

RECONSTRUCTING THE RECONSTRUCTIONS

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Abstract: This paper investigates how effective the implementation of the new law on corporate reconstruction in Sweden has been. The law came into effect on the 1st of August, on request from an EU directive in 2019. The law aims to limit reconstruction proceedings to only firms that show an actual probability of survival and increase the percentage of administrators with adequate experience. To evaluate this, we ran a difference-in-difference regression on data of all reconstructions in Sweden, Norway and Finland ranging from 2020-05-11 to 2022-11-31, where Norway served as a control group and Finland as a second treatment group. Due to a small data set, we did not get significant results for the Swedish data. However, the data shows a drop when the law was implemented and a significant result for the Finnish law implementation. Therefore, we conclude that the law had a negative effect on the number of reconstructions. Moreover, we saw apparent changes in the selection of reconstruction administrators. Since the new law came into effect, all reconstruction administrators have had previous experience as bankruptcy administrators, which served as our proxy for having adequate experience. Therefore, we conclude that the law has been implemented successfully. However, more research needs to be conducted on changes in efficiency as that is too early to evaluate.

Keywords: insolvency, corporate reconstruction, corporate reorganization, wage guarantee, bankruptcy administrators

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1 Introduction

One of the cornerstones of the Swedish Limited Company Act (ABL) is the presumption that, if nothing else is stated in the articles of association, the purpose of a limited company is to maximize profits for its shareholders (ABL, 3 chapter, 3 §). In turn, a profitable and prosperous company is beneficial not only for its shareholders but also for the employees, business partners, customers and the government. However, the utopian scenario where everybody benefits does not hold for financially distressed firms. If the capital stock is used up, the shareholders have a lot to lose in the event of bankruptcy. As a consequence of limited liability, the profitability function of the shareholders is flat when the company is insolvent but slopes upwards when the company is successful (Goodhart, 2021). Because shareholders often are active in corporate governance, it is not unusual that they keep their optimism and continue to run their company at the expense of their creditors. Since the risk has shifted from the shareholders onto the creditors and their interests no longer align, the creditors are likely to take on a more considerable loss than what would have been necessary if actions were taken before it was too late. This scenario, where a firm is so heavily indebted that it cannot fund projects necessary for its survival, is called debt overhang and is correlated with firms' financial distress (CFI, 2022).

Under perfect market conditions, inefficient firms will go bankrupt and leave the market, while efficient firms thrive and take their place. However, debt overhang can lead to market failure by reducing investment in firms that would be efficient in a perfect market. Relieving debt overhang corrects these market failures. On the other hand, correcting too much creates another market failure by increasing investment spending in inefficient firms. These moral hazards create market inefficiencies which can have long-term effects on economic growth. Hence it is in both the government's and the creditors' best interest to remediate them.

One of the ways how governments try to solve insolvency issues in financially distressed firms is through corporate reconstruction. Corporate reconstruction is an alternative to bankruptcy offered to firms in financial distress who are deemed to eventually be able to survive (Kronofogdemyndigheten, n.d.). Sweden has had a law on corporate reconstructions (LFR) since 1996, a law that has been subject to several investigations since then (Bill 2021/22:215, 2022, p.95). These investigations have found numerous inefficiencies in the procedure, which will be discussed in the background of this paper yet changes in regulations did not come into

effect until the 1st of August this year. The intent of the law is not only to aid firms that are in financial distress but also to promote a competitive economy (Bill 2021/22:215, 2022, p.100). The reform aims to restrict access to reconstruction only to companies that show a substantial potential of surviving the reconstruction and ensure that only qualified reconstruction administrators are appointed.

Aim

When trying to solve insolvency issues, governments face trade-offs regarding whether to approve too many reconstructions or too few. Some countries believe the golden mean is reached by having more stringent requirements of economic prerequisites. They believe that by doing this, they will force companies to seek out help in an earlier stage, where insolvency is easier to combat. However, if requirements are too high, the governments risk overlooking firms that otherwise could be saved.

Sweden chose another strategy, and previous legislation stated that a reconstruction only should be denied if there is a lack of fair reason to believe that they can succeed. That meant a system where reconstructions were granted for more firms than was viable, which led to ineffective proceedings with many bankruptcies. In Sweden, reconstruction proceedings are also interlinked with the wage guarantee system, which is a part of national welfare, so it is in the government's best interest to cut unnecessary costs. However, they deemed the previous legislation too generous, and previous studies have found that the system was being exploited by business owners who wanted access to wage guarantees. Our first research question aims to measure if the law's implementation has made requirements stricter.

With changes in insolvency law happening all around Europe, Sweden has taken an unusual approach. The Swedish reform aims to ensure that the proceedings are not being exploited whilst providing the right help for those undergoing reconstruction. The first goal is to limit the company reconstruction to firms that show an actual probability of survival after reconstruction has been initiated. The second goal is to increase the percentage of administrators in reconstructions with adequate experience. We will use bankruptcy administrators as a proxy for adequate experience, which for why will be clarified in the legislative history section.

Sweden is also trying to find the golden mean of insolvency legislation. If they can optimize the trade-off by filtering out doomed firms beforehand and sifting out unfit administrators whilst still offering generous help to those that need it, they could serve as a template for other countries to follow. This paper aims to examine how effective this implementation has been.

Research Questions

- (1) Has the law's implementation decreased the number of approved reconstruction cases?*
- (2) Has the law's implementation increased the percentage of knowledgeable reconstruction administrators?*

2 Background

Reconstructions in Sweden

The following section will explain how the Swedish legislation on corporate restructuring was carried out in practice prior to the new law. We break down the procedure step by step:

1. The application form is handed to one of the appointed courts by either the firm itself or a concerned creditor. The applicant often suggests a reconstruction administrator whom they trust. The administrator has three separate roles in the reconstruction. The first is to act as an advisor to the firm. Secondly, (s)he supervises the reconstruction and reports either suspicion of crime or if the reconstruction can no longer succeed. Thirdly, the administrator serves as an authority figure in conjunction with the decision of wage guarantee (Danhard, 2018, p. 425). Furthermore, it is essential to note that the administrator is not meant to serve as an agent to the company but as a legal officer (Karlsson-Tuula, 2011, p. 81).
2. The court decides whether the application will be approved. The reconstruction will be denied when there is a *lack of fair reason* to believe that the purpose of the reconstruction can be achieved (LFR 1996, 2 Chapter, 6 §). If approved, the court appoints a reconstruction administrator with a legal background and insights into business economics and management.
3. The administrator makes decisions regarding wage guarantees for the firm's employees. The Swedish wage guarantee system aims to help firms retain employees and involve the government in paying the employees for some of their receivables against the firm (Karlsson-Tuula, 2011, p. 96). The wage guarantee works as a social benefit for employees and aims to help the firms with their insolvency issues. The system excludes employees with significant influence and substantial ownership in the firm. Moreover, a wage guarantee can be approved for three months before the application of reconstruction until the first month after the decision (Danhard, 2018, p. 425). A wage guarantee can also cover eventual severance payments and holiday payments. Maximum payment is set at four price base amounts¹ and for eight months at most (LGL, 9 §). If the reconstruction is successful, the firm will pay back the gross salaries in accordance with the settlement but does not have to pay back any part of the general payroll taxes.
4. Within a week of the decision, the administrator shall inform all known creditors with a list of the debtor's assets and liabilities and other key information regarding the firm's economic position. Moreover, it should also explain the causes of insolvency and how it is planned to be solved (LFR 1996, 2nd chapter, 13 §). Lastly, it should contain a date for the meeting of

¹ The price base amount for 2022 is 48 300 SEK

creditors, which usually occurs three weeks after the first decision. At this meeting, all creditors can voice how they believe the reconstruction shall continue. One important thing to note is that whilst in reconstruction, the firm is protected against bankruptcy, and its debt is frozen for the time being.

5. The reconstruction begins, and organizational changes are made.

6. Every three months, the court reviews the outlook of the firm and decides if the reconstruction should be allowed to continue for another three.

7. The firm can apply for a public settlement, a debt negotiation that is tried in court. To avoid bankruptcy, the debtor and its creditors agree on reducing or postponing the debt (Sveriges Domstolar, n.d.).

8. The reconstruction ends in either the firm going into bankruptcy (failed reconstruction) or continuing its operations with or without the public settlement (successful reconstruction).

The new amendments mainly impact steps 1 and 2. In step 1, there are now more stringent requirements for the application, which requires the firm to propose a solution for how viability might be ensured (LFR 2022, 2nd chapter, 4 §). For the second step, the law previously specified that reconstruction should be **denied** when there is *a lack of fair reason* to believe it could succeed. Now, the requirements are stated as it should only be **granted** if there is *substantial reason* to believe it could succeed (LFR 2022, 2nd chapter, 10 §). Moreover, the law also contains a new chapter called "Supervision of reconstruction administrators", where the Enforcement Authority now plays a supervisory role and can remark on administrators that they find unfit for the job, which could be because they lack qualification, experience or do not have a suitable organization (LFR 2022, 7th chapter).

Legislative history

The new Swedish law came partly because of a directive published by the European Union on the 20th of June 2019. The directive regarded preventive restructuring frameworks and measures to increase the efficiency of procedures concerning restructuring, insolvency and discharge of debt (Directive (EU) 2019/1023, 2019). This resulted in the Swedish government assigning an investigative task force to map out how this directive could be implemented in Sweden. Almost three years later, on the 1st of August 2022, the new reformed law on corporate restructuring became effective. This reform aims to make requirements stricter regarding who can undergo reconstruction and the reconstruction administrator that supervises and aids the

process (Bill 2021/22:215, 2022). The investigation finds that the design of the current viability test might be a contributing factor to why a relatively low share of reconstructions succeeds. They also conclude that increased requirements will help sift out doomed companies in an earlier stage of the process. This will help increase trust towards the reconstruction institute and, in turn, increase companies' inclination to seek help (Bill 2021/22:215, 2022).

Moreover, a mapping from the Swedish Enforcement Authority found that only 30% of the reconstructions from the period 2019-07-01 - 2019-12-31 were successful² (Kronofogdemyndigheten, 2020). This mapping included 92 cases, sorted based on whether the administrator also undertakes assignments as a bankruptcy administrator. In 50 of these cases, the administrator was a bankruptcy administrator, and they had a success rate of 50%. The rest of the cases only saw a success rate of 7%.

When undergoing reconstruction, the applicant gets to suggest a reconstruction administrator. The law does not restrict who can be appointed as reconstruction administrator, but courts see it advantageous if said person has adequate experience. The data shows that administrators that are not bankruptcy administrators apply wage guarantees to a broader extent (Kronofogdemyndigheten, 2020). On the other hand, bankruptcy administrators were found to approve wage grants for previous months in only 22% of the cases. The respective number for the rest was 43%. Moreover, a mapping from 2021 found that organized crime against the public wage grant has increased (Polismyndigheten, 2021). The National Audit Office reviewed the public wage grants and found that people who intend to abuse the system tend to choose administrators who do less thorough investigations (Riksrevisionen, 2022). The report found that abuse occurs less frequently in reconstructions than bankruptcies. However, the average reconstruction contains wage guarantees for 39 employees, while the respective number for bankruptcies is 9 (Riksrevisionen, 2022).

Furthermore, the report states that it is problematic that a reconstruction administrator decides whether the employees will get a wage grant while also being employed and paid by the company. The company can quickly end the contract if a wage guarantee is denied, and this can, in turn, amplify the risks of suboptimal decision-making (Riksrevisionen, 2022, p.34). The report also concludes that the risk of exploitation increases when reconstruction is begun in a

² Still operative by 2020-05-31

company with a low chance of succeeding. If a company succeeds in its reconstruction, it will have an opportunity to pay back the grants to the state. However, if the reconstruction fails and the company must file bankruptcy shortly after, the government will have to pay a wage guarantee twice to the same employees.

Returning to the success rates of 50% and 7%, respectively. This discrepancy could be because there are few formal requirements for reconstruction administrators, which can be linked to less knowledge regarding reconstruction and the wage grant system. It becomes apparent that non-bankruptcy administrators are a contributing factor when the problem of double wage guarantees arises. Additionally, the supervisory authority is missing wage guarantee decisions for 10% of the cases that bankruptcy administrators manage and 26% of the other cases. It is unclear whether this is because no decision was made or it was not sent to the authority (Kronofogdemyndigheten, 2020).

3 Previous research

The Economic Impact of Corporate Restructuring

The procedure for court-supervised reorganizations or reconstructions varies a lot in nature between different countries. This makes it difficult to estimate the macroeconomic effects of legislation on reconstructions. However, many studies have been made on the macroeconomic effects of restructuring companies in the general sense, court-supervised or not. Most of this research is done in the setting of an economic crisis where many firms in the economy face insolvency issues simultaneously. In general, the research shows that reconstructions benefit economic growth by relieving insolvency issues that hinder firms from operating efficiently, not least in times of economic crisis. To what degree the government should interfere in the reconstruction is not apparent, though, depending on many factors, such as the overall state of the economy. While little government interference can positively relieve insolvency issues, drawbacks include long work-out times because of low incentives for creditors and firms to resolve the issues quickly. The reconstruction's swiftness is an important condition for the positive effect on economic growth. Another problem is the risk of unproductive firms continuing to operate because of lax creditors (Laryea, 2010). A study on company reconstructions in Japan found that creditors benefitted from keeping unproductive firms in operation. The consequence was decreased profits for productive firms, which had a negative effect on investment in such firms. This, in turn, affected employment growth negatively (Caballero and others, 2008). Governments can remedy these effects by making these reconstructions more effective. From a macroeconomic perspective, the government's purpose is to ensure that firms that should not exist in the market because of inefficiencies or excess supply should go bankrupt. In contrast, productive firms that are not operating efficiently because of debt overhang should be able to continue operations (Laryea, 2010). A study conducted in South Korea also showed a positive relationship between corporate reconstructions and GDP growth through investment and capital productivity. On the other hand, a negative effect on labour- and financial markets was identified in the short term. Suggested remedies to this were increased supervision in the reconstructions and, again, facilitating swift proceedings (Shin, 2017).

Previous research on similar law implementations

A study from 2000 on data collected between 1989 and 1991 found that the Swedish bankruptcy system was effective in restructuring small firms, showing a high success rate in reviving productive firms with insolvency issues. Compared to the US system, administrative costs were considerably lower, and the process was substantially faster. The Swedish legislation did not allow for reconstruction in the sense that it does now. Companies had no choice but to file for bankruptcy, meaning they fell under the control of an administrator appointed by the court. This could indicate that a more supervised and unbiased process is faster and more cost-effective. An older study from 1983 studies the implementation of a bankruptcy law passed in the US in 1979. The law before 1979 was even less restrictive on which firms could choose to reconstruct rather than file for bankruptcy and, by doing so, keep control over the firm while being protected from creditors by the court. This was economically inefficient since it essentially rewarded low productivity among firms, which contradicts fundamental economic theory. The study showed that the new law's increased requirements for reconstruction led to decreased bankruptcy costs and economic efficiency (White, 1983).

4 A Nordic comparison

The dataset consists of a list of the companies that have undergone a reconstruction between the 11th of May 2020 and the 30th of November 2022 in Sweden and the companies between the 11th of May 2020 and the 31st of October 2022 in either Norway or Finland. The data also contains which court managed the case and who the administrator was. In addition, the Swedish data contains information regarding whether the reconstruction administrator also undertakes other assignments as a bankruptcy administrator.

The comparison

Up until 2021, the world bank has annually published a report called "Doing Business" that aims to measure business regulations for local firms in different countries. The latest report is divided into different topics, giving a thorough overview of the business climate. The topic most relevant for this essay is "Resolving Insolvency". The report uses three indicators to assess the procedure's effectiveness, combined with the number of commenced proceedings to estimate the strength of the insolvency index. First, a clarification of the indicators:

(1) *Recovery rate* is the present value of the remaining proceeds after a reconstruction, liquidation or debt enforcement. This is recorded as how many cents on the dollar are recovered by secured creditors after deducting the cost of the estate and the time value lost.

(2) *Time* is measured from the day the debtor becomes insolvent until the creditors receive parts- or the entire debt.

(3) *Cost* is measured as a percentage of the value of the debtor's estate.

The average time for the procedure in Sweden is two years, the average cost for the estate is 9%, and secured creditors receive 78.1 cents on the dollar. In Norway, the average time is significantly lower at 0.9 years, with an average cost of 1% and a recovery rate of 91.9 cents on the dollar. Finland has an average time of 0.9 years, with a cost of 3.5% and a recovery rate of 88 cents on the dollar. The strength of the insolvency frameworks is scored 12, 11.5 and 14.5, respectively (Doing Business, 2019) (see appendix)

The reason why Norway has the most effective procedure yet scored the lowest is a consequence of having significantly fewer proceedings. Below, a summary of Norwegian and Finnish legislation will be provided.

Finland

The reconstruction proceedings in Finland are called corporate sanitation and are legislated under *Laki yrityksen saneerausesta* (1993). The law aims to sanitize viable businesses driven by a debtor in financial distress or to secure the proper prerequisites for continued survival (LFS, 2022, 1 §). Just like Sweden and following the EU directive 2019/1023, the Finnish parliament has also reviewed their previous legislation. But beyond only implementing in accordance with the guidelines, the new legislation aims to take measures to prevent exploitation of the proceedings (Eduskunta Riksdagen, 2022)

An application of the proceeding could be made by either the debtor, creditor or someone else who might experience economic losses if the firm was to become insolvent (LFS, 5 §).

The reform of the law has divided the proceeding into two, normal sanitation and early sanitation. Finnish court will approve of normal sanitation if there are at least two creditors whose receivables make up at least a fifth of the debtor's known debt. Moreover, the new legislation allows the court to deny a firm the proceeding if any criteria of a firm are not in compliance with what is written in section 7 of the law. This is also the part where measures against exploitation are taken. In section 8, new requirements of the reconstruction administrator are presented, which are similar to those of Sweden. However, unlike Sweden, Finland did not appoint a supervisory authority. Moreover, early sanitation is a precautionary measure against insolvencies and can be applied only by the debtor (LFS, 4 §).

Lastly, a wage guarantee is issued when the employer is insolvent, to a maximum of €19000 (Riksdagen, 2022).

Norway

Until the 11th of May 2020, Norway's insolvency legislation was called debt negotiation and could be found under *Lov om gjeldsförhandling og konkurs* (1984-06-08-58). The law aimed to create a mediating legal framework to get debtors to negotiate with their creditors either by voluntary or forceful debt settlement (Lov om gjeldsförhandling og konkurs, 1 a. §).

However, with the arrival of the COVID-19 pandemic came an increase in insolvency in Norwegian firms. The 11th of May 2020, the Norwegian parliament instated a temporary law named *Midlertidig lov om rekonstruksjon for å avbjelpe økonomiske problemer som følge av utbrudd av covid-19 (rekonstruksjonsloven)* that aims to replace the previous rules 1a. through 59 §§ (Rekonstruksjonsloven, 1 §). This law is set to be in effect until the 1st of July 2023 (Stortinget, 2021). The government recognizes that a debt restructuring is not enough; instead, a reconstruction proceeding is necessary, and the plan is to develop this temporary law into a permanent one (Reggeringen, 2020).

The new law states that both the debtor and the creditor can apply for the proceeding, and the requirement of the application is described in section 3 §. Furthermore, the court assigns the reconstruction administrator, and in addition, a board of creditors is also elected and will serve as representatives for different parties (Rekonstruksjonsloven, 3rd chapter, 8 §). The requirements for the Reconstruction administrators are that they should be lawyers with a background in insolvency proceedings. In addition, some general rules explained in 13 § apply to both the reconstruction administrator and the board of creditors.

Lastly, a difference between Sweden and Finland is that the Norwegian legislation states that the court might mandate the debtor to pay an advance of the reconstruction costs according to 4 §. Moreover, a wage guarantee is not issued for Norwegian reconstructions (Riksrevisionen, 2022).

Conclusion comparison

The EU directive 2019/1023 is relevant to all members of the European Economic Area (EEA), including Sweden, Finland, and Norway. However, the case of Norway differs as they are not a member of the EU. Neither the Norwegian Ministry of Justice and Public Security nor the Ministry of Economy has replied to what degree the directive has been considered (Schult Ulriksen, 2021).

The previous Finnish legislation was relatively similar to the old Swedish, and the reform has had the same aim and similar measures to the Swedish, so Finland will then serve as a second treatment group. Sweden and Finland have made their procedures stricter, but Norway has made

their legislation more accessible. The recently implemented reconstruction procedure can be compared to the old ones in Sweden and Finland. Hence they will serve as a control group. It is assumed that an eventual shift in the Swedish data will not have a corresponding occurrence in the Norwegian data since they have not had any change in relevant legislation this past year. Finland should, however, have a similar effect, only one month prior instead, as their legislation came into effect on the 1st of July 2022.

Moreover, the Norwegian procedure requires the firms to be responsible for the costs associated with the reconstruction and not issuing wage guarantees. This can serve as another measure to combat the exploitation of the system.

5 Method

Data

The Swedish data consists of a dataset of all reconstruction cases received by the Swedish Enforcement Authority from 2018-01-01 to 2022-11-30. The district court handles applications for reconstruction, but the cases that get approved are sent to the Enforcement Authority for supervision. Hence, our data contains the approved applications for reconstruction during the period. The data contains the following variables:

Organization number of the applicant

Name of the applicant

Name of the responsible district court

Name of the appointed reconstruction administrator

Name of the administrator's law firm

Start date of reconstruction

End date of reconstruction

	Min.	1st Qu.	Median	3rd Qu.	Max.
Sweden	0.1923	0.9615	1.2500	1.8269	2.5000
Norway	0.0000	0.1852	0.3704	0.3704	0.7407
Finland	1.455	2.364	2.818	3.818	4.727

Table I : Descriptive statistics for number of reconstructions per capita. Row one shows Swedish data (Kronofogdemyndigheten, 2022). Row two shows Norwegian data (Brønnøysundsregistren, 2022). Row three shows Finnish data (Oikeusrekisterikeskus, 2022)

We sorted the data by month and extracted the number of cases per month. We then split the data into two datasets, one before the law was introduced in august 2022 and one after. There is a slight discrepancy between the date the application was filed, when the application was approved by the district court and when it was received by the Enforcement Authority. The deciding factor for whether the old or new law is applied to a case is whether the application date was before or after august 2022. However, we are interested in if the approved cases have increased or decreased so we divide the data into one-month long periods with the first approved case with the new legislation as a starting point.

The Norwegian data consists of a dataset with similar variables as the Swedish one during the time span 2020-05-11 to 2022-10-31. The data was collected from The Brønnøysund Register Centre and contains the following variables:

Organization number of the applicant

Name of the applicant

Start date of reconstruction

The Finnish data ranges from 2020-01-01 to 2022-10-31 and was collected from The Legal Register Centre. It contains the following variables:

Name of the applicant

Start date of reconstruction

To make the data more comparable and easier to interpret, we divide the number of reconstructions per month with the population to get the number of reconstructions per capita.

The Swedish dataset also contains a variable for whether the administrator for a specific reconstruction case is also a bankruptcy administrator. By law, there is no formal requirement for someone to be appointed bankruptcy administrator either³. Therefore, there is no clear definition of a bankruptcy administrator, but our data is based on the following definition:

The Person has been appointed bankruptcy administrator in a bankruptcy case at least once The Person can be found on a districts court's list of approved bankruptcy administrators

If (and only if) an administrator meets at least one of these criteria, they are treated as a bankruptcy administrator. The data spans the period 2018-01-01 to 2022-11-30.

Empirical Model

To answer our research questions, we first had to deal with them separately. We used the first three datasets to see if the law affected the total number of reconstruction cases. The most logical approach is to use a difference-in-difference model. We aim to isolate the effect that the law has had in Sweden and Finland by comparing the number of reconstructions after the law's implementation with the same variable in Norway, which did not implement this law. We argue that for the period 2020-05-11 to 2022-10-31, Norway has had similar legislation as both

³ In practice, the requirements are quite high. Generally, one must be a member of the Swedish Bar Association and have several years of experience in insolvency law

Sweden and Finland and is similar to both countries regarding business climate and economic activity. All three countries score similarly on the "Doing Business" report referred to previously and share similar macroeconomic trends. To further investigate whether this argument holds, we tested the prior trends.

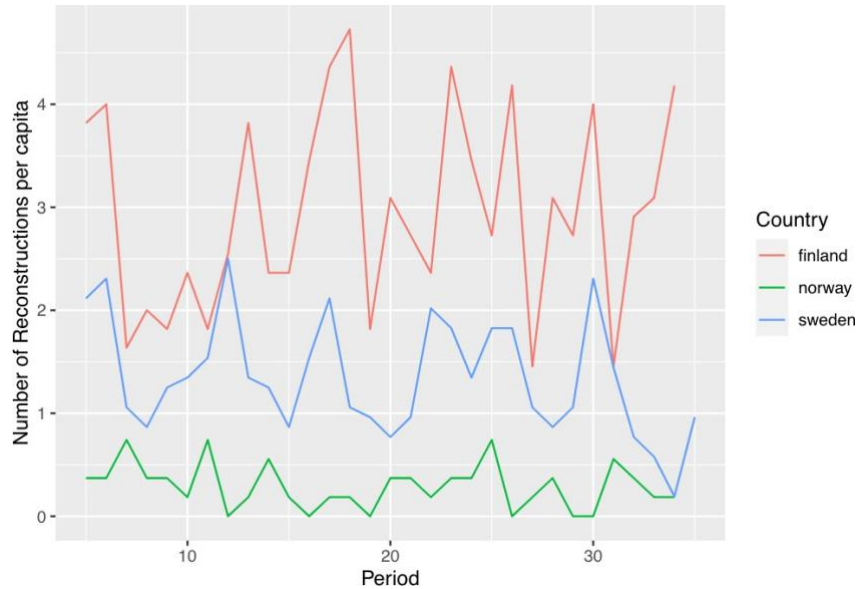


Figure I: Number of reconstructions per capita in Sweden, Finland, and Norway. The blue graph shows Swedish data (Kronofogdemyndigheten, 2022). The green graph shows Norwegian data (Brønnøysundsregistren, 2022). The red graph shows Finnish data (Oikeusrekisterikeskus, 2022).

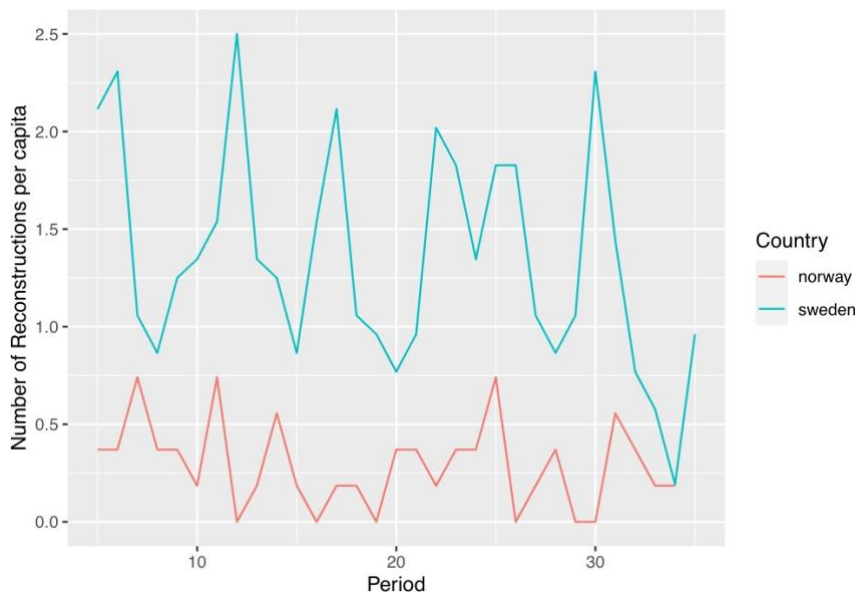


Figure II: Number of reconstructions per capita in Sweden and Norway. The blue graph shows Swedish data (Kronofogdemyndigheten, 2022). The red graph shows Finnish data (Oikeusrekisterikeskus, 2022).

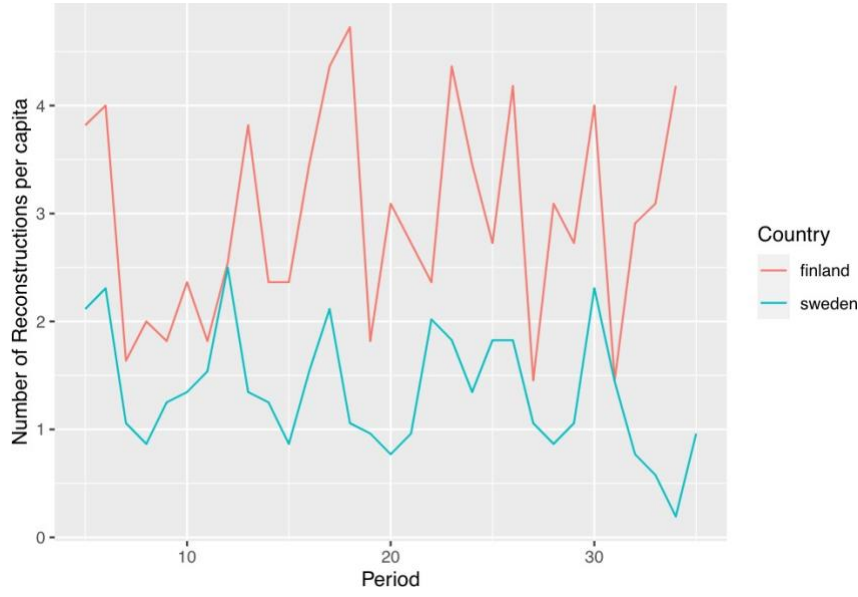


Figure III: Number of reconstructions per capita in Sweden and Finland. The blue graph shows Swedish data (Kronofogdemyndigheten, 2022). The red graph shows Finnish data (Oikeusrekisterikeskus, 2022).

The test reveals that all three countries show some kind of similarity but perhaps not enough to support the parallel trends assumption. The trends for Sweden and Finland are more similar, but Norway has considerably lower variance and does not follow the same pattern. All three countries show quite high volatility which probably is a consequence of the small number of observations. While the test speaks against the parallel trend assumption in the case for the treatment groups in relation to the control group, we argue that there should not be any major factors that are different between the groups and affect the dependent variable. Because of the small sample size, a lot of the variation in the number of reconstructions is due to randomness. The difference in trends prior to treatment is therefore regarded as a consequence of chance and not that the trends are truly dissimilar.

Based on the assumption of parallel trends, we then estimate the treatment effect with the difference in difference model. To do this, we regress the number of reconstructions per capita on a dummy variable for whether an observation lies before or after the law was implemented (August in the case for Sweden), a dummy variable for Sweden and an interaction term between the two dummies. We call this model “Two-way fixed effects difference-in-difference estimator” and it is described by the following equation:

$$(1) \text{Reconstructions per capita} = \beta_0 + \beta_1 \text{Sweden} + \beta_2 \text{PostAug} + \beta_3 \text{Sweden} * \text{PostAug} + \varepsilon$$

We then used the same model but with Finland as treatment group, meaning that we switch the dummy for Sweden to a dummy for Finland and the set the dummy for time of law implementation to July instead of August.

$$(2) \text{Reconstructionspcapita} = \beta_0 + \beta_1 \text{Finland} + \beta_2 \text{PostJuly} + \beta_3 \text{Finland} * \text{PostJuly} + \varepsilon$$

To answer the question whether the proportion of bankruptcy administrator among administrators has increased, we used a regular ordinary least squares regression. Since we have no control group, we did an event study instead. The crucial assumption that no other variables affecting the proportion of bankruptcy administrators change from before the treatment to after the treatment is unlikely to hold. Therefore, we should be careful when interpreting the results from the regression. What we can obtain is an indication of whether the proportion has increased or decreased. Our approach was to regress the proportion of bankruptcy administrators among administrators per month on time, a dummy for whether the observation is before or after the law implementation and an interaction effect between the two. The equation for the model is described as following:

$$(3) \text{Proportionofbankruptcyadministratorsamongadministrators} = \beta_0 + \beta_1 \text{time} + \beta_2 \text{PostAug} + \beta_3 \text{time} * \text{PostAug} + \varepsilon$$

A problem with this model however is that the dependent variable only allows values between 0 and 1. Looking at the data, we have observation close to and even at the threshold which is problematic since it does not make sense then to use a model that allows for values outside the threshold when the actual data does not. We therefore also use a logit regression model which only allows for values between 0 and 1 (see appendix).

6. Results and Analysis

The following section contains our results from the models described in the previous section and our interpretation of said results. First, we run a couple of tests for each model and evaluate if they are reasonable. Then we present the predictions from each model, compare them with the actual data and analyze the results.

When we looked at the prior trends in the previous section, we suspected that our argument for parallel trends was flawed. To check for this, we run a regression on the prior trends we visually inspected. This acts as a test of if there is a difference in the trends prior to treatment. We did this by regressing the number of reconstructions per capita on time and adding an interaction effect between time and whether an observation is Swedish or Norwegian to isolate the estimated difference between the two groups. We do this only using the data prior to the law implementation. Starting with the Swedish data, we see that the interaction effect is highly significant, suggesting that it is very unlikely that the true difference between the trends is zero. We get the same results from running the same regression on the Finnish data. Looking at the magnitude of the effects, they are quite small, though, especially in the case of Sweden. This means that while there may be a significant difference in the trends, it might be minimal. Looking at the plots of the trends, we also see that the trends are almost opposite of each other during a period at the beginning of the period but then follow a similar pattern. This period of opposite trends can significantly impact the test while having minor importance for our assessment of the parallel trends assumption. The fact that the test found the prior trends dissimilar confirms what we also saw from the visual inspection, but the arguments for why the Norwegian data can act as a control group still hold.

To further test our assumption, we did a staggered DiD model with lags and leads. The results from the model are summarized in the graph below. What we can see is that the DiD estimator is significant for most of the periods before the treatment at period 32, which is another indicator that the prior trends are not parallel. The periods after the treatment are mostly insignificant which leads us unable to draw conclusions about the effect of the new law.

The staggered DiD model for the Finnish data show that the DiD estimator is significant for all periods, which means that we should not interpret the results from the DiD estimator for the

treatment period at all since the data consistently show significant results when no treatment has occurred.

Despite partly failing the prior tests, we argue that the parallel trends assumption still holds. Therefore, we run a DiD model for the effect that the law implementation has had on the number of reconstructions per month per capita in Sweden. The DiD estimator labelled as "time x treated" was insignificant, meaning that the model did not predict the law to have affected the number of reconstructions in Sweden. However, since we are dealing with a small sample, it is important to remember that obtaining a significant result is improbable.

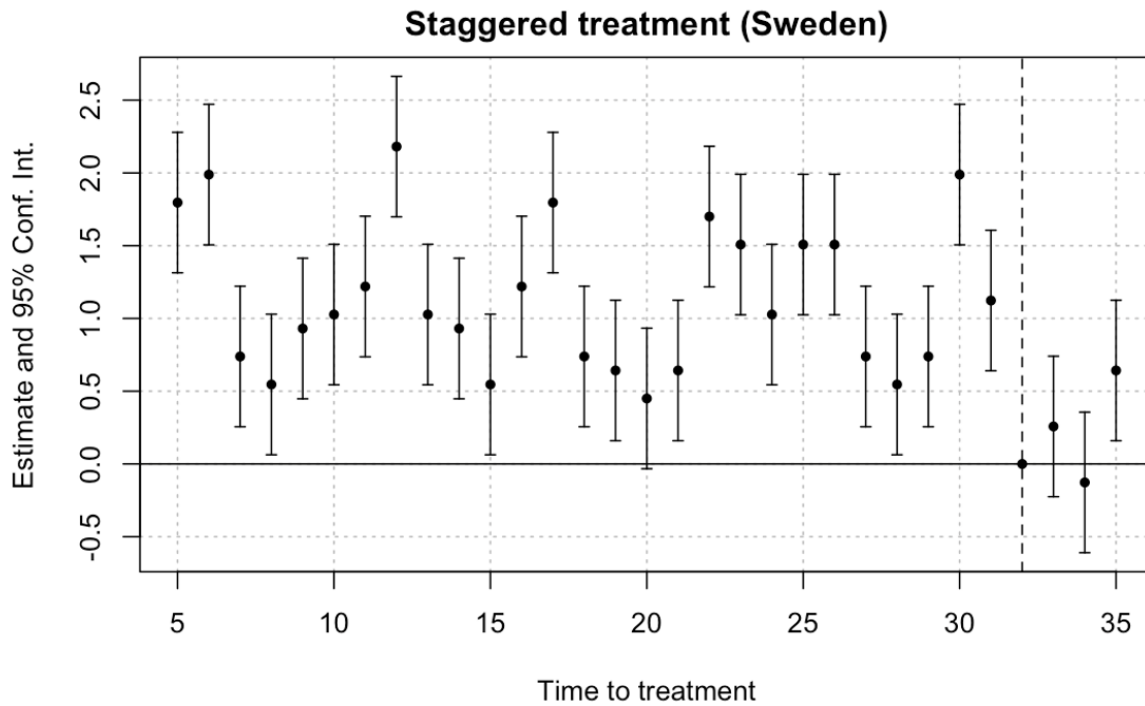


Figure IV: Dynamic DiD for Swedish data (Kronofogdemyndigheten, 2022).

Running the same model on the Finnish data yields a result significant only at the 10% level. While this does not say much in estimating the true treatment effect of the law, we do have an indication of an effect that helps us in our analysis. But, again, we should remember that the small sample size is unlikely to produce a significant result.

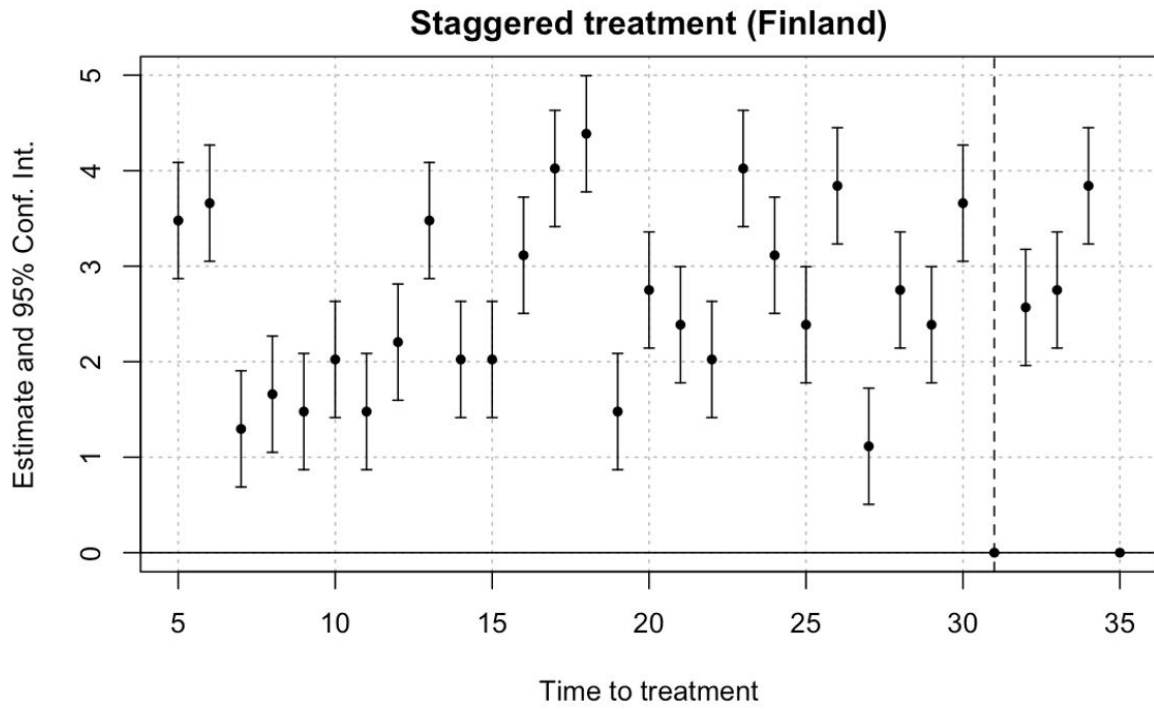


Figure V: Dynamic DiD for Finnish data (Oikeusrekisterikeskus, 2022)

We use an event study to investigate whether the proportion of bankruptcy administrators among reconstruction administrators has increased since we lack a control group. As mentioned earlier, we should be careful when interpreting the output, but we can still obtain an indication of the effect of the law. The dummy variable "after", which represents the jump in the dependent variable after the treatment, is highly significant, suggesting that an effect of the law implementation is present.

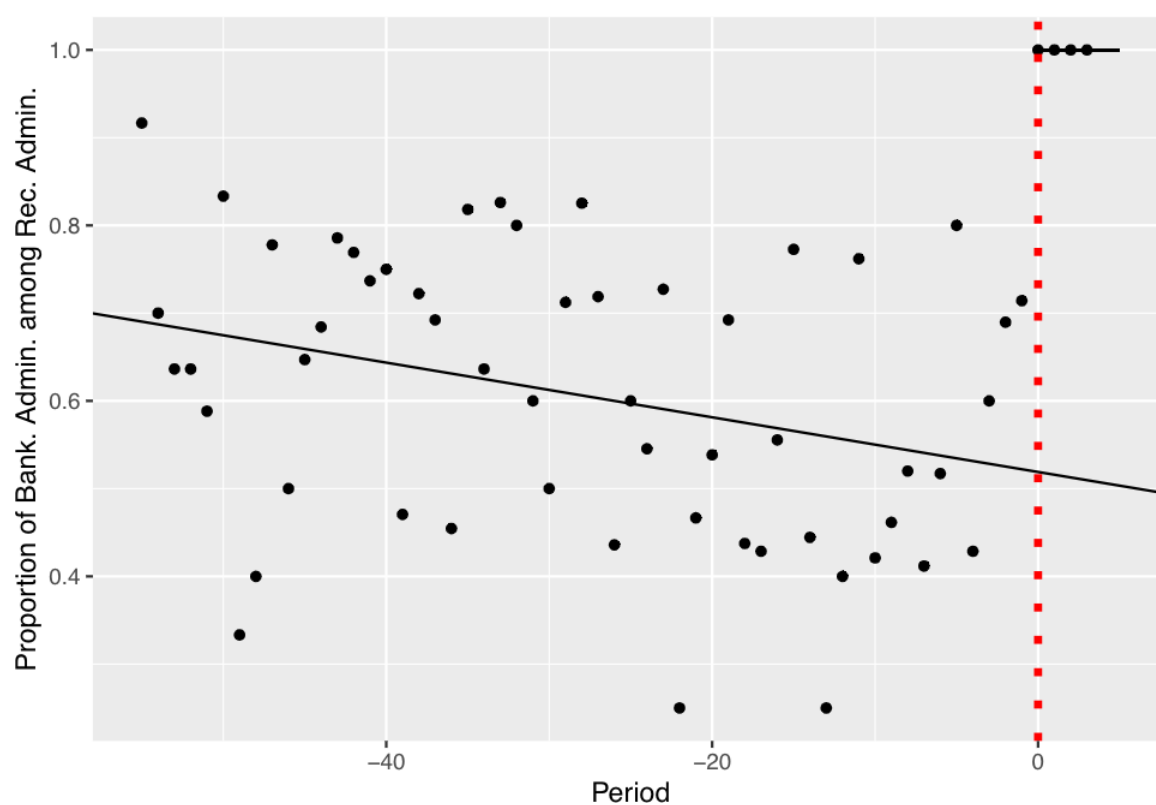


Figure VI: Share of bankruptcy administrators among reconstruction administrators in Sweden (Kronofogdemyndigheten, 2022).

7 Conclusion

(1) Has the law's implementation decreased the number of approved reconstruction cases?

Previous research leans towards the conclusion that a more supervised and restricted corporate restructuring legislation is preferable if the goal is to stimulate economic growth and maximize welfare. The new Swedish law, as well as the EU directive it came from, should fall into this category of law. This includes the requirement of a viability test, the increased mandate for the Enforcement Authority and the more stringent criteria for approving applications. Our indicator for the strictness of the law in practice was the DiD model for the number of reconstructions per capita. Since the results were insignificant for Sweden, we could not conclude causality between the law implementation and the drop in the number of reconstructions solely from that. However, this is likely due to a weak control group rather than the theory not holding up in practice. Here, there is a lot of room for future research. It would be interesting to study the law's effects one year after its implementation. One could then also look at the success rate of the reconstructions before and after the new law to get a better indication of the law's effect on the efficiency of the reconstructions.

Another thing that corroborates this conclusion is that this effect is what the change in legislation intended to achieve. The new law only grants a reconstruction if there is substantial reason to believe that it could succeed, in contrast to previously when it was only denied when there was a lack of fair reason for it to succeed. The aim was to serve as added legal support for the courts to sift out unviable firms. Therefore, it is reasonable to conclude that this would impact the number of reconstruction proceedings.

(2) Has the law's implementation increased the percentage of knowledgeable reconstruction administrators?

When it comes to the proportion of bankruptcy administrators among reconstruction administrators, the data shows that there likely is an effect present. The new law seems to have led to a higher proportion of bankruptcy administrators, which we used as an indicator of the law's ability to create a more supervised process. According to previous theory, this should lead to a more efficient process with higher success rates. If this is true remains to be seen and is a subject for future research on the topic. However, what we can conclude is that since bankruptcy administrators are shown to approve wage guarantees to a lesser extent than other

reconstruction administrators, we should see less amount of wage guarantees in reconstructions. This saves government resources and decreases the unlawful use of public safety instruments and misallocating government means.

8 Appendix

Table II: Statistics of proceedings in the different countries (Doing Business, 2019)

	Sweden	Finland	Norway
Recovery Rate (cents on the dollar)	78.1	88	91.9
Time (years)	2	0.9	0.9
Cost (% of estate)	9	3.5	1
Strength Index (1 - 16)	12	14.5	11.5

Table III: Test of prior trends for Sweden (Kronofogdemyndigheten, 2022)

	Estimate (S.E.)
Time	-0.033168 (0.008719)
Time x Country	0.054725 (0.006436)
N	54

Table IV: Test of prior trends for Finland (Oikeusrekisterikeskus, 2022)

	Estimate (S.E.)
Time	-0.06001 (0.01617)
Time x Country	0.13464 (0.01185)
N	52

Table V: DiD for Swedish data (Kronofogdemyndigheten, 2022)

	Estimate (S.E.)
Time	0.06790 (0.44126)
Treated	1.06933 (0.11208)
Times x Treated	-0.67047 (0.620404)

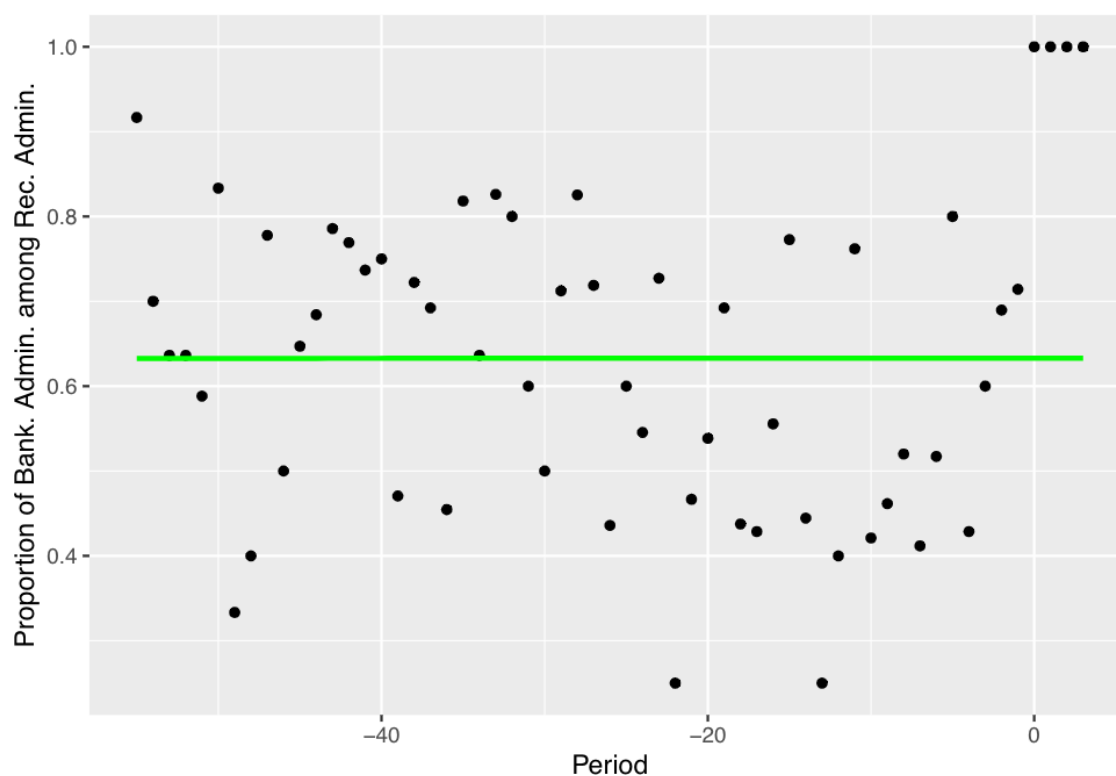
Table VI: DiD for Finnish data (Oikeusrekisterikeskus, 2022)

	Estimate (S.E.)
Time	0.2593 (0.6907)
Treated	2.7131 (0.1769)
Times x Treated	-1.8141 (0.9771)

Table VII: Linear model for proportion of Bankruptcy administrators
(Kronofogdemyndigheten, 2022)

	Estimate (S.E.)
Time	-0.003116 (0.001306)
After	0.481022 (0.146464)
Times x After	0.003116 (0.108689)

Figure VIII: Logit regression of proportion of bankruptcy administrators
(Kronofogdemyndigheten, 2022)



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