent variables to predict failure. The prediction accuracy of this regression model is 83% when tested on the

original sample. The accuracy is high as Laitinen [2007] puts it. Worth noticing is that new variables supersede all but one variable in the previous model. This sustainable variable is ratio of inventories to asset.

**Background**

1. *Payment defaults*
2. *Woman as entrepreneur*
3. *Number of part-time employees*
4. *Inventories to asset*

**Characteristics of the plan**

5. *Remission %*
6. *Number of creditor groups*
7. *Plan: submission of equity*
8. *Plan: concentration on core biz*
9. *Plan: emphasize on marketing*
10. *Plan: improvement of planning*

*Table 2.2: The best set of financial and non-financial variables to predict failure*

There is a sub-sample of 68 cases giving explicit information of their future prospects and numerical expectations. Forward stepwise analysis for that sub-sample produces again set of ten variables to predict failure. Different sample and/or new variables lead to the set where five variables left from previous set (Table 2.2). Amongst them there still is ratio of inventory to asset from Table 2.1. Future prospects superseded two variables. The resulting model has astonishing classification accuracy of 95%.

**Background**

1. *Payment defaults*
2. *Limited company*
3. *Reason: product markets*
4. *Inventories to asset*

**Characteristics of the plan**

5. *Growth: net turnover (2 y)*
6. *Growth: operating margin (2 y)*
7. *Plan: concentration on core biz*
8. *Plan: improvement of control*
9. *Plan: emphasize on marketing*
10. *Plan: improvement of planning*

*Table 2.3: The best set of financial and non-financial variables to predict failure, sub-sample with future prospect variables*

### 3. The process to produce a reorganization plan within legal proceedings

The legal reorganization proceedings are essentially a process intended to produce a reorganization plan confirmed by court (Fig 3.1). The process begins when a court rules on to start the proceedings. Once started the proceedings end up to the reorganization plan confirmed by the court. Outcome of the proceedings might also be direct movement into the liquidation proceedings (Ch 7 in the USA) or mere discharge of the protection under legal proceedings.

The three main phases of the process are: (1) Elaboration and (2) Handling of the plan proposal and (3) Feasibility tests of the closed plan. The legislation sets certain demands for progressing within the process. In Finland, submitting of the plan proposal should take place in four months from the beginning. There is similar time limit also in the USA. When starting the handling of the plan proposal the court sets deadlines for certain check points within the handling. The same holds true by the feasibility tests. On solid base the court might allow extensions for all these deadlines.

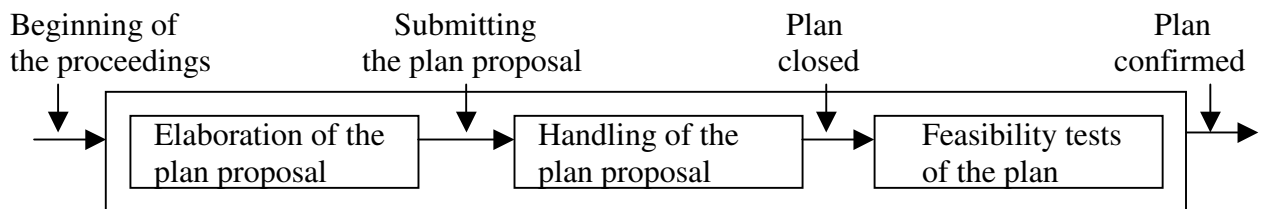


Figure 3.1: The process to produce a reorganization plan (legal proceedings)

For our sample we have three variables describing progress within the process: Total duration of the process (Total duration in Table 3.1), Delay in submitting the plan proposal (Delay in submitting in Table 3.1) and Duration of the feasibility tests (Feasibility tests in Table 3.1). These three variables measure durations in all the three main phases: the duration of the feasibility tests is measured explicitly, the duration of the elaboration is measured implicitly by delay because of the nearly constant deadline for submitting. The duration of the handling of the plan proposal gets also measured implicitly by total duration (Duration of the handling  $\approx$  Total duration – Duration of the feasibility tests – Duration of the elaboration). Table 3.1 presents how the actual measure variables distribute in the sample.

	Min	Max	Mean	Median	StdDev
<b>Total duration</b>	0.00	1002.00	277.28	251.00	119.85
<b>Delay in submitting</b>	-5.00	407.00	67.11	41.00	80.66
<b>Feasibility tests</b>	0.00	259.00	100.51	101.00	56.66

Table 3.1: Distribution characteristics of the durations variables in the sample (days)

The prescribed deadline to submit the plan proposal is usually very tight. When debtor has experienced financial distress for years in most cases, also the remedies cannot be trivial and straightforward. That is why it is more a rule than an exception that extensions for the deadline are needed for thorough and careful elaboration of the plan proposal. In completely reverse situations extensions will be needed, too. We have that kind of situation, when the appointed trustee, who has prime responsibility to elaborate the plan proposal, is in severe difficulties to make-out the debtor's situation. So, delays as such might be good or bad for the quality of the



plan proposal. The same holds true in case of a non-delay, because in most cases holding on the original deadline is possible only by negligence. That might lead to fatal problems in the quality of the plan. Surely sometimes it is easy to elaborate a relevant plan proposal.

Negligence and manifested difficulties in the elaboration of the plan proposal might hit hard on the duration of the handling of the proposal. In this phase the creditors perform inspection of the proposal. Shortcomings and discrepancies will be exposed and when correcting these findings time elapses. Sometimes creditors are able to raise new, important issues during this phase in spite of careful elaboration. The whole rationale of the handling phase lays on the need to use creditors' special knowledge to expose potential problems in the plan proposal before legal enforcement. Again prolonged duration might signal inherent problems in the proposal passing through to confirmed plan or the extra time used is assurance of the better quality for the plan eventually becoming confirmed.

In principle, the feasibility tests are straightforward processing so that the pace is very much that of the court. There are some issues that might cause delays. Firstly, there might be provisions for the confirmation written in the plan. In that case the court needs explicit evidences that these conditions will be met. Normally conditions for confirmation improve feasibility of the plan. Secondly, a reason extending time for the feasibility tests is claims on impediments for the plan to be confirmed. The court has to investigate the claims with eventual hearings. All of this causes time to elapse. With short of evidences the investigation leads to discharges of the claims and to the confirmation of the plan. Nevertheless normally behind claims there are reasonable doubts. So the extended duration in these cases signals some potential problems in the plan.

#### **4. The normal progression**

In the Appendix 1 there are three graphs, each of them describing accumulation of failures (y-axis) against durations (x-axis). In the graphs each column represents one case. For the first graph (Total duration of the process) cases has been sorted by total duration of the process. For example the column number nine has duration 181 days (x-axis) and six failures have accumulated (y-axis) up to that point.

In the graph in the middle of the page cases has been sorted by the duration of the feasibility tests. For example column number 62 represents the case where duration (x-axis) is 127 days and until then there are 28 failures (y-axis).

In the graph in the bottom of the page cases has been sorted by the delays in submitting the plan proposal. Again from the graph we can read that column number 30 represents the case where delay is 26 days (x-axis) and in all the cases where delay is 26 days or less there are 13 failures (y-axis).

In all the three graphs white line shows average propensity for plans to be failed ( $40/85=0,47$ ). As discussed in chapter 3 we can expect that there might be problems with the cases at the tail of the distributions. From the graphs we can see ranges with fast growth in the both ends of the delay distribution and lower end of the total duration. Otherwise accumulation pace in the tails of the distributions is near to average.

Accordingly discussions in chapter 3 make us expect that most favorable propensity for success might be found amongst the cases that do not stay at any tails of the distributions. This expectation proves to be true. In every distribution we find range where the propensity for fail is essentially lower than the average. These ranges have been visualized in the graphs by red arrows.

*Definition 4.1: We consider the progress of a reorganization process “Normal” in cases where one of the three duration variables gets values within the ranges in Table 4.1.*

	Duration	
	Min	Max
<b>Total duration</b>	183	231
<b>Duration of the feasibility tests</b>	81	126
<b>Delay in submitting proposal</b>	1	25

*Table 4.1: Ranges with low failure propensity*

In Table 4.2 we see the dramatic signaling power of the Normality-variable. The classification set according to definition 4.1 divides cases into two groups that have nearly equal amount of members. In the group with the Normal progress the rate of failures is only 24% while in the other group that is 70%. As we see, the difference is statistically very significant.

			Total
	Non-failure	Failure	
<b>Non-normal progress</b>	13 30.23%	30 69.77%	43
<b>Normal progress</b>	32 76.19%	10 23.81%	42
Total	45 52.94%	40 47.06%	85
	DF	Value	Prob
Chi-Square	1	18.0130	<.0001

*Table 4.2: Failure rates for cases with Normal and Non-normal process progress*

## 5. Non-normal progress signals a warning

Referring back to chapter 2 we have gathered the variables proposed by Laitinen [2007] as Table 5.1. These variables were there either candidates or at use as independent variables for failure prediction models. When the name of the variable in the table is red-colored, the variable seems to have increasing effect on failure propensity. Green color indicates negative (plan surviving) effect. Only the variables with statistical significance better than 5% have been included in the set.

### Characteristics of the debtor

1. *Limited company*
2. *Woman as an entrepreneur*
3. *Number of part-time employees*
4. *Total debt to net turnover*
5. *Total debt to net turnover (interim)*
6. *Inventories to asset*
7. *Reason: financial markets*
8. *Reason: product markets*

### Characteristics of the plan

9. *Remission %*
10. *Number of creditor groups*
11. *Growth in volume*
12. *Plan: concentration on core biz*
13. *Plan: improvement of control*
14. *Plan: emphasize on marketing*
15. *Plan: improvement of planning*

Table 5.1: Candidates for independent variables by Laitinen [2007] to predict failure

Now we perform a logistic regression analysis searching for a model to explain failures of the reorganization plans. We use forward stepwise method with 5% as threshold significance level. As independent variables we offer the contents of Table 5.1 and the Normal progress-indicator variable.

Results of the analysis can be seen as SAS-output in the Appendix 2. The analysis picks up only two of the variables as relevant independent variables to explain failures. The two variables are: Normal progress-indicator and dummy for Limited company (more discussion about limited companies in chapter 8).

The result of the analysis essentially says that one single

**Indicator for progress of the process supersedes  
the explanatory power of the 14 other variables.**

## **6. Characteristics of the debtor and Normal progression**

Now we try to explain how progress in the process could mediate effects from the background to the success of the whole proceedings. Let us recollect what in the process should happen in principle:

- a) Problems behind the distress should be identified
- b) Strengths of the debtor should be identified
- c) There should be plotted a way out of the problems via the strengths.

The legislation rules the entrepreneur to contribute the process. Intuitively it is easy to understand that a woman as an entrepreneur (variable 2 in Table 5.1) is generally more co-operative than a man. Being more co-operative the debtor helps the process to progress more fluently. Also it is more probable that problems will be exposed that decrease chance to conduct the process casually.

It seems apparent that when the business concept of the debtor is more complicated, problems behind the distress might be more complicated. When problems are more complicated, solving them might also be more challenging. When challenges of the process increase then too fast progress might cause fatal negligence. On the other hand, trying to pass carefully through phases a)-c) above the greater challenge provokes higher professional capabilities. Short of

capabilities could be expected to cause incoherent, disordered or tangled progressing in the process, especially in challenging cases.

Using part-time employees causes extra work for managing daily business. Continuous optimizing of the inputs in the business makes the concept more complicated. Number of part-time employees (variable 3 in Table 5.1) can be seen to influence to progressing of the process through that characteristic.

Let us consider the issue of inventories (variable 6 in Table 5.1). One extreme category of the debtors is the one where earning is based on selling services (service industries). For example the transportation industry is well represented in the sample. They have no inventories in general. At another extreme end there are enterprises in wholesale industries. Whole their earning is based on the logistics. Somewhere in between there are industrial enterprises. When considering different business concepts, inventories (or logistics) are a separate dimension to be managed. One more dimension increases complexity to deal with. The greater inventory (to total asset) the greater is the complexity. The greater complexity in the concept causes more complicated problems to be solved in the reorganization process.

In Table 5.1 we see that higher indebtedness (compared to turnover) seems to be more successfully solved (variables 4 and 5). It is easy to see how this goes via progress of the process. For nearly each case in the sample the court has appointed a trustee (this is a private practitioner on contrary to trustee in USA practice). Typically the trustee has legal education and background. For them it is relatively easy to approach problems associated at indebtedness. Even the law itself gives to some extent explicit orders how to deal with debts. Higher indebtedness is a clear target to be processed so that the process also progresses fluently.

When reasons behind the distress (variables 7 and 8 in Table 5.1) have been documented into the plan, the process has been successful at least to the point a) above. Getting that far helps forward on the list a)-c). In opposite case there is only a little chance to reach relevantly point c). Doing right things in the process helps it also to progress fluently.

## **7. Normal progression and characteristics of the plan**

Variables 12-15 in Table 5.1 indicate a set of actions the debtor should perform to consummate the plan. The documentation into the plan itself indicates that the process has reached the point c) with more or less controlled manner. In nearly every case the plan contains the order to cut costs also in the future. It is quite safe to say so in every case. On the contrary the action orders like variables 12-15 in Table 5.1 need to be considered.

The connection between the applied remission level (variable 9 in Table 5.1) and failures (successes) of the plans is very complicated. The same holds true with the applied remission level and progress of the process. It is not obvious what might be the mediating mechanism that favorable (Normal) progress in the process supersedes explanatory role of the remission level.

There is no good explanation for the connection between number of creditors groups and failures of the plans as found by Laitinen [2007] (variable 10 in Table 5.1), either. That is why the mediating role of progress in the process is not possible to explain.

Planned growth in volume (variable 11 in Table 5.1) has obvious connection to failure on any plan. In the sample there can be seen mainly two reasons to aspire for the growth. Firstly the debtor genuinely seeks for the growth in spite of the financial distress. Secondly the debtor simply cannot be calculated to survive without the growth. In the process that is carefully conducted both of these ideas would be rejected.

## 8. In limited companies the consummation is different

As we saw in the regression analysis in chapter 5, Normal progress indicator superseded explanatory power of all but one variable in Table 5.1 (Laitinen [20007]). The limited companies seem to differ so that the differences cannot be compensated during the process. In Table 8.1 we can see the difference of the failing propensities with limited companies (64%) and other debtors 30%) in the whole sample.

	Non Failure	Failure	Total
Limited	15 35.71%	27 64.29%	42
Non Limited	30 69.77%	13 30.23%	43
Total	45 52.94%	40 47.06%	85
	DF	Value	Prob
Chi-Square	1	9.8896	0.0017

*Table 8.1: Failures with limited companies vs. other debtors*

Laitinen [2007] assumes that reason for the difference is on the personal risks. Typically abortion of the plan leads to the liquidation bankruptcy of the debtor. In case of a limited company the entrepreneur might get a lot to pay as a guarantor. In case of other legal form of the enterprise he inherits unlimited liabilities from the debtor. He/she loses practically all the chances to continue as an entrepreneur in any new business. In case of limited companies as a debtor the entrepreneur can start a new business although the credibility sets severe limitations.

We found eight cases in our sample where the responsible person steps into a similar position in a new company. In all these cases this took place after abortion of the plan. In all these cases we dealt with a limited company. This corroborates Laitinen's assumption.

We can assume that the confirmed plans form a continuum. On the one end, there lay those plans very easy to consummate. On the opposite end lays the plans impossible to consummate. Somewhere in the middle there are cases that are very hard to consummate. In case of a limited company the entrepreneur can see for himself easier opportunity to continue with a new company. In a similar situation the entrepreneur in a non-limited company cannot see anything but to continue by the hard way.

## 9. Other research

Poughkeepsie-study (Jensen-Conklin [1992]) is one of early studies on the success of the confirmed plans. In the study the sample consisted of the cases in one court (Poughkeepsie) during ten years. There the way from the petition to the confirmed plan seemed to be very rocky - the rate was 17 %. Nevertheless the severe filtering would not lead to any better rate of success with the plans than in our sample.

In the USA proceedings the courts should test the feasibility of the plan as prerequisite for the confirmation. Baldiga [1996] reports her observations on the practices in USA concerning the procedure preparing the confirmation. Differences in the procedure from court to court are significant. Also in this sample about 50% of the confirmed plans failed. For the courts there were written list as normative criteria. Baldiga [1996] could not see any effect on the success of the plan if the courts followed the norms or not. Essentially the conclusion was that there is shortage of the means to assess the feasibility of the plan.

LoPucki & Doherty [2002] made a research on the reasons why the reorganization proceedings in Delaware end up to the plans that fail more often (54%) than what is the case in New York (31%) or especially in other courts (14%). Their sample consisted of public companies what probably explains why the failure rate in average was much lower (28%) than in the samples of Jensen-Conklin [1992] and Baldiga [1996]. LoPucki & Doherty [2002] proved that the court is the reason for the difference. The accounts by Jensen-Conklin [1992] and Baldiga [1996] make it easy to believe in the conclusion of LoPucki & Doherty [2002]. Nevertheless Ayotte & Skeel [2006] challenged the explanation. LoPucki & Doherty [2006] replied. In effect, this debate exposed one category of cases where the propensity to fail is higher than in average. The so called prepackaged and pre-negotiated plans seem to fail more often than normally processed.

## 10. Conclusions

The essential contribution of this study is the issue of the progression in the process to produce a reorganization plan. The dummy variable to indicate the normal progression seemed to be very powerful tool in explaining failure of the plan. In this context characteristics of the process supersede characteristics of the debtor – the others but being a limited company.

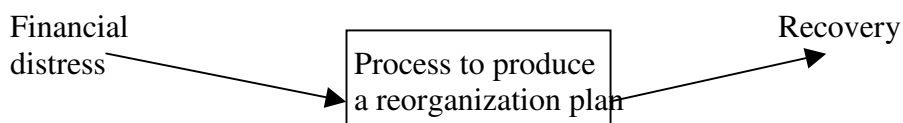
The basis for the progress indicator seems theoretically solid. Too streamlined progress carries obviously risks to negligence. USA experiences on prepackaging support the idea. On the other hand disordered progressing itself increases chances to create weaknesses in the plan – worse plans. Likewise, chances to drift to disordered progress increase when challenges for the reorganization increase. The challenges increase when the business concept of the debtor and/or the nature of the distress are more complicated.

Although the basis for the indicator is solid there are some shortcomings with it. Perhaps the most severe one is its dependence on numeric values. Whenever the indicator gets practical importance the parties shall take that into the considerations and start to behave in the way that those numeric values get different meaning. The phenomenon itself stays but we need different limits to expose it.

In this context the indicator have an important mission even at its conceptual nature. It proves that achievability of the recovery is dependant on the process to produce its plan. The distressed enterprise is not meaningful to deem to have on not to have potential to recover without taking into account the process (figure 10.1).

Our evidence comes from legal proceedings. Let us assess how we could generalize our results. In general, the concept of process stands for some ordered way to conduct actions to produce some outcome. All this cannot happen without resources. Vice versa, without resources there cannot be any process. The legal proceedings organize resources for the process normally in cases where the debtor has run out of any slack in resources.

All this reasoning raises fundamental question: Is it possible to conduct any turnaround for financial distressed company outside legal proceedings when the debtor already has run out of slack resources (for example Smith & Graves [2005])?



*Figure 8.1: Turnaround from distress to recovery*

During this study we also faced the fact that very little is known about prerequisites to recover. A lot of problems could be avoided if we knew the necessary and sufficient conditions for the successful recovery. Our sample proves that even at the best the recovery could not happen momentarily: The process that produced a reorganization plan kicks off a new process to actualize the recovery. We have learn with our sample that in some cases the plan itself has been consummated but later on the debtor has drifted into the liquidation bankruptcy. So, the recovery might be even more difficult issue than the consummation of the plan.

Last but not least, the process to produce reorganization plan itself should be also exposed. So far we do not know what its essential contents is. Reaching that we can expect to find more robust indicator to replace the one we constructed in this study. Better indicator would then be the tool to supervise the process and help the supervisor to put the process back to track when in danger to get lost.

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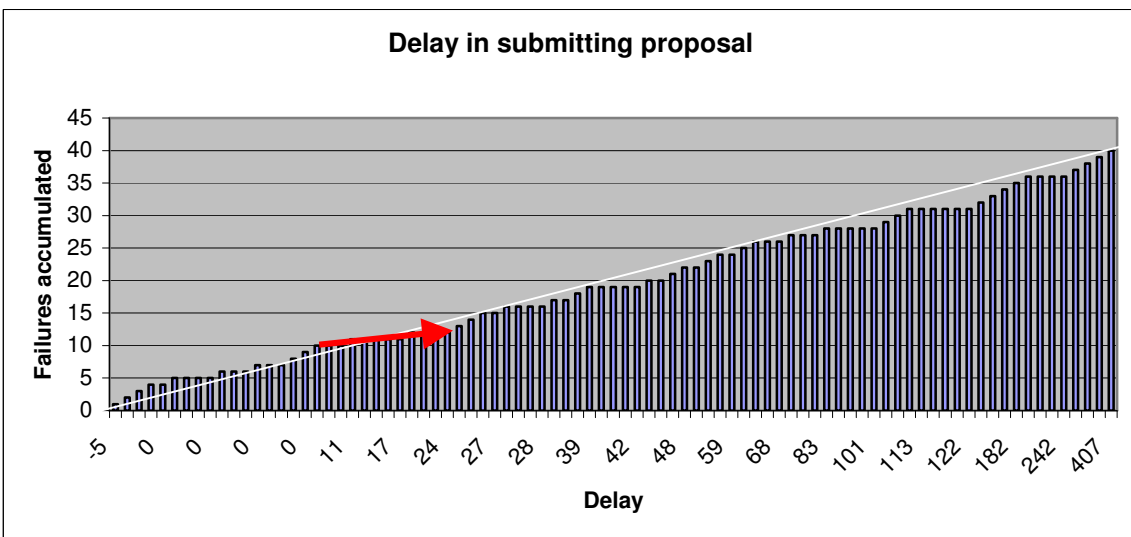
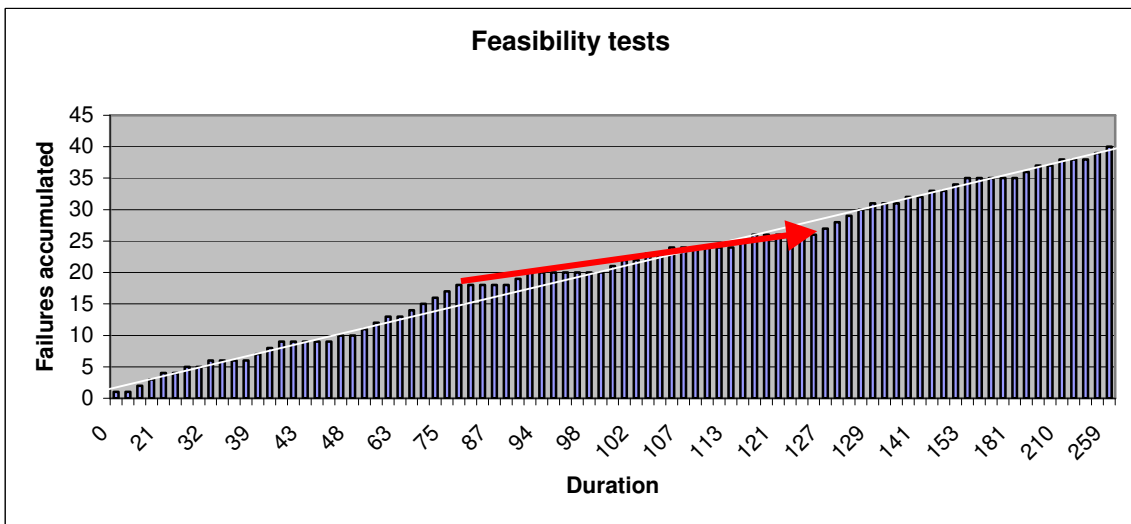
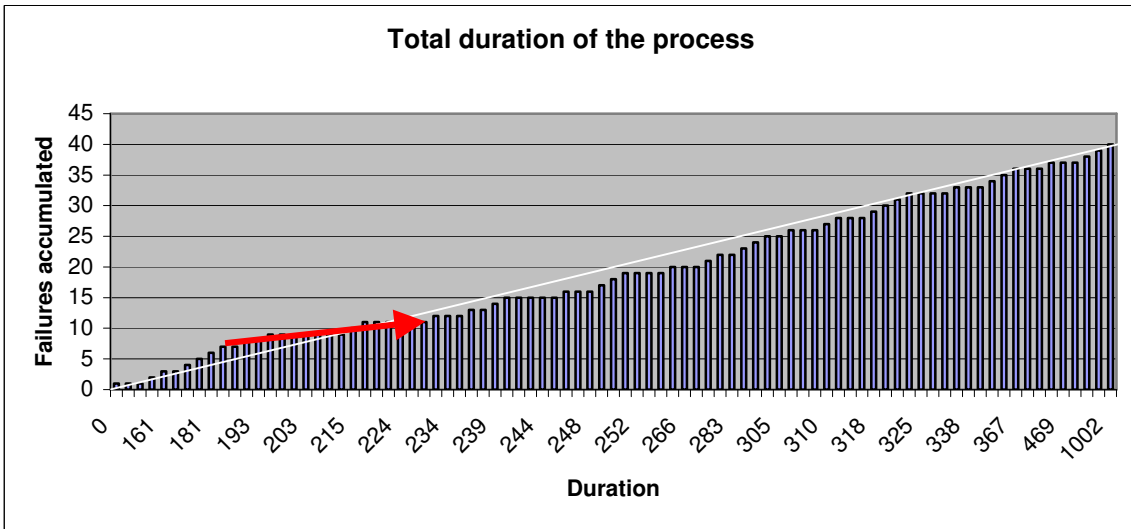
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Accumulation rate of failures by...



## Explaining failures of the reorganization plans – LR-model

Model Fit Statistics		
Criterion	Intercept Only	Intercept and Covariates
AIC	110.896	87.775
SC	113.266	94.883
-2 Log L	108.896	81.775

R-Square	0.2906	Max-rescaled R-Square	0.3885
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Testing Global Null Hypothesis: BETA=0			
Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	27.1213	2	<.0001
Score	24.2040	2	<.0001
Wald	17.9137	2	0.0001

Residual Chi-Square Test		
Chi-Square	DF	Pr > ChiSq
25.4028	16	0.0630

Deviance and Pearson Goodness-of-Fit Statistics				
Criterion	DF	Value	Value/DF	Pr > ChiSq
Deviance	76	81.7749	1.0760	0.3047
Pearson	76	81.8492	1.0770	0.3027

Type III Analysis of Effects			
Effect	DF	Wald Chi-Square	Pr > ChiSq
NonLimited	1	8.1663	0.0043
NormalProgress	1	15.4760	<.0001

Analysis of Maximum Likelihood Estimates						
Parameter		DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept		1	0.1623	0.2715	0.3571	0.5501
NonLimited	0	1	-0.8301	0.2905	8.1663	0.0043
NormalProgress	0	1	-1.1420	0.2903	15.4760	<.0001

Association of Predicted Probabilities and Observed Responses			
Percent Concordant	72.4	Somers' D	0.611
Percent Discordant	11.2	Gamma	0.731
Percent Tied	16.4	Tau-a	0.307
Pairs	1548	c	0.806

Hosmer and Lemeshow Goodness-of-Fit Test		
Chi-Square	DF	Pr > ChiSq
3.7782	2	0.1512