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How legal and institutional environments shape the private debt renegotiation process?

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Abstract

I investigate how legal and institutional conditions around loan origination influence a private debt renegotiation process. Using a large sample of 15,000 loans on the European credit market, I apply a sequential logit model to consider the renegotiation likelihood, the conditional probability of multiple renegotiation rounds or multiple amended terms, and the renegotiation outcomes conditional on specific loan amendments. I find that legal systems with stronger protection of creditors control rights have a positive influence on renegotiation likelihood and favorable outcomes on amendments to amount or maturity. Stronger legal protection reduces renegotiation likelihood when creditors face potential strategic default by shareholders. The legal and institutional environment has a significant effect on how the initial design of the financial contract impacts the renegotiation process.

JEL classification: G21, G24, G32, G34

Keywords: legal systems, institutional environment, financial contracts, private debt, renegotiation, sequential logit, Europe

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1. Introduction

According to the *"law & finance"* literature, capital structure, financial contracts and bank behavior respond to the legal and institutional environment (Mc Namara et al., 2017; Haselman et al., 2010; Qian and Strahan, 2007). Differences in legal protection, such as creditor rights (Cho et al., 2014), affect the terms of a loan agreement (Bae and Goyal, 2009). However, these conclusions concern the influence of legal and institutional systems on the initial terms of a credit contract, i.e. at the time of loan origination, but, according to my knowledge, there is no empirical evidence on the influence of the legal and institutional environment on the private debt renegotiation process[1]. This is surprising when considering how legal regimes are crucial in shaping creditor control rights. These are important determinants of the terms of a credit agreement as well as how these terms can change with the evolution of the bank-borrower relationship and loan renegotiation. Indeed, recent empirical evidence shows that bank loans are often amended outside of distress with important changes to the initial terms of the debt contract (Nikolaev, 2018; Roberts, 2015; Roberts and Sufi, 2009).

I investigate how legal and institutional conditions around loan origination influence private debt renegotiation process. I consider loan renegotiation as a process because, conditional on a renegotiation decision, multiple renegotiation rounds can occur during the life time of the credit agreement (Roberts, 2015), or several characteristics of the debt contract can be amended (Godlewski, 2019), and these amendments may be borrower "favorable" (e.g. maturity extended) or not. I decompose the renegotiation process into the renegotiation likelihood, the dynamics of the renegotiation process (unique vs multiple renegotiation rounds), the scope of the amendments to the credit agreement (unique vs multiple loan terms

[1] Daher (2017) studies the influence of legal enforcement on the impact of financial covenants violation on corporate financing policies.

amended), and the renegotiation outcomes conditional on specific amendments to loan terms ("unfavorable" vs "favorable" changes to loan amount or maturity).

I focus on several proxies capturing initial legal and institutional environments: the level of creditor rights' protection, the rule of law, and variables capturing the level of creditors protection facing debt renegotiation. I also control for a large number of country level factors such as legal origin, credit and stock markets development, as well as the initial loan terms, lenders' pool characteristics, and borrower financial conditions. I rely on a large cross-country sample of more than 15,000 loan facilities to more than 8,000 firms from 29 European countries, of which 20% were renegotiated at least once during the period under investigation (1999-2015). To model the renegotiation process in a comprehensive manner, I employ sequential logit regressions.

My main findings confirm the important economic role of initial legal conditions for the renegotiation process. Better contractual enforcement through a legal system that provides stronger protection of creditors control rights and reduced renegotiation costs has a positive influence on the renegotiation process, particularly renegotiation likelihood and favorable outcomes on amendments to amount or maturity. But when facing potential strategic default by shareholders, stronger legal protection of creditors reduces their willingness to accept concessions through renegotiation. Another interesting result is that the terms of the initial credit agreement and the lenders' pool are significant determinants of the renegotiation process. Contractual mechanisms mitigating adverse selection and moral hazard, such as covenants and collateral, and organizational mechanisms such as the reputation of the lenders have the largest economic impacts.

Sensitivity tests provide additional interesting results. Weaker institutional environment weakens the effect of creditors legal protection while efficient contract enforcing increases the likelihood of multiple renegotiations and multiple amendments to the initial contract. The initial design of the loan contract plays an important role: the absence of covenants affects the effect of legal systems because of moral hazard problems at renegotiation, while the absence of collateral, which is an important feature of the legal environment, weakens the influence of creditors protection. Relationship oriented loans increase the capacity of the legal and institutional environment in driving the renegotiation process and outcomes. Borrower transparency and episodes of financial crises are also important for the legal regimes to effectively influence renegotiation. These additional findings show the existence of some complementarity between the legal and contractual channels in enforcing and completing financial contracts through debt renegotiation.

My results are important and relevant for a better understanding of one of the main advantages of corporate financing through private debt: the inherent flexibility of credit contracts, that can be revised and amended, even outside of financial distress (Gorton and Kahn, 2000; Smith and Warner, 1979; Zinbarg, 1975). A better understanding of the influence of initial legal and institutional environment on this contractual flexibility is of utmost interest at least for two main reasons. First, because it can provide policy-oriented implications on how to improve legal and institutional systems. Second, because it can shed light on how to write better credit contracts. This has far reaching consequences for the design of debt contracts, corporate policy and performance, financial intermediation efficiency, and the economy as a whole[2]. This is particularly relevant for bank-based financial systems, like Europe, where private debt remains the major source of external financing for firms (de Haan et al., 2012; Gomes and Phillips, 2012)[3] and where different legal traditions and institutional characteristics co-exist.

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[2] Acharya et al., 2005; Asquith et al., 2005; Bolton and Scharfstein, 1996; Chava and Roberts, 2008; Denis and Wang, 2014; Dessein, 2005; Dichev and Skinner, 2002; Garleanu and Zwiebel, 2009; Mella-Barral, 1999; Moraux and Silaghi, 2014; Pawlina, 2010; Saavedra, 2018.

[3] Domestic credit provided by banks (% of GDP) was 87% while 27% of companies were using banks to finance investments or working capital in the Euro Area (source: The World Bank, 2017).

I contribute to the "*law & finance*" literature dealing with the relationship between the legal and institutional environment, firms capital structure, and the design of financial contracts (Mc Namara et al., 2017; Shah et al., 2017; Cho et al., 2014; Bae and Goyal, 2009; Qian and Strahan, 2007). My contributions complement several studies on private debt renegotiation outside of distress, mostly on the US credit market (Nikolaev, 2018; Roberts, 2015; Roberts and Sufi, 2009) and a growing literature on the role of contractual features in financial contracting and debt renegotiation (Asquith et al., 2005; Denis and Wang, 2014; Dichev and Skinner, 2002; Saavedra, 2018). However, my paper differs in several important ways. First, I explicitly focus on the impact of initial legal and institutional conditions on the renegotiation process by exploiting the cross-country dimension of my sample. Second, I use a large sample of 15,000 loans over a 16 years' period and I employ an adequate methodology which is the sequential logit model. Third, I focus on the European credit market which is a bank-based financial system where private debt represents most of the external corporate financing. According to my knowledge, this is the first empirical research on how private debt renegotiation responds to legal and institutional conditions in Europe.

The remainder of the paper is organized as follows. Section two covers the relevant theoretical and empirical literature. Data, methodology and variables are presented and discussed in section three. Section four covers the descriptive statistics and the univariate and multivariate results, as well as sensitivity analysis. Finally, section five concludes.

2. Literature review

From a theoretical perspective, debt financing is a natural way of implementing contingent control allocations (Aghion and Bolton, 1992) and one of the important roles of the debt contract is to allocate decision (or control) rights (Hart, 2001). These rights reflect the bargaining power of the parties to the contract that influences how the initial, and subsequent surplus, is shared. Therefore, bargaining power and contractual allocation of decision rights have deep implications on debt reorganization (Dumitrescu, 2007; Fan and Sundaresan, 2000). Indeed, in case of an occurrence of (purely) unanticipated or (simply) non-contractible states, the contracting parties will be unable or unwilling to commit to the initial terms of the contract due to its ex post inefficiency. For instance, a positive shock to the borrower that improves credit quality should shift the bargaining power in his favor (Hart and Moore, 1998). In that case, renegotiation may be considered as a decision-making mechanism in advance of contingencies for revising the initial terms upon arrival of new information (Hart and Moore, 1988) in order to reallocate decision rights and surplus sharing.

Under asymmetric information, better informed agents (borrowers) yield control rights to less informed agents (lenders) in the initial contract, especially through covenants (Dessein, 2005; Garleanu and Zwiebel, 2009). These are later amended upon arrival of new information to re-equilibrate bargaining power and surplus sharing between the parties. However, according to Berlin and Mester (1992), firms with high ex ante credit risk find the option to renegotiate most valuable, which will depend on the severity of agency problems and the quality of lender’s monitoring and information. Hege and Mella-Barral (2005) examine the optimal renegotiation strategy in a dynamic setting with multiple (non-coordinated) creditors. They show that the possibility of subsequent renegotiation rounds severely limits the size of the obtained concessions (i.e. coupon reductions). This can be attractive ex ante because debt dispersion protects creditors from opportunistic expropriation (Bolton and Scharfstein, 1996). Moraux and Silaghi (2014) also analyze the optimal number of renegotiation rounds taking renegotiation costs into account. By focusing on the size and dynamics of concessions (i.e. coupon reductions), they emphasize the role of counterparties’ bargaining power. For instance when creditors hold more bargaining power, the number of renegotiations increases while coupon reductions are smaller. They show that smaller firms with lower bargaining power facing concentrated debt ownership obtain smaller concessions during renegotiation. But the borrower may also use renegotiation as a signaling game and use the repayment offer to influence the lender's renegotiation strategy (Gale and Hellwig, 1989). The lender can also use renegotiation in a strategic way to reduce borrower's incentives to engage in opportunistic renegotiation (Bourgeon and Dionne, 2013). Finally, lenders who are concerned by their reputation on the credit market may have additional incentives to devote a larger amount of resources to information production in order to make the "right" renegotiation decision (Chemmanur and Fulghieri, 1994).

A rapidly growing empirical literature deals mostly with determinants of private debt renegotiation outside of default[4]. Roberts and Sufi (2009) find that more than half of the contracts in their sample are renegotiated, often early in the life of the loan, with important amendments to the initial terms (amount, maturity, and pricing). They uncover main determinants of renegotiation: the accrual of new information concerning the credit quality, investment opportunities, and the collateral of the borrower, and fluctuations in credit and equity markets. The initial terms of the contract have no significant impact on the probability of renegotiation. Roberts (2015) provides additional results on the dynamics of renegotiation by showing that most loans are renegotiated multiple times over relatively short horizons, leading to significant changes to the contract terms. The main determinants of this process are the financial health of the borrower and the lender, the uncertainty regarding borrowers' future profitability, and the outcome of renegotiation. In a similar dynamic setting, Nikolaev (2018) shows that uncertainty is a strong determinant of renegotiation frequency, consistent with the idea that amendments help to complete the credit agreement in response to unforeseen contingencies. He also finds that the renegotiation dynamics are driven by

[4] Another strand of the literature studies the links between specific contractual features, such as covenants, and the renegotiation process (Asquith et al., 2005; Saavedra, 2018; Dou, 2019) and the consequences of renegotiations on firm performance (Denis and Wang, 2014; Miyakawa and Ohashi, 2016).

contracting frictions, agency or information problems of the borrower-lender relationship and by demand for lender's monitoring process.

Godlewski (2015a, 2015b, 2014) provides empirical evidence on loan renegotiations in Europe. He finds that renegotiations lead to substantial amendments to main initial loan terms, but renegotiating financial covenants is the most significant amendment type with the largest significant and positive impact on a borrower's abnormal return. Early and less frequent renegotiations also lead to significant and positive abnormal returns. These findings support the idea that the renegotiation of financial contracts may certify borrower's quality. The dynamics of loan renegotiation in Europe are slightly different from the US: multiple renegotiations are less frequent, covenants are less frequently amended, and the first renegotiation occurs much later. Also, financial development, banking structure and legal environment of the borrower country play a major role for renegotiation.

However, none of these papers explicitly focus on the role of legal and institutional environment in the loan renegotiation process. This is surprising because according to the "*law & finance*" literature, the legal and institutional environment plays a crucial role in shaping financial contracts and firms' financial policies. For instance, in Kaplan et al. (2007), contractual differences (among VC) are consistently related to legal regime variables. Qian and Strahan (2007) find that stronger creditor protection leads to concentrated debt ownership, longer maturities, and lower interest rates. In environments with weak creditors protection, maturity substitutes for interest rate to control for borrower risk. Bae and Goyal (2009) also show that differences in legal protection of creditors affect positively the size and maturity of loans, while reducing the spreads. Creditors rights also shape firms' capital structures, as stronger creditors rights are associated with low long-term leverage and lower long-term debt issuance (Cho et al., 2014). Efficient judicial systems also reduce corporate leverage (Shah et al., 2017) while more efficient bankruptcy regimes favor long term debt growth (Mc Namara et al., 2017). Moreover, Haselman et al. (2010) and Haselman and Wachtel (2010) show that legal environment affects bank behavior. Banks' loan portfolios composition depends on the legal environment and well-functioning legal environments increase bank credit supply to firms. They emphasize the importance of collateral law in spurring bank lending growth. Daher (2017) investigates the influence of legal enforcement on the impact of financial covenants violation on corporate financing policies. He finds that strong legal enforcement alleviates the decline in net debt issuance following covenants violation.

To establish a link between private debt renegotiation and the legal and institutional environment, I consider that the initial design of the financial contract takes the specific mechanisms that creditors prefer to exercise their control rights into account (Wang, 2017). These rights are related to the bargaining power of the parties to the contract. Private debt renegotiation (outside of default) corresponds to one or more concessions on the initial contract conditional on new information and may be considered as an "update" of these control rights. The contractual environment, especially contractual enforcement, is intimately related to the legal and institutional conditions that protect the creditors control rights. If these conditions allow to improve contract enforcement and thus favor creditors control rights, then lenders can be more willing to accept concessions and renegotiation should be more "attractive". Increased protection of creditors control rights may also increase their willingness to renegotiate and accept concessions if we consider that proper legal and institutional environment reduces renegotiation costs. However, better legal protection of creditors interests may also make them more reluctant to accept any concessions through renegotiation because their interests are legally protected in any case. Nevertheless, this argument should be less valid with respect to out-of-default renegotiations.

The general underlying idea is that by entering renegotiation, the lender(s) accept to make “concessions” by modifying the terms of the initial debt contract. Hence, conditional on the renegotiation decision, I consider as “concessions” the number of renegotiation rounds, the number of amendments (i.e. the number of loan terms changed following renegotiation), or the renegotiation outcomes (borrower “favorable” vs “unfavorable”). The latter may be borrower “favorable” when for instance the loan amount is increased, giving access to additional external funding for the firm (to finance additional investments for instance) or maturity is extended, reducing the cost of debt servicing for the borrower.

Hege and Mella-Barral (2005) and Moraux and Silaghi (2014) examine debt renegotiation in distress that can be considered as an “extreme” case of renegotiation due to borrower’s distress. Nevertheless, they provide useful insights for this research where renegotiation is not related to distress but to other factors, in particular legal and institutional ones. For instance, the legal environment influences the bargaining power of counterparties when creditors benefit from better legal protection. Renegotiation costs are also related to the legal environment. According to Hege and Mella-Barral (2005) and Moraux and Silaghi (2014), renegotiation can decrease the size or the number of concessions, defined as coupon reductions. Here “concessions” are defined in a much broader sense, including the number of renegotiations rounds, the number of amendments to the contract, and specific renegotiation outcomes such as amount or maturity changes. Nevertheless, following Hege and Mella-Barral (2005) and Moraux and Silaghi (2014), renegotiation can lead to less unfavorable outcomes for the borrower, or in other words, less amendments leading to positive changes to loan terms such as amount or maturity. Furthermore, legal environments facilitating renegotiation, by decreasing its costs for instance, should also positively affect these outcomes.

Another argument is more related to the “law & finance” literature and relies on opposing a “demand” vs a “supply” view of the impact of legal protection of creditors on corporate financing (Shah et al., 2017). Following the “demand” view, stronger creditor’s legal protection decreases managers willingness for debt. This can lead to less favorable renegotiation outcomes (i.e. positive changes to amount or maturity). Following the “supply” view, better legal protection increases investors’ confidence, leading to more favorable renegotiation outcomes.

3. Data, methodology, and variables

In this section I describe data sources, sample selection process, the econometric methodology employed, and variables.

3.1 Data

I start by extracting all available loan amendments in Europe with effective dates between January 1999 (start of the Euro) and December 2015 (last available information) from the Bloomberg Professional Terminal Service (Bloomberg)[5]. This data set contains unique loan identifiers, effective dates of amendments, and amended terms. The latter concern changes to amount (facility, tranche, outstanding…), maturity, covenants, pricing grid, definition (non-material amendment). For material amendments, such as changes to amount or maturity, Bloomberg also provides old and new terms.

Next, I extract all loans to European borrowers (excluding Financial and Government entities) with effective dates between January 1999 and December 2015 that are available in Bloomberg[6]. This allows me to gather information on loan facility amount, spread, maturity, covenants, collateral, date, type (revolver, term…), purpose (corporate, refinance, acquisition…), currency, etc. I also obtain unique loan identifiers which allows to merge this

[5] I use the Bloomberg corporate actions function (CACT).
[6] I use the Bloomberg loan search function (LSRC).

data set with information on lenders. The latter provides information on the number of lenders, the retained shares of the loan, the nationalities (country of incorporation), the roles (or titles), and the identity (names). I also obtain some descriptive information on the borrowers (name, industry sector, country, identifiers…).

Then I merge this loan and lenders data set with the amended loans information using unique loan identifiers. At this stage, the sample size is reduced mostly due to unmatched loans in both datasets and missing information on lenders.

I then add (borrower) country level data, in particular legal and institutional environment characteristics, but also economic and financial variables. To do so I use data from the World Bank, Demirgüç-Kunt et al. (2012), Djankov et al. (2007) and Favara et al. (2012) to obtain variables related to the rule of law, creditors' rights, and creditors' protection in case of debt restructuring. I merge my datasets using borrower country of incorporation and loan origination year. After dropping borrower countries with no renegotiations (Iceland and Slovakia) the sample size is reduced to 15,781 loans to 8,691 borrowers.

Next, I use the borrower identifiers to add firms accounting variables and financial ratios from Bloomberg. This step reduces drastically the size of the sample with financial information on the borrowing companies.

My sample is larger than most of US studies, usually using around 1,000 (hand-collected) credit agreements, but close to Nikolaev (2018) with respect to the number of firms (he uses a sample of more than 10,000 firms). It is also larger than European studies, as these focus exclusively on amended loans only, the largest using 833 renegotiated loans (Godlewski, 2015a).

3.3 Methodology and variables

The renegotiation process consists of a renegotiation decision (likelihood), and conditional decisions related to a time dimension (number of renegotiation rounds), a scope dimension (number of amended loan terms), or outcomes (changes to loan terms following renegotiation). The adequate methodology is the sequential logit model. Figure 1 illustrates this approach. In a first step (or sequence), the renegotiation decision is modelled with a dummy variable *Renegotiation* equal to one if a loan was renegotiated (0 otherwise). In a second step, conditionally on this decision, the renegotiation process can involve multiple rounds, amending several terms of the loan agreement, or positive (i.e. favorable) changes to specific loan terms.

Renegotiation decision or likelihood is the first important feature of a renegotiation process as it corresponds to the first "concession" and path towards updating the contract. The time and scope dimensions of renegotiation (rounds and amendments) are a second important issue. Renegotiating multiple times a loan involves multiple renegotiation costs and puts at stake the credibility and reputation of a lender regarding her expertise in writing efficient contracts. It can be viewed as a convergence path towards an "optimal" contract that can occur more or less quickly, i.e. with more or less rounds. Renegotiating large portions of the contract by amending numerous loan terms is also costly and puts at stake lender reputation but with a different perspective. It is also related to a convergence path towards an "optimal" contract that can be achieved with a different degree of renegotiation. Finally, conditional outcomes are another very important dimension of the renegotiation process. Positive changes to amount or maturity of the loan correspond to material amendments and signal "concessions" made by the lender at renegotiation, by increasing the loan amount and/or extending the loan maturity. These outcomes are considered as "favorable" because larger loan amount provides additional external capital for the firm (e.g. for investments purposes) while longer maturity reduces the cost of debt servicing. They can also be interpreted as proxies of borrower-initiated renegotiations.

I employ several alternative specifications to model second step decisions, involving dummy variables *Rounds* (equal to one if a loan was renegotiated more than once, 0 otherwise), *Amendments* (equal to one if a loan had more than one term amended, 0 otherwise), *Amount favorable* (equal to one if amount was increased following renegotiation, 0 otherwise), *Maturity favorable* (equal to one if maturity was extended following renegotiation, 0 otherwise), *Amount & Maturity favorable* (equal to one if amount was increased and maturity was extended at the same time following renegotiation, 0 otherwise)[7].

My focus is to investigate the impact of legal and institutional environment at the borrower's country level on the renegotiation process defined as above. To capture overall creditors protection, I consider creditors' rights and rule of law indexes, following notably Bae and Goyal (2009) and Qian and Strahan (2007)[8]. I use the Djankov et al. (2007) creditor rights index that measures the legal rights of creditors against defaulting debtors in different jurisdictions. This variable can also be considered as a proxy for the "ex-ante" legal protection of creditors. The rule of law index comes from the World Bank (World Governance Indicators) and measures perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence. I also consider more detailed proxies of the legal system with respect to renegotiation frictions faced

[7] *Amount favorable* or *Maturity favorable* correspond to renegotiation "packages" where amount or maturity was amended and increased or extended following renegotiation. *Amount & Maturity favorable* correspond to renegotiation "packages" where both terms were amended at the same time, the former being increased, and the latter being extended. I can only model outcomes on these specific loan terms because Bloomberg provides old and new terms for amount or maturity only. Therefore, this classification is subjective and constrained by data availability. It partially follows Robert and Sufi (2009) who have access to information on amendments to loan spread which is not available in Bloomberg. In particular, Robert and Sufi (2009) consider as favorable amendment packages where loan amount is increased while loan spread does not. Hence, my classification can be considered as a "weaker" version of Robert and Sufi (2009) with respect to amendments to loan amount. I consider that a positive change to loan amount following renegotiation can be favorable to the borrower because it provides additional external capital for the firm.

[8] All variables are defined in detail in appendix B. All variables are measured at the time of loan origination. Another candidate to proxy for legal and institutional environment was *Regulatory quality* but it is highly correlated with *Rule of law*. In subsequent sensitivity analysis, I also control for an additional (direct) proxy of judicial efficiency, measured by the *Enforcing contract* variable from World Bank Doing Business database.

by creditors. I use Favara et al. (2012) renegotiation failure index, creditors' priority index and creditors recovery rate. The renegotiation failure index summarizes several characteristics of debt enforcement procedures that protect creditors from shareholders' strategic default. This index also provides a proxy for the "ex-post" legal protection of creditors, i.e. the effective enforcement of law[9]. Priority reflects the order in which creditors' claims are served. Recovery rate is computed for secured creditors, conditional on default. In addition, I control for legal origin of the borrower country.

I also consider the development and structure of financial systems because it affects the cost of external financing by acting on information asymmetry (Levine et al., 2000; Rajan and Zingales, 1998) and provides valuable outside options for refinancing. I focus on the development of credit and stock markets, and on the banking sector health.

I control for loan level variables to take the influence of the initial contract design on the renegotiation process into account. I consider main loan terms such as amount, maturity, collateral and covenants[10]. I also control for the amount outstanding and the number of previously issued loans[11]. Amount and maturity are related to information asymmetry and uncertainty (Berger et al., 2005; Mosebach, 1999). Collateral and covenants are contractual mechanisms serving as signaling and screening devices to mitigate adverse selection and moral hazard problems (Besanko and Thakor, 1987; Bester, 1985). Secured loans are more prone to renegotiation (Bester, 1994) while covenants renegotiation allows to rebalance the allocation of contractual control rights (Garleanu and Zwiebel, 2009).

[9] The renegotiation failure index is based on 12 items while the creditor rights index is based on 4 items (see appendix B). The latter is partially embedded in the former (for instance regarding the secured creditors' ability to seize collateral) but the renegotiation failure index is much larger in scope. Furthermore, both indices measure two different features of the legal environment (ex-ante vs ex post protection), as the renegotiation failure index is much more focused on enforcement.

[10] Including the loan spreads drastically reduces the sample size as less than half of it contains information on this variable. Therefore, I do not include it in the main regressions.

[11] I also control for a large set of fixed effects such as loan origination year, purpose, currency.

I also control for characteristics of the banking pool and the links between the lenders and the borrowers. I consider variables such as the number of lenders, the presence of lead lenders that belong to a league table, the existence of previous bank-borrower relationships and the presence of lenders that are from the same country as the borrower. The structure and composition of the banking pool are related to informational frictions, especially regarding credit risk diversification, moral hazard and hold-up problems (Bolton and Scharfstein, 1996; Bosch and Steffen, 2011; Lee and Mullineaux, 2004; Preece and Mullineaux, 1996; Sufi, 2007). Another important aspect is the role of lender's reputation in mitigating agency problems (Bushman and Wittenberg-Moerman, 2012; Johnson, 1997; McCahery and Schwienbacher, 2010; Ross, 2010). Borrower-lender proximity is also important as it helps overcome information asymmetry problems (Hauswald and Marquez, 2006; Mian, 2006).

Finally, I also control for borrower financial characteristics to take their relative bargaining power and financial health into account. I consider proxies for size, leverage, liquidity, and profitability. Larger and more profitable firms should have greater bargaining power. Leverage can also be considered as a bargaining tool, but it could also hamper the outside options of the borrower if considered as to high. I also control for transparency by considering the listed and rated status of the borrower[12].

4. Results

This section is devoted to the presentation of the main descriptive statistics and univariate results, and the discussion of regression results and sensitivity analysis tests.

4.1 Descriptive statistics and univariate results

Table 1 presents the country composition of the sample and the country average proportion of renegotiated loans for the whole period. Among the 29 countries covered, United Kingdom represents the largest portion of loans and borrowers (23% and 22%

[12] I also add borrower industry sector fixed effects.

respectively), followed by France, Germany, Spain, Netherlands, and Italy. These six countries account for 71% of the sample[13]. The sample coverage is consistent with the European syndicated lending market, where these countries account for most of the loan originations. We observe an important country heterogeneity in loan renegotiation percentage, ranging from below 1% in Portugal to almost 44% in Luxembourg. The sample average for *Renegotiation* equals 18.25% (with a standard deviation equal to 39%), which is lower when compared to 37% (Nikolaev, 2018)[14].

Figure 2 shows the time distribution of loan originations and renegotiations. We remark a cyclical evolution of the market, with booms and busts around the Credit Crisis in 2008 and 2009 and the Eurozone Crisis in 2012 and 2013. The sample contains rather long-term loans, as initial maturities ranging from 5 to 10 years represent 60% of the credit agreements (figure 3). Figure 4 shows the breakdown of amended loan characteristics. Loan amount represents the most amended characteristic (close to 33%), followed by maturity (21%) and definition (25%), which is a non-material amendment. These figures are close to Roberts (2015) who finds that changes to amount and maturity occur in 27% and 29% of the cases respectively. Figure 5 provides the distribution of renegotiation rounds and amendments. Unique renegotiation or single amended loan term concern 70% and 45% of the renegotiations respectively. Renegotiation dynamics is less important than its scope, as multiple amendments are more common than multiple rounds. For instance, less than 16% of renegotiations involve two rounds, while in less than 34% of the cases, two loan terms are

[13] Countries forming the EU-15 represent 88% of the sample, while Eurozone countries account for 61%.
[14] It is even much lower when comparing to US samples where renegotiations account for 60% to 73% (Denis and Wang, 2014; Roberts, 2015). There are several plausible explanations for these differences. First, I investigate a different economic area which is much more bank-based. Second, their samples are hand-collected and thus smaller. Third, the definition of renegotiation may vary. For instance, Roberts (2015) considers amendment, amendment and restated, and rollover as renegotiations, which might mechanically increase the proportion of renegotiations. According to Bloomberg, an amendment occurs when a credit agreement has been changed in order to amend some terms of the contract.

amended following renegotiation. An infinitesimal portion of renegotiations involve nine rounds, while in 1% of the cases the entire loan contract is amended.

Table 2 provides descriptive statistics and univariate results for renegotiation related variables. Panel A shows means and standard deviations of renegotiation characteristics. For the sub-sample of renegotiated loans, the average duration from origination to amendment equals 32 months (or 42% of the initial maturity), while a typical loan is renegotiated 1.6 times, involving almost 1.9 amended terms. Roberts (2015) finds that an amended loan enters on average 3.5 renegotiation rounds. Material changes to amount and maturity equal -36 million USD and +17.25 months respectively. Roberts and Sufi (2009) find +193 million USD and +25.53 months respectively. In my sample, positive changes to amount (*Amount favorable=1*) or to maturity (*Maturity favorable=1*) occur in 51% and 79% of the respective renegotiation cases. When both items are increased simultaneously, i.e. *Amount & Maturity favorable=1* (which occurs in 33% of the cases), amount increases by 177.89 million USD and maturity is extended by 22.19 months. These figures are closer to Roberts and Sufi (2009). We remark that multiple rounds are associated with several amendments, and vice-versa. *Amount favorable* is less common for frequently renegotiated loans while it occurs more often when several loan terms are amended. However, maturity is decreased more often in the latter case. Mechanically, the time to renegotiation is larger for renegotiations involving multiple rounds or several amendments.

Panel B of table 2 presents a breakdown of various renegotiation packages[15]. The most important package involves a single amended loan term which is the amount (close to 20%). In Roberts (2015) sample, packages involving amending covenants only account for almost 46% of the renegotiations. Among material amendments, renegotiating maturity only comes second (12.15% vs 4.68% by Roberts (2015)), followed by renegotiation of two loan terms:

[15] Renegotiation packages accounting for at least 2% of the renegotiations are displayed. The total number of different packages is 56.

amount and maturity (3.43% by Roberts (2015)). Let note that amending four different loan terms occurs in 2% of the cases.

Table 3 provides various descriptive statistics and univariate results for all explanatory variables[16].

The average creditor rights index is slightly above 2 while the rule of law index is close to 1.5. Average renegotiation frictions are weak (0.39 on a scale from 0 to 1), creditors priority is high (close to scale's maximum at 4) and their recovery rate is above 50%. French legal origin countries represent more than 40% of the sample[17]. Variables for creditors protection, priority, recovery rate, and rule of law are all significantly larger while French legal origin is lower for renegotiated loans. These conclusions hold when considering the full spectrum of the renegotiation process: legal and institutional variables are larger for multiple renegotiation rounds, multiple amendments to the loan contract, and favorable outcome to amendments to loan amount and/or maturity. Better legal and institutional environment aiming at stronger creditors protection and better contract enforcement is positively related to the renegotiation process.

Financial markets are well developed, both regarding credit and equity markets, with a satisfactory financial health of the banking sector. Loan renegotiation is related to larger equity and credit markets because of lower information asymmetry in financial developed economies and thanks to more outside options for borrower refinancing. These conclusions hold but differently with respect to the nature of the financial market. Frequent renegotiations or multiple amended loan terms are associated with lower credit market development while

[16] All firm variables are symmetrically winsorized at 5% to minimize the influence of outliers. Panel B shows the breakdown of the sample by borrower industry sector, loan purpose, loan type, and loan currency. A correlation matrix is provided in table A.1 in the appendix.
[17] There are of course English law countries in my sample, but the English legal origin dummy is highly correlated with the creditor rights index.

the opposite result is found for equity markets. Favorable outcomes to amount or amount & maturity amendments are related to both financial markets being developed.

The sample contains large loans (1.9 billion USD) with maturity above 6 years, secured in 40% of the cases and with few financial covenants (9%). Borrowers have previously issued almost 4 loans. The number of lenders is almost 10, of which 20% belong to a league table. In 12% of the cases a banking relationship existed while 28% of the lenders are from the same country as the borrower. Overall, renegotiation concerns larger loans with longer maturities, covenants and collateral, funded by numerous lenders. These conclusions hold for other aspects of the renegotiation process, but differences are less important for contractual mechanisms such as covenants or collateral in case of multiple rounds or amendments. These results are consistent with the bargaining power arguments (larger loans with longer maturities) and with the use of renegotiation for updating the contract and redeploying control rights among the parties (covenants and collateral). Frequent renegotiations or multiple changes to loan terms are associated with less reputable lenders and more relationship banking. Here, private and soft information produced with relationship lending technology is more important to update the contract in time or scope while reputable lenders are less willing to accept such concessions as this might harm their reputation in terms of efficient contract writers.

Half of the borrowers are listed companies and 12% had a rating. These are large firms (almost 5 billion USD of sales) with a debt to equity ratio equal to 1.40, current ratio at 1% and operating margin equal to 11%. More transparent firms that are listed or rated with lower financial risk renegotiate more often their loans. Rated borrowers with lower debt to equity ratios also get more frequent renegotiations or numerous amendments to their loan contracts[18].

[18] These firm variables are computed at loan origination to be consistent with the aim of the paper. The values of these variables at the time of renegotiation are very similar. For instance the average for sales, leverage, current

4.2 Regression results

Table 4 shows the main results. The renegotiation decision is modelled in a first step (*Reneg.*), and then the decisions to enter multiple renegotiation rounds (*Rounds*), amending several terms of the contract (*Amend.*), or reaching a favorable outcome conditional on amending specific loan terms (*Amount favorable, Maturity favorable, Amount & Maturity favorable*) are modelled in a second step. Although not shown, all regressions include control variables for legal origin (French, German), loan currencies (USD and GBP), loan type (term), loan purposes (acquisition, general corporate, LBO, project finance, debt refinancing, working capital), loan origination year, and borrower industry sector. There are two main specifications with respect to legal and institutional variables because *Rule of law* and *Creditors recovery* are highly correlated. The first six columns correspond to the model using *Rule of law* while the last six columns use *Creditors recovery*. The table shows coefficients and standard errors are clustered at the loan facility level. I provide the values of marginal effects when discussing the results.

Panel A show results including all variables except firm characteristics. All legal and institutional variables are significant in the *Renegotiation* equation, except *Priority*. The most significant variables are *Creditor rights*, *Renegotiation failure* and *Creditors recovery* with marginal effects equal to 3%, from 17% to 19%, and 19% respectively. The positive influence of overall creditors rights protection and larger recovery rates are consistent with the hypothesis that better legal protection of creditors interests increases the likelihood of renegotiation. This is because better legal protection enhances the willingness of lenders to make concessions and update the loan contract through renegotiation, which is less costly in legal systems that grant more protection to creditors with respect to their consent in case of borrower's reorganization or their ability to seize collateral. An interesting finding is related

ratio and operating margin at renegotiation equal to 4 863.43, 1.34, 0.01, and 0.11 respectively. Indeed, as these are out of default renegotiations, the firm characteristics are similar at loan origination and at loan renegotiation.

to the negative effect of the renegotiation frictions index. Larger values mean that debt enforcement is stronger and creditors interests are better protected in case of shareholders' strategic default, i.e. against shareholders' moral hazard. Facing potentially adverse incentives of shareholders who might try to strategically renege on the outstanding debt, stronger debt enforcement in favor of the creditors actually reduces the willingness to accept concessions and so the renegotiation likelihood. These first results point at different perspectives on the impact of legal protection and debt enforcement for creditors. The positive effect of *Creditor rights* fits into the "supply" view where better legal protection increases creditors' confidence and their willingness to accept concessions through renegotiation. On the contrary, the "demand" view where better protection reduces firms' willingness for debt, and by extension for debt renegotiation, can explain the effect of *Renegotiation failure*. These results also show that ex-ante and ex-post legal protection of creditors interests have different effects on the likelihood of renegotiation[19].

The legal and institutional variables are not significant in the equations of the second step of a renegotiation process with respect to time (*Rounds*) or scope (*Amendments*). It seems that creditors protection doesn't matter for the dynamics or degree of renegotiations. However, *Rule of law, Renegotiation failure* and *Priority* are significant for renegotiation outcomes involving favorable amendments to loan amount, and to amount & maturity. The corresponding economic effects are large, with marginal effects equal to 8% to 12%, 7% to 8%, and 11% respectively. The overall quality of the rule of law and renegotiation frictions have similar effects as on renegotiation likelihood, respectively increasing and decreasing the probability of favorable outcomes. A higher rank of creditors priority reduces favorable outcomes on amount & maturity amendments. If their claims are always served first, the

[19] I provide additional sensitivity analysis for these results in section 4.3.

willingness of lenders to concede favorable concessions on important material amendments to main loan terms such as the amount and maturity can be severely reduced.

Turning to the country level control variables, financial and economic development proxies are mostly significant in the renegotiation equation, but their economic effects are very weak (marginal effects close to 0%). Loan and lenders' pool level control variables are far more significant, both in statistical and economic terms, especially regarding the renegotiation equation. These results are consistent with the idea that initial contractual frictions matter for renegotiation. All main loan characteristics have a significant and positive impact on the renegotiation likelihood. The largest marginal effect equals 15% (covenants) followed by collateral (7%). Secured loans are more prone to renegotiation (Bester, 1994) while amending restrictive covenants allows to rebalance the allocation of contractual control rights (Dessein, 2005; Garleanu and Zwiebel, 2009). Larger loans with longer maturities are renegotiated more often (with low marginal effects between 1% and 2%) because they are usually associated with lower information asymmetry and less uncertainty (Berger et al., 2005; Mosebach, 1999). Initial loan amount and maturity have a negative effect on maturity and amount favorable outcomes respectively, signaling some sort of tradeoff between initial values of these two loan terms and the propensity to favorably amend each of them separately. Covenants and collateral also increase the probability of frequent renegotiations (marginal effects equal to 15% and 12% respectively), suggesting that initial contractual frictions and (mis)allocation of control rights take time to be resolved through renegotiation. Secured loans are less likely to obtain favorable outcome on maturity amendment. Additionally, borrowers who issued more loans in the past and thus are better known from the credit market renegotiate more easily because of reduced information asymmetry. On the contrary, larger outstanding amounts reduce renegotiation likelihood but allows to increase maturity at renegotiation. These two variables have low economic significance, with marginal effects ranging from 1% to 3%.

Larger pools of lenders increase renegotiation likelihood, multiple renegotiation rounds and multiple amendments, although its economic significance is very low. Although a larger group of lenders could have coordination problems, these results rather suggest larger syndicates are associated with less informational frictions (Lee and Mullineaux, 2004; Preece and Mullineaux, 1996; Sufi, 2007) while debt dispersion protects creditors from opportunistic expropriation (Hege and Mella-Barral, 2005), thus enhancing the creditors willingness to enter a renegotiation process. Reputable lenders have the same influence, except that they reduce the probability of amending numerous terms of the contract, with marginal effects equal to 5%, 12% and 14% respectively. Lender reputation mitigates adverse selection and helps signaling the quality of the deal (Bushman and Wittenberg-Moerman, 2012; Ross, 2010), thus also easing the prospect for renegotiation but not amending large portions of the contract, which might harm the reputation of the lenders as "specialist" in designing efficient contracts. On the contrary, lender-borrower relationship has a negative impact on renegotiation, on multiple amendments and on favorable outcome for amount & maturity (marginal effects equal to 5%, 12% and 6% respectively). The existence of relationship gives access to private and soft information type that enhances lender's ability to write more efficient contracts since origination, thus reducing the need for renegotiation. Another argument relies on the incentive conflicts between the lead bank and other lenders of the banking pool. The existence of a previous relationship between the lead lender and the borrower can exacerbate those conflicts and renegotiation becomes less likely in such circumstances (Demiroglu and James, 2015).

Panel B shows results including all variables as well as firm characteristics. Due to data availability for firm characteristics, the sample size is drastically reduced and cut by more than half. Listed status has a positive influence on renegotiation likelihood because greater transparency facilitates re-contracting while easier access to external financing through capital markets provides larger bargaining power. Among firm financial variables, only leverage is significant and negative for the amount & maturity favorable outcome. Greater financial risk reduces lenders' willingness to give concessions on these two majors material amendments. Regarding legal and institutional variables, we remark that previous results remain robust, although some coefficients lose significance, probably due to reduced sample size. Notable changes are for *Creditor rights* coefficient that becomes also significantly positive for amount and amount & maturity favorable outcomes, which is consistent with the idea that greater creditors protection increases lenders willingness to accept concessions on these loan terms, while *Priority* becomes also positive for multiple renegotiation rounds.

Regarding country level control variables, we notice that financial development variables become now not significant in the *Renegotiation* equation while *Private credit* becomes also significantly positive for amount favorable outcome and *Stock market* becomes significant for amount & maturity favorable outcome.

Loan level control variables show overall robust coefficients with respect to previous results, the most notable changes concern the outcomes specification for which most of the initial loan terms are now significant. Lenders' pool variables are more affected with less significance across specifications. This may be explained by a sample size effect, as the number of loans is cut by 55% due to unavailability of data for firm characteristics. It may also be the result of sample composition as firms with available data are eventually more transparent, because, for instance, these are listed firms. In such circumstances, the structure and composition of the lending pool could matter less because of increased transparency of the firms and increased bargaining power.

To summarize, the results support the importance and relevance of initial legal and institutional conditions for the loan renegotiation process. Better contractual enforcement through the legal system with stronger protection of creditors control rights and reduced renegotiation costs has a positive influence on the renegotiation process, particularly renegotiation likelihood and favorable outcomes on amendments to amount or maturity. But when facing potential strategic default by shareholders, stronger legal protection of creditors actually reduces their willingness to accept concessions through renegotiation. Another interesting result is that the terms of the initial credit agreement and the lenders' pool are significant determinants of the renegotiation process. Contractual mechanisms mitigating adverse selection and moral hazard, such as covenants and collateral, and organizational mechanisms such as the reputation of the lenders have the largest economic impacts.

4.3 Sensitivity analysis

I perform a battery of sensitivity tests of previous results. I investigate the effects of alternative specifications, weak legal environment, specific initial contract features, loan maturity, borrower opacity, financial crises, and different economic areas. I also provide some sensitivity analysis for the different effects of *Creditor rights* and *Renegotiation failure* variables, as well as including a more direct proxy of debt enforcement[20]. All regressions include, unless stated otherwise due to a specific sensitivity test, country level, lenders' pool level, and loan level variables, as well as all other control variables (as in table 4, panel A). All results for sensitivity tests are provided in table 5. In my discussions I focus on the legal and institutional variables and use as a benchmark results obtained in panel A of table 4.

I consider first alternative specifications and perform regressions without lenders' pool variables or without loan variables. I want to test if the legal and institutional results remain

[20] Occasionally, some equations couldn't be estimated due to convergence problems. Unfortunately, some additional alternative sensitivity analyses couldn't be performed for similar reasons (with respect to the size of the lending pool, the existence of previous lender-firm relationship, and for other legal and institutional variables).

robust when omitting initial loan and lenders level characteristics as they might be more important for the (re)design of the loan contract (Kaplan et al., 2007)[21]. The results remain overall robust although creditors rights and priority become non-significant when excluding loan variables.

Next, I test how legal and institutional variables matter for renegotiation in environments with weak rule of law, defined with respect to the median of *Rule of law* (1.66). As expected, several coefficients become not significant, suggesting that weaker legal and institutional systems reduce the influence of creditors protection on the renegotiation process. However, greater protection against shareholders increases the scope of renegotiation in such environments.

I consider two separate regressions - without *Creditor rights* and without *Renegotiation failure* respectively - as these two variables have opposite effects in the main regressions (table 4, panel A). I want to test if these effects remain the same if we consider each variable separately. Therefore, taken separately, coefficients for *Creditor rights* and *Renegotiation failure* variables exhibit very similar magnitudes and signs as in the main regressions when both variables are included simultaneously.

I also include as an additional control variable a more direct proxy of judicial efficiency in debt enforcement by considering *Enforcing contract* from the World Bank Doing Business database[22]. All coefficients and signs remain stable, with the exception of *Rule of law* which becomes not significant[23]. Enforcing contract is weakly significant and positive only with respect to *Rounds* and *Amendments*. Efficient contract enforcement reduces

[21] This approach can also be considered as (weak) version of testing the impact of potential endogeneity of loan variables on previous results.
[22] This variable is calculated as an average of the scores for "Time (days)", "Cost (% of claim value)" and "Procedures (number)". See appendix B for more details. The mean of *Enforcing contract* equals 69.52 (median at 68.51) with a standard deviation of 9.93.
[23] The correlation coefficient between *Rule of law* and *Enforcing contract* equals 0.52.

the cost of legal procedures thus increasing the willingness to engage into multiple renegotiation rounds or amending multiple terms of the initial contract.

I also consider specific contractual features of the initial credit agreement, such as the absence of covenants, collateral, no term loans, and unrated borrowers. I expect to capture potentially specific loan contracts with respect to informational frictions, moral hazard and allocation of bargaining and control rights using these proxies. I also consider the effect of loan maturity by excluding loans maturing in 2013 which represent the largest portion of my sample.

The absence of covenants may signal less information asymmetry between the borrower and the lender at loan origination, but it can also lead to potentially exacerbated moral hazard problems at renegotiation. It also means that the enforcement "power" of the initial contract is lower and less control rights for the lender at origination. In these circumstances, greater creditor rights decrease favorable outcomes on amount or maturity amendments, in response to the moral hazard problems at renegotiation. Other coefficients remain relatively robust. The absence of collateral may signal less risk in the initial contract but also lower bargaining power of the lender at renegotiation. Collateral law is also an important feature of the legal and institutional environment (Haselmann et al., 2010). Several previous results become not significant in the renegotiation likelihood equation, meaning that collateral is an important contractual channel through which the legal system influences the renegotiation process. However, we remark that greater creditors rights now decrease favorable outcomes on amount or maturity amendments in the absence of pledged collateral for the benefit of the lenders. Using a sub-sample without term loans that are less relationship oriented, we notice that most of previous results hold but also that new findings emerge, suggesting that more relationship-oriented loans (such as revolving loans) are different with respect to the impact of legal systems on the renegotiation process. Stronger creditors' rights increase the probability of a favorable outcome to amount amendment, while better rule of law increase the probability of multiple amendments. Hence the relationship nature of the underlying loan contract enhances the possibility of favorable renegotiation and multiple amendments when creditors benefit from a better legal protection. The legal and institutional environment has a diminished influence on renegotiation for more opaque borrowers who do not have a credit rating at loan origination. Hence credit transparency is important for the legal channel to operate with respect to private debt renegotiation. However, we notice that when creditors benefit from higher priority, unrated borrowers have a larger likelihood to frequently renegotiate their loans. Excluding loans maturing in 2013 that correspond to the largest portion of the contracts in the sample do not affect most of previous results, with the notable additional result regarding the positive influence of *Renegotiation failure* variable on the number of amendments at renegotiation.

Next, I consider the cyclical behavior of loan originations and renegotiations by focusing on two sub-periods, starting from October 2008 for the Global financial crisis[24] and June 2010 for the Eurozone crisis[25]. Indeed, large disruptions in the functioning of capital markets can affect the influence of legal and institutional environment on loan renegotiation. Overall both crises do not significantly affect previous findings. However, we notice some changes regarding the influence of creditors protection on renegotiation outcomes, and on renegotiation dynamics. Under the specific conditions of a financial crisis with increased default risk, better creditors protection leads lenders to accept increasing amounts while refusing extending maturity at loan renegotiation.

I focus on sub-samples with loans issued in the Eurozone area only (58% of the whole sample)[26] and on a sub-sample excluding UK (25% of the observations) to test if previous

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[24] Leaving 63% of the initial sample and 71% of the renegotiations.
[25] Which leaves 76% of the initial sample and 81% of the renegotiations.
[26] I consider the core 12 countries of the Eurozone only (Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain).

results are sensitive to the major economic area in the sample or affected by the specific legal origin and environment of UK, more protective of investors and of creditors in particular[27]. Overall previous results remain robust, with two notable exceptions: *Rule of law* is not significant for outcome equations when considering Eurozone economic area only, while *Creditor rights* becomes significantly negative for favorable maturity outcome.

To summarize, the influence of legal and institutional environment on the loan renegotiation process remains relatively robust but is also sensitive to several specific characteristics. Weaker institutional environment naturally weakens the effect of creditors legal protection. Efficient contract enforcement weakly matters for the dynamics and scope of renegotiation as it reduces the costs of renegotiation. The initial design of the loan contract also plays an important role. The absence of covenants affects the effect of legal systems because of moral hazard problems at renegotiation. Similarly, the absence of collateral, which is an important feature of the legal environment, weakens the influence of creditors protection. Relationship oriented loans increase the capacity of the legal and institutional environment in driving the renegotiation process and outcomes. Borrower transparency and episodes of financial crises are also important for the legal regimes to effectively influence renegotiation.

5. Conclusion

I investigate how legal and institutional conditions around loan origination influence private debt renegotiation process outside of distress. I consider the level of creditor rights' protection, the rule of law, and variables capturing the level of creditors protection facing debt renegotiation or restructuring. I apply sequential logit regressions to a large cross-country sample of more than 15,000 loan facilities to more than 8,000 firms from 29 European countries.

[27] UK represents the largest portion of the sample as a country.

My main findings confirm the important economic role of initial legal and institutional conditions for the renegotiation process. Better contractual enforcement through a legal system that provides stronger protection of creditors control rights and reduced renegotiation costs has a positive influence on renegotiation likelihood and favorable outcomes on amendments to amount or maturity. Stronger legal protection of creditors reduces renegotiation likelihood when facing potential strategic default by shareholders.

The results of sensitivity tests confirm that initial legal and contractual conditions matter and also show the existence of some complementarity between the legal and contractual channels in enforcing and completing financial contracts through debt renegotiation.

In terms of policy-oriented implications, the conclusions of this study reinforce the crucial role of rule of law, legal protection, and judicial efficiency for financial contracting. Mitigating renegotiation costs and balancing bargaining power of the counterparties through legal channels is important for the inherent flexibility of private debt contracts. However, not all legal features have the same influence on the renegotiation process. “Basic” legal protection of (secured) creditors tend to increase the willingness to amend loans, while more specific features protecting creditors from shareholders’ strategic default have the opposite effect. Considering the latter as a proxy for debt enforcement (ex-post legal protection) while the former as a proxy for ex-ante legal protection, it appears that these two types of legal protection work differently with respect to renegotiation.

Regarding normative implications for financial institutions, this study shows that the legal and institutional environment is a crucial component of financial contracting. The level of legal protection of counterparties’ rights and the efficiency and quality of debt enforcement around the time of the initial contract matter for its future shape. Therefore the legal component of a contract is not only important at the initial stage but also along its entire life, especially when the contract can be updated through renegotiation. It is also worth noticing that the legal and contractual features are complements with respect to private debt renegotiation.

The limitations of this study offer several interesting extensions and research perspectives. The issue of endogeneity of micro level variables (such as loan characteristics) at origination appeals to richer data allowing to implement proper instruments. The comparison of findings in Europe should be confronted with other major economic areas, such as the US. Finally, an exciting research avenue relies in further linking the legal systems with debt renegotiation and borrower distress.

Appendix

Appendix A: Description of amended terms

Amount
Borrow amount = change to borrowed amount
Borrowing base amount = change to borrowing base amount which is the value assigned to a collection of a borrower's assets (such as accounts receivable or inventory), used by lenders to determine the initial and/or ongoing loan amount, and/or compliance with one or more debt covenants
Facility amount = change to facility amount
LOC amount = change to line of credit amount which acts as a guarantee provided by lenders to pay off debt or obligations if the borrower cannot
Outstanding amount = change to loan outstanding amount
Prepay amount = change to prepay amount
Tranche amount = change to tranche amount

Covenants financial = change to financial covenants which enforce minimum financial performance against the borrower (such as coverage, leverage, current ratio, tangible net worth and maximum capital expenditures)

Covenants non-financial = change to non-financial covenants which can be affirmative (state what action the borrower must take to comply with the loan) and negative (limit the borrower's activities)

Maturity
Maturity change = change to loan maturity

Pricing
Loan fee = change to loan fees (such as upfront fee, commitment fee, facility fee, etc.)
Pricing grid = change to pricing grid such as altering the level of applicable margin contingent on borrower's leverage

Definition
Definition change = change to definition of key terms in loan agreement (for instance the definition of an accounting ratio used as a benchmark for a financial covenant, such as the equity to assets ratio)

Appendix B: Variables definitions

Dependent variables: renegotiation process
(source: Bloomberg)

- Renegotiation = 1 if a loan is renegotiated (0 otherwise)
- Rounds = 1 if a loan is renegotiated multiple times (i.e. more than once) (0 otherwise)
- Amendments = 1 if several characteristics of the initial loan contract are amended (i.e. more than one) (0 otherwise)
- Amount favorable = 1 if loan amount is increased following a renegotiation that implies loan amount amendment (0 otherwise)

- Maturity favorable = 1 if loan maturity is extended following a renegotiation that implies loan maturity amendment (0 otherwise)
- Amount & Maturity favorable = 1 if loan amount is increased and maturity is extended following a renegotiation that implies loan amount and maturity amendments (0 otherwise)

Other renegotiation variables
(source: Bloomberg)

- N. Rounds = number of renegotiation rounds
- N. Amendments = number of amended loan terms following renegotiation
- Change to amount ($mln) = change to loan amount for renegotiations involving amount amendment (in MLN USD)
- Change to maturity (m.) = change to loan maturity for renegotiations involving maturity amendment (in months)
- Time to renegotiation = time from loan origination to renegotiation (in months)
- Time to renegotiation / Maturity = time to renegotiation divided by loan maturity at origination (in percent)

Main explanatory variables
Legal and institutional variables (sources: Djankov et al. (2007), World Bank, and Favara et al. (2012))

- Creditors rights = Measures the legal rights of creditors against defaulting debtors in different jurisdictions.
  The creditor rights index measures four powers of secured lenders in bankruptcy: (1) whether there are restrictions, such as creditor consent, when a debtor files for reorganization; (2) whether secured creditors are able to seize their collateral after the petition for reorganization is approved, that is, whether there is no automatic stay or asset freeze imposed by the court; (3) whether secured creditors are paid first out of the proceeds of liquidating a bankrupt firm; and (4) whether an administrator, and not management, is responsible for running the business during the reorganization. A value of one is added to the index when a country’s laws and regulations provide each of these powers to secured lenders.
  The creditor rights index aggregates the scores and varies between 0 (poor creditor rights) and 4 (strong creditor rights).
- Rule of law = Perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence.
- Renegotiation failure = Measures the probability that shareholders fail to force a renegotiation of debt with creditors.
  The index is the average of the following binary (0 if no, 1 if yes) indicators: 1) secured creditors may seize and sell their collateral without court approval, 2) secured creditors may enforce their security either in or out of court, 3) the entire firm’s assets can be pledged as collateral, 4) an insolvency or liquidation order cannot be appealed at all, 5) an insolvency case is suspended until the resolution of the appeal, 6) the firm may enter liquidation without attempting reorganization, 7) secured creditors may enforce their security upon commencement of the insolvency proceedings, 8) a defaulting firm must cease operations upon commencement of insolvency proceedings, 9) management does not remain in control of decisions during insolvency proceedings, 10) secured creditors have the right to approve the appointment of the

insolvency administrator, 11) secured creditors may dismiss the insolvency administrator, 12) secured creditors vote directly on the reorganization plan.

- Priority = Equals 0, 1, 2, 3, or 4 to reflect the order in which creditors' claims are served. A value of 4 indicates that creditors' claims are always served first.
- Creditors' recovery = Recovery rate for secured creditors, conditional on default.

Other explanatory variables

Country variables (sources: Demirgüç-Kunt et al. (2012), World Bank Doing Business)

- Private credit = Financial resources provided to the private sector by domestic money banks as a share of GDP.
- Stock market = Total value of all listed shares in a stock market as a percentage of GDP.
- Bank Z score = Captures the probability of default of a country's commercial banking system. Z-score compares the buffer of a country's commercial banking system (capitalization and returns) with the volatility of those returns.
- Enforcing contract = measures the gap between an economy's performance and the regulatory best practice on the Enforcing Contracts indicator components. It is calculated as the simple average of the scores for "Time (days)", "Cost (% of claim value)" and "Procedures (number)". The score ranges from 0 to 100, where 0 represents the worst regulatory performance and 100 the best regulatory performance.

  "Time (days)" is recorded in calendar days, counted from the moment plaintiff decides to file the lawsuit in court until payment. The average duration of the following three different stages of dispute resolution is recorded: (i) filing and service; (ii) trial and judgment; and (iii) enforcement. Time is recorded considering the case study assumptions and only as applicable to the competent court in practice.

  "Cost (% of claim)" is recorded as a percentage of the claim value, assumed to be equivalent to 200% of income per capita or $5,000, whichever is greater. Three types of costs are recorded: average attorney fees, court costs and enforcement costs. Bribes are not taken into account.

  "Procedures (number)" records the list of procedural steps compiled for each economy that traces the chronology of a commercial dispute before the relevant court. A procedure is defined as any interaction, required by law or commonly carried out in practice, between the parties or between them and the judge or court officer. Procedural steps include steps to file and serve the case, steps to assign the case to a judge, steps for trial and judgment and steps necessary to enforce the judgment. To indicate overall efficiency, 1 procedure is subtracted from the total number for economies that have specialized commercial courts or divisions, and 1 procedure for economies that allow electronic filing of the initial complaint.

Loan variables (source: Bloomberg)

- Amount = Loan facility amount at origination (in MLN USD).
- Maturity = Loan maturity at origination (in years).
- Covenants =1 if loan has covenants.
- Secured = 1 if loan is secured.
- Amount outstanding = amount outstanding on all loans.
- Previous issues = Number of loans previously issued by a firm.

Lenders pool variables (source: Bloomberg)

- Lenders = Number of lenders in the syndicate.

- League = 1 if the loan agent was listed among the top 3 of the Bloomberg European league table one year before the origination year.
- Relationship = 1 if the loan agent syndicated a loan for the same borrower during the last 3 years before the origination year.
- Same country = Percentage of lenders in the pool which are from the same country as the borrower.

Firm variables (source: Bloomberg)

- Listed = 1 if a firm is listed on a stock exchange.
- Rated = 1 if a firm has a rating (Moody's or S&P, Senior Unsecured Debt or LT Issuer Credit).
- Sales = Net sales or revenue of the firm (in MLN USD).
- Debt / Equity = Total debt to equity.
- Current ratio = Current assets to current liabilities.
- Operating margin = Operating income to net sales.

Table A.1 Correlation matrix

This table presents correlations coefficients for all main explanatory variables and control variables (definitions are provided in appendix B).

	Creditor rights	Rule of law	Renegotiation failure	Priority	Creditors recovery	GDP growth	Private credit	Stock market	Bank Z score	Amount	Maturity	Covenants	Secured	Amount outstanding	Previous issues	Lenders	League	Relationship
Creditor rights	1.00																	
Rule of law	0.26	1.00																
	(0.00)																	
Renegotiation failure	0.21	0.27	1.00															
	(0.00)	(0.00)																
Priority	0.38	0.54	0.22	1.00														
	(0.00)	(0.00)	(0.00)															
Creditors recovery	0.33	0.66	0.31	0.47	1.00													
	(0.00)	(0.00)	(0.00)	(0.00)														
GDP growth	0.04	0.10	0.15	0.10	0.08	1.00												
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)													
Private credit	0.53	0.40	0.26	-0.14	0.30	-0.22	1.00											
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)												
Stock market	0.22	0.43	0.14	0.04	0.24	0.30	0.44	1.00										
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)											
Bank Z score	-0.00	0.08	-0.06	-0.10	-0.18	0.12	-0.21	0.08	1.00									
	(0.67)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)										
Amount	0.00	0.01	-0.02	0.01	0.00	0.01	-0.02	-0.01	-0.02	1.00								
	(0.95)	(0.10)	(0.00)	(0.23)	(0.60)	(0.14)	(0.00)	(0.16)	(0.00)									
Maturity	-0.04	-0.06	0.00	-0.11	-0.06	0.06	-0.01	-0.04	0.00	-0.01	1.00							
	(0.00)	(0.00)	(0.79)	(0.00)	(0.00)	(0.00)	(0.02)	(0.00)	(0.81)	(0.16)								
Covenants	0.03	0.07	-0.01	0.06	0.08	0.04	0.03	0.07	-0.01	0.04	0.00	1.00						
	(0.00)	(0.00)	(0.40)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.01)	(0.00)	(0.40)							
Secured	0.03	0.02	-0.01	0.03	0.03	-0.02	0.08	-0.04	-0.08	0.00	0.25	0.16	1.00					
	(0.00)	(0.00)	(0.03)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.59)	(0.00)	(0.00)						
Amount outstanding	0.01	-0.01	-0.01	0.00	-0.03	0.04	-0.04	0.03	0.09	0.02	0.05	-0.01	0.05	1.00				

	(0.56)	(0.19)	(0.19)	(0.84)	(0.01)	(0.00)	(0.00)	(0.01)	(0.00)	(0.02)	(0.00)	(0.29)	(0.00)					
Previous issues	-0.01	-0.09	-0.05	-0.03	-0.07	0.06	-0.04	0.04	-0.03	0.02	0.14	0.09	0.14	0.13	1.00			
	(0.19)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)				
Lenders	-0.01	0.08	0.02	0.02	0.05	0.07	-0.01	0.04	0.11	0.13	0.01	0.23	0.07	0.31	0.12	1.00		
	(0.09)	(0.00)	(0.00)	(0.03)	(0.00)	(0.00)	(0.08)	(0.00)	(0.00)	(0.00)	(0.02)	(0.00)	(0.00)	(0.00)	(0.00)			
League	-0.09	-0.00	-0.14	-0.05	-0.17	0.03	-0.06	0.03	0.01	-0.01	0.01	-0.02	-0.02	-0.00	0.02	-0.05	1.00	
	(0.00)	(0.60)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.10)	(0.09)	(0.02)	(0.01)	(0.00)	(0.81)	(0.00)	(0.00)		
Relationship	0.00	0.06	0.01	0.02	0.01	-0.05	0.07	0.05	-0.01	0.03	-0.11	0.04	-0.06	0.02	0.06	0.07	0.06	1.00
	(0.60)	(0.00)	(0.38)	(0.02)	(0.42)	(0.00)	(0.00)	(0.00)	(0.43)	(0.00)	(0.00)	(0.00)	(0.00)	(0.05)	(0.00)	(0.00)	(0.00)	
Same country	-0.35	-0.08	-0.16	-0.13	-0.14	-0.13	-0.19	-0.25	0.10	-0.01	-0.01	-0.07	-0.05	-0.05	-0.09	-0.01	-0.05	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.18)	(0.02)	(0.00)	(0.00)	(0.00)	(0.00)	(0.15)	(0.00)	(0.53)

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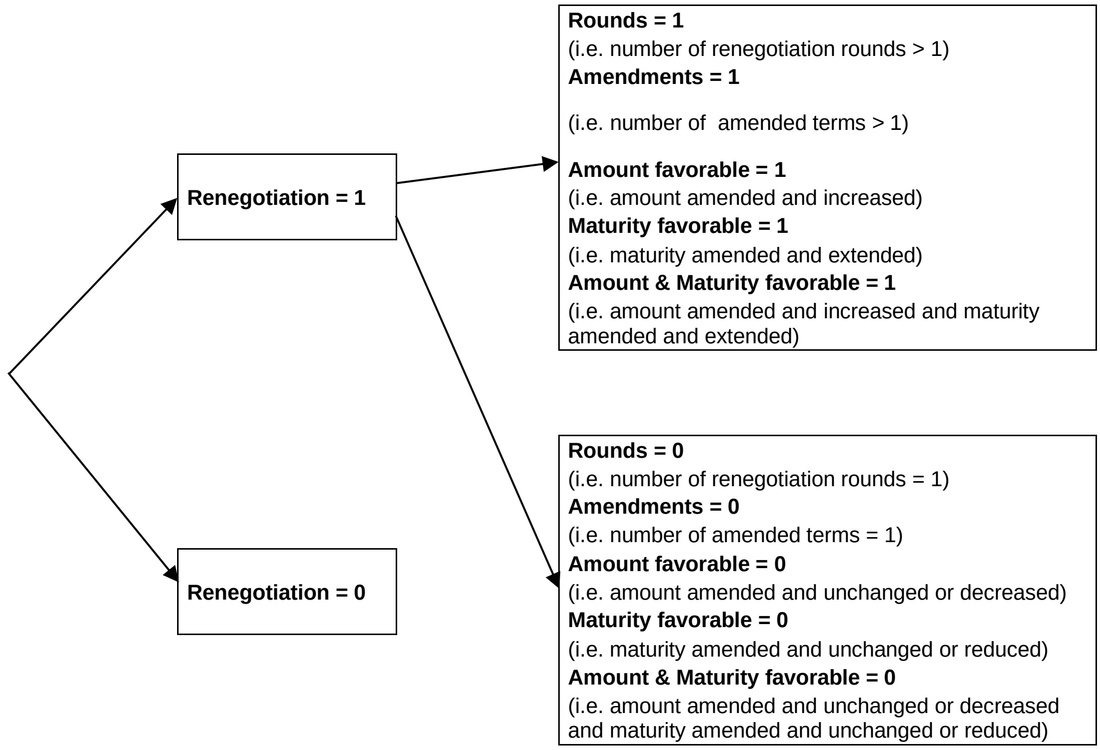

Figure 1 Sequential logit

This figure illustrates the sequential logit approach to renegotiation decision, dynamics, scope, outcome (variables are defined in appendix B).

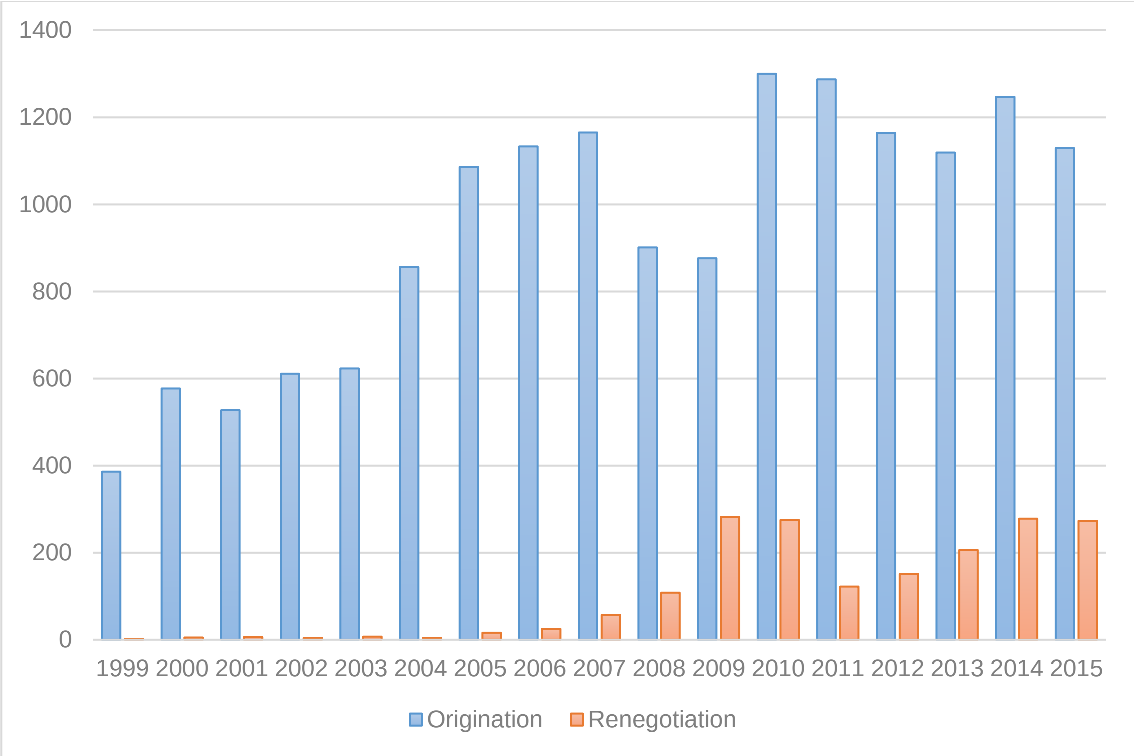

Figure 2 Sample composition by year

This figure provides the distribution of the number of loan facilities (originated and renegotiated) by year.

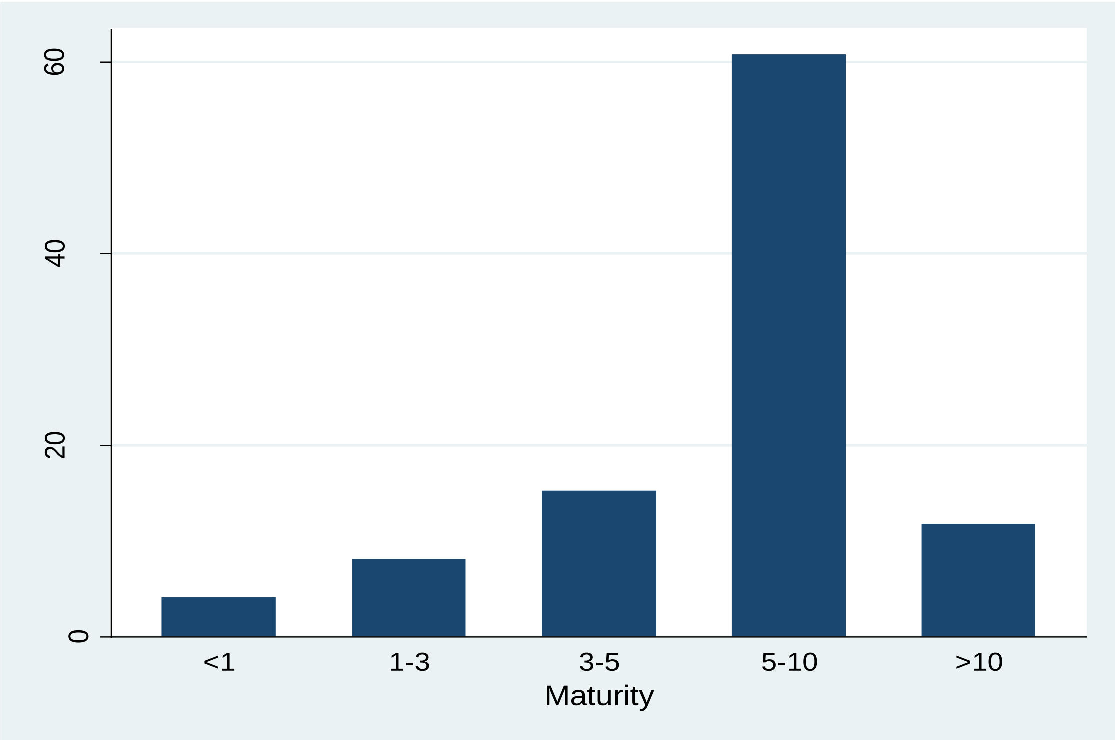

Figure 3 Sample composition by loan maturity at origination

This figure shows the distribution of the loans by initial maturity by brackets (in years).

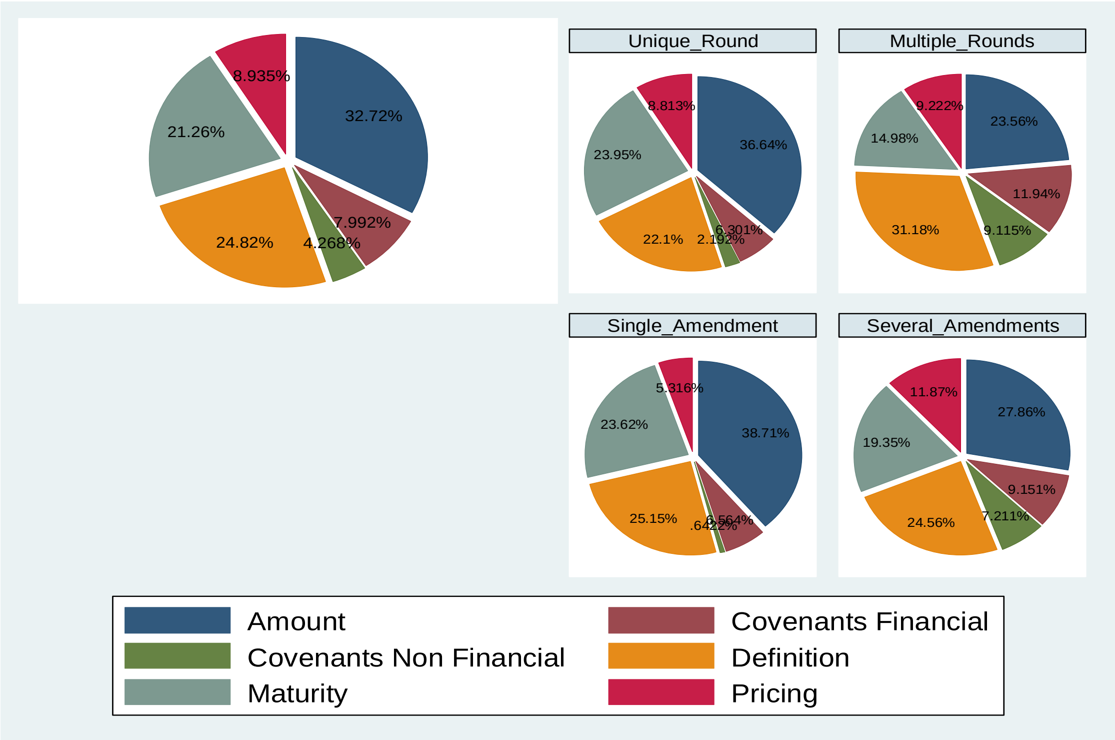

Figure 4 Amended terms

This figure presents the breakdown of amended loan characteristics following renegotiation for the sample of amended contracts and by renegotiation dynamics (*Rounds*) and renegotiation scope (*Amendments*). 30% of renegotiations involve multiple rounds and 55% of renegotiations involve several amendments. Amended terms are described in appendix A.

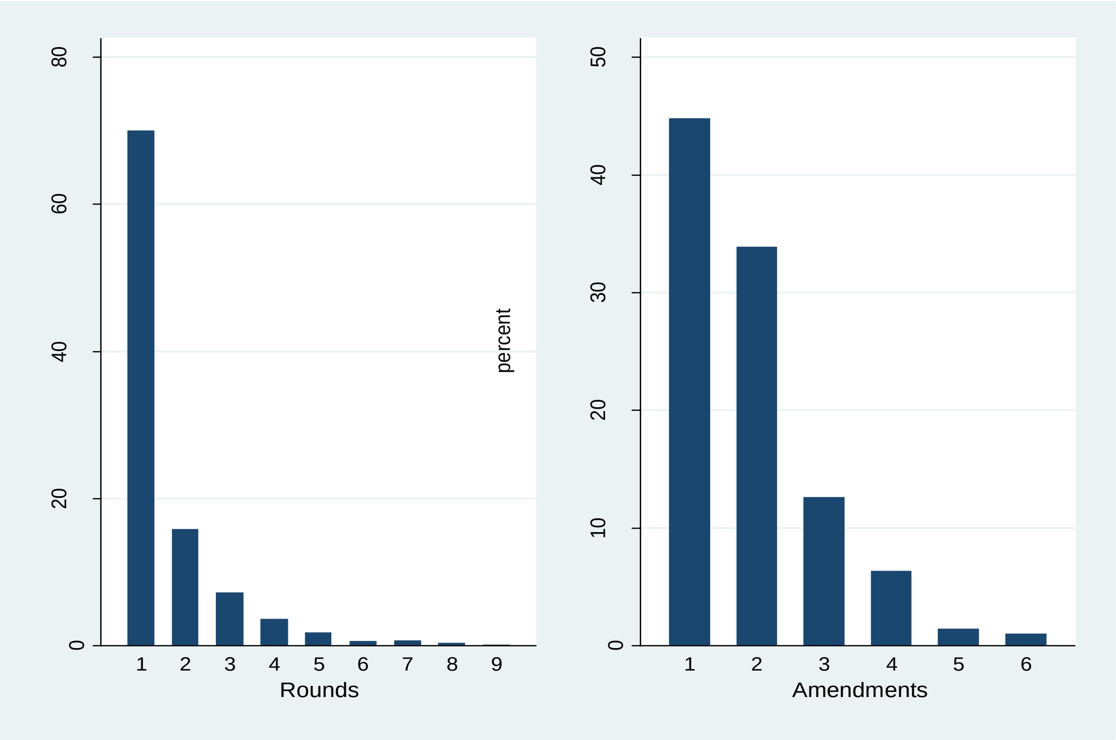

Figure 5 Renegotiation dynamics and scope

The left figure presents the distribution of renegotiation rounds. For instance, 15.85% of the amended loans involve 2 rounds. The right figure presents the distribution of amended terms. For instance, 12.60% of the amended loans involve amending three loan terms.

Table 1 Sample composition by country

This table presents the number of loans, companies and average percent of renegotiated loans by borrower country.

Country	Loans	Companies	Renegotiation
AUSTRIA	112	69	16.92%
BELGIUM	287	164	18.11%
BULGARIA	47	35	3.30%
CROATIA	36	20	6.12%
CYPRUS	27	15	31.71%
CZECH REPUBLIC	105	78	14.35%
DENMARK	166	78	13.77%
ESTONIA	24	12	31.25%
FINLAND	325	133	14.58%
FRANCE	1984	1054	14.31%
GERMANY	1766	986	20.03%
GREECE	184	118	3.04%
HUNGARY	77	45	25.00%
IRELAND	224	131	21.97%
ITALY	1033	663	9.62%
LATVIA	11	8	35.71%
LUXEMBOURG	376	226	43.88%
NETHERLANDS	1119	604	26.82%
NORWAY	495	284	21.48%
POLAND	242	143	10.44%
PORTUGAL	130	86	0.92%
RUSSIAN FEDERATION	452	222	23.88%
SLOVENIA	45	25	2.86%
SPAIN	1685	1006	11.09%
SWEDEN	470	194	14.54%
SWITZERLAND	499	206	21.28%
TURKEY	183	133	2.61%
UKRAINE	51	38	13.43%
UNITED KINGDOM	3676	1947	21.10%
Sample	15 831	8 723	18.25%

Table 2 Renegotiation variables: descriptive statistics and univariate analysis

Panel A provides descriptive statistics for variables related to renegotiation for the whole sample and by *Rounds* and by *Amendments*, along with mean t-test statistics (30% of renegotiations involve multiple rounds and 55% of renegotiations involve several amendments.). Panel B shows the breakdown of renegotiation packages in details. “Yes” means that a specific loan term was amended. For instance, amending simultaneously the loan amount and maturity occurs in 10.04% of the renegotiations.

Panel A

			Rounds			Amendments		
Variable	**Mean**	**SD**	**=1**	**>1**	**T-test**	**=1**	**>1**	**T-test**
N. Rounds	1.58	1.14				1.37	1.74	(-13.12)***
N. Amendments	1.89	1.05	1.73	2.25	(-18.57)***			
Change to amount ($mln)	-35.93	770.80	-16.29	-107.11	(2.20)*	-50.73	-19.29	(-0.92)
Amount favorable=1	*0.51*	*0.50*	*0.53*	*0.46*	*(2.84)***	*0.48*	*0.54*	*(-2.58)***
Change to maturity (m.)	17.25	50.00	16.72	19.22	(-0.74)	15.96	18.53	(-0.93)
Maturity favorable=1	*0.79*	*0.40*	*0.79*	*0.80*	*(-0.41)*	*0.90*	*0.73*	*(9.11)****
Time to renegotiation	32.09	24.79	27.46	42.81	(-23.37)***	30.15	33.66	(-5.55)***
Time to renegotation / Maturity	0.42	0.34	0.38	0.51	(-14.35)***	0.40	0.43	(-2.96)**

Panel B

Maturity	Definition	Covenants Financial	Covenants Non-Financial	Pricing	Amount	Percent
					Yes	19.91%
	Yes					12.94%
Yes						12.15%
Yes					Yes	10.04%
	Yes				Yes	8.09%
		Yes				3.38%
	Yes	Yes	Yes			2.97%
				Yes		2.73%
Yes				Yes	Yes	2.39%
Yes	Yes				Yes	2.02%
	Yes	Yes	Yes		Yes	2.00%

Table 3 Explanatory variables: descriptive statistics and univariate analysis

Panel A provides descriptive statistics and univariate tests for all variables (definitions are provided in appendix B). Reneg.: Renegotiation (i.e. renegotiated loan), fav.: favorable (outcome) following amendment to Amount, Maturity or Amount & Maturity. Panel B shows the breakdown of the sample by borrower industry sector, loan purpose, loan type, and loan currency.

Panel A

							Rounds		Amendments		Amount fav	Maturity fav.	Amount & Maturity fav.
	Mean	SD	Median	No Reneg.	Reneg.	T-test	=1	>1	=1	>1			
Creditor rights	2.33	1.36	2.00	2.29	2.55	(-13.74)***	2.51	2.68	2.47	2.63	2.73	2.49	2.65
Rule of law	1.46	0.53	1.66	1.44	1.56	(-15.77)***	1.53	1.63	1.51	1.60	1.56	1.53	1.61
Renegotiation failure	0.39	0.15	0.45	0.39	0.38	(2.68)**	0.39	0.38	0.38	0.38	0.38	0.39	0.39
Priority	3.33	0.76	4.00	3.30	3.52	(-16.86)***	3.48	3.62	3.46	3.57	3.56	3.45	3.58
Creditors recovery	0.61	0.20	0.56	0.60	0.65	(-14.54)***	0.64	0.68	0.63	0.67	0.65	0.64	0.63
French	0.43	0.50	0.00	0.45	0.36	(11.70)***	0.36	0.37	0.35	0.38	0.28	0.35	0.26
German	0.20	0.40	0.00	0.19	0.21	(-3.50)***	0.21	0.21	0.20	0.22	0.23	0.21	0.24
GDP growth	1.77	2.19	2.13	1.78	1.74	(1.22)	1.58	2.13	1.66	1.81	1.47	1.47	1.60
Private credit	113.53	39.03	107.39	112.31	118.32	(-10.89)***	119.01	116.65	118.99	117.75	121.66	118.81	122.75
Stock market	86.87	44.58	77.91	86.41	90.62	(-6.62)***	89.74	92.72	88.26	92.67	90.46	87.60	94.19
Bank Z score	11.41	5.33	10.87	11.43	11.23	(2.74)**	10.83	12.18	10.30	12.03	11.13	10.85	11.55
Amount	1 861.15	34 401.44	300.00	1 387.44	3 840.55	(-5.28)***	2 022.53	8 272.02	2 234.24	5 216.91	1 488.59	1 523.50	2 290.33
Maturity	6.41	4.01	5.95	6.25	6.73	(-8.76)***	6.38	7.58	6.50	6.92	6.24	6.48	6.65
Covenants	0.09	0.28	0.00	0.06	0.23	(-45.85)***	0.18	0.35	0.20	0.26	0.18	0.18	0.18
Secured	0.40	0.49	0.00	0.34	0.59	(-36.98)***	0.52	0.74	0.55	0.62	0.54	0.45	0.55
Amount outstanding	4.73	53.41	0.44	2.63	4.77	(-14.93)***	3.99	6.59	4.32	5.16	3.71	3.05	2.76
Previous issues	3.80	3.27	3.00	3.60	4.30	(-14.97)***	3.99	5.04	4.24	4.34	3.75	3.62	3.85
Lenders	9.24	11.85	6.00	7.61	15.98	(-51.54)***	12.62	23.85	13.76	17.81	13.31	15.42	17.39
League	0.19	0.39	0.00	0.19	0.19	(-0.04)	0.19	0.17	0.24	0.15	0.20	0.19	0.19
Relationship	0.12	0.33	0.00	0.13	0.12	(1.78)	0.10	0.15	0.10	0.13	0.11	0.12	0.12
Same country	0.28	0.45	0.00	0.29	0.23	(8.74)***	0.26	0.17	0.24	0.23	0.22	0.27	0.24

Listed	0.47	0.50	0.00	0.46	0.60	(-19.85)***	0.60	0.60	0.62	0.58	0.54	0.68	0.66
Rated	0.12	0.32	0.00	0.11	0.18	(-15.59)***	0.15	0.24	0.15	0.20	0.14	0.21	0.14
Sales	4 835.52	8 295.17	1 128.00	4 828.36	4 862.59	(-0.23)	4 843.83	4 911.46	4 702.12	5 006.33	5 719.31	8 312.86	6 579.88
Debt / Equity	1.40	1.73	0.79	1.42	1.33	(2.74)**	1.37	1.23	1.39	1.29	1.93	2.70	1.32
Current ratio	0.01	0.01	0.01	0.01	0.01	(-1.76)	0.01	0.01	0.01	0.01	0.02	0.02	0.02
Operating margin	0.11	0.13	0.09	0.11	0.11	(-0.78)	0.11	0.12	0.11	0.12	0.12	0.07	0.16

Panel B

Borrower industry sector		Loan purpose		Loan type		Loan currency	
Basic Materials	19.37%	Acquisition	15.00%	Term	61.00%	EUR	59.00%
Communications	29.22%	General corporate purposes	21.00%	Revolving	36.00%	GBP	19.00%
Consumer, Cyclic	17.32%	LBO	17.00%			USD	15.00%
Consumer, Non-cyclical	16.65%	Project finance	7.00%				
Diversified	18.92%	Debt refinancing	25.00%				
Energy	15.74%	Working capital	5.00%				
Industrial	17.26%						
Technology	23.16%						
Utilities	11.24%						

Table 4 Renegotiation process: decision, dynamics, scope, and outcomes

This table presents estimated coefficients and standard errors, clustered at the loan facility level (in parentheses) from sequential logit regressions.
Panel A shows the main results and Panel B shows results including borrower variables in the regressions.
Reneg., Rounds, Amend., Amount favorable, Maturity favorable, Amount & Maturity favorable correspond to the renegotiation decision (= 1 if a loan is renegotiated), the renegotiation dynamics decision (= 1 if the number of renegotiation rounds is greater than 1), the renegotiation scope decision (= 1 if the number of amended terms is greater than 1), the renegotiation outcomes (=1 if amount is amended and increased; =1 if maturity is amended and extended; =1 if amount and maturity are amended and increased / extended). Figure 1 illustrates the sequential logit approach. All variables are described in appendix B.
All regressions include control variables for legal origin (French, German), loan currencies (USD and GBP), loan type (term), loan purposes (acquisition, general corporate, LBO, project finance, debt refinancing, working capital), year, and borrower industry sector.
*, **, and *** indicate a statistically significant coefficient at the 10%, 5%, and 1% confidence level.

Panel A

	Reneg.	Rounds	Amend.	Amount favorable	Maturity favorable	Amount & Maturity favorable	Reneg.	Rounds	Amend.	Amount favorable	Maturity favorable	Amount & Maturity favorable
Creditor rights	0.2402**	-0.1479	0.0638	0.1548	-0.2109	-0.1902	0.0495	-0.1745	0.0914	-0.1342	-0.1156	-0.9786
	(0.10)	(0.17)	(0.16)	(0.18)	(0.15)	(0.46)	(0.11)	(0.17)	(0.17)	(0.19)	(0.14)	(0.61)
Rule of law	0.3621*	0.0472	-0.1050	0.8124*	-0.3008	3.7648**						
	(0.22)	(0.47)	(0.37)	(0.48)	(0.37)	(1.56)						
Renegotiation failure	-1.5039**	-0.5128	1.9106	-4.5793**	0.0249	-3.6624***	-1.6989**	-0.6413	1.9373	-3.0663	0.3001	-2.3158
	(0.65)	(1.05)	(1.40)	(1.89)	(1.02)	(1.48)	(0.67)	(1.30)	(1.31)	(2.00)	(1.04)	(8.17)
Priority	-0.0288	0.5487	0.3647	-0.5144	0.2566	-3.0025**	-0.0279	0.5108	0.3275	-0.2260	0.1771	0.7342
	(0.20)	(0.43)	(0.36)	(0.49)	(0.32)	(1.45)	(0.15)	(0.41)	(0.33)	(0.41)	(0.26)	(1.46)
Creditors recovery							1.6882***	0.3283	-0.1678	2.0649	-0.6047	1.4910
							(0.59)	(1.49)	(1.19)	(1.51)	(0.93)	(7.63)
Private credit	-0.0080*	0.0019	-0.0031	0.0064	0.0060	0.0415**	-0.0063	0.0019	-0.0039	0.0075	0.0030	0.0040
	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)	(0.02)	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Stock market	0.0079**	-0.0034	0.0006	0.0002	-0.0016	0.0063	0.0054*	-0.0036	0.0010	-0.0031	0.0001	-0.0078
	(0.00)	(0.00)	(0.01)	(0.01)	(0.00)	(0.01)	(0.00)	(0.00)	(0.00)	(0.01)	(0.00)	(0.01)
Bank Z score	0.0006	-0.0103	-0.0056	0.0479	0.0194	0.2194	0.0094	-0.0095	-0.0070	0.0500	0.0161	0.1305
	(0.02)	(0.03)	(0.03)	(0.04)	(0.02)	(0.17)	(0.02)	(0.03)	(0.03)	(0.03)	(0.03)	(0.10)
GDP growth	0.1468**	0.0572	-0.2840**	0.2629**	0.0934	0.7689	0.1291**	0.0497	-0.2848**	0.1911	0.0866	0.6519

	(0.06)	(0.11)	(0.13)	(0.13)	(0.11)	(0.83)	(0.06)	(0.11)	(0.13)	(0.13)	(0.12)	(0.48)
Amount (log)	0.1621**	-0.0322	0.0406	-0.1418	-0.3776***	0.0928	0.1542**	-0.0313	0.0418	-0.1730	-0.3759***	-0.3622
	(0.07)	(0.10)	(0.08)	(0.14)	(0.12)	(0.40)	(0.07)	(0.10)	(0.08)	(0.14)	(0.12)	(0.33)
Maturity	0.0908***	0.0701	-0.0292	-0.1032**	-0.0032	-0.1447	0.0926***	0.0700	-0.0302	-0.0906**	0.0005	-0.0457
	(0.02)	(0.04)	(0.04)	(0.04)	(0.05)	(0.11)	(0.02)	(0.04)	(0.04)	(0.04)	(0.05)	(0.10)
Covenants	1.3743***	0.9438***	0.4622	-0.1104	-0.4357	0.5834	1.3777***	0.9449***	0.4590	-0.1075	-0.4417	0.4563
	(0.20)	(0.23)	(0.29)	(0.37)	(0.31)	(0.83)	(0.20)	(0.24)	(0.29)	(0.36)	(0.30)	(0.61)
Secured	0.6921***	0.7368***	0.0146	-0.0640	-0.6525**	0.2651	0.6842***	0.7366***	0.0136	-0.1409	-0.6957**	-0.0512
	(0.14)	(0.23)	(0.24)	(0.30)	(0.27)	(0.71)	(0.14)	(0.23)	(0.24)	(0.32)	(0.27)	(0.77)
Amount outstanding (log)	-0.2101***	0.0952	-0.0877	0.2301	0.2461**	-0.0653	-0.2021***	0.0944	-0.0883	0.2533*	0.2464**	0.4061
	(0.06)	(0.09)	(0.08)	(0.14)	(0.11)	(0.45)	(0.06)	(0.09)	(0.08)	(0.14)	(0.11)	(0.38)
Previous issues	0.0921***	-0.0155	0.0548	-0.0267	-0.0138	0.0173	0.0942***	-0.0149	0.0551	-0.0263	-0.0163	-0.0204
	(0.03)	(0.03)	(0.04)	(0.05)	(0.06)	(0.08)	(0.03)	(0.03)	(0.04)	(0.05)	(0.06)	(0.08)
Lenders	0.0344**	0.0272***	0.0111*	-0.0189	-0.0015	0.0179	0.0348**	0.0272***	0.0110*	-0.0185	-0.0018	0.0073
	(0.02)	(0.01)	(0.01)	(0.02)	(0.01)	(0.03)	(0.02)	(0.01)	(0.01)	(0.02)	(0.01)	(0.02)
League	0.4289***	0.7854***	-0.6976**	0.2576	-0.0482	0.1378	0.4439***	0.7842***	-0.7028**	0.2991	-0.0571	0.1292
	(0.17)	(0.27)	(0.28)	(0.28)	(0.27)	(0.75)	(0.17)	(0.27)	(0.28)	(0.28)	(0.28)	(0.63)
Relationship	-0.4408**	0.1035	-0.6137**	-0.2731	0.0713	-2.7742**	-0.4468**	0.1050	-0.6106**	-0.2814	0.0937	-2.1514**
	(0.20)	(0.30)	(0.30)	(0.33)	(0.36)	(1.37)	(0.20)	(0.30)	(0.30)	(0.34)	(0.36)	(1.06)
Same country	-0.0266	-0.0811	0.2685	0.1196	0.3120	2.1551**	-0.0017	-0.0774	0.2616	0.1287	0.2774	1.4382
	(0.15)	(0.25)	(0.25)	(0.28)	(0.22)	(0.94)	(0.14)	(0.25)	(0.24)	(0.28)	(0.22)	(0.89)
Facilities		3 989			3 989			4 051			4 051	
Chi2		340.62			356.90			348.21			363.00	
Log.L.		-4 765.42			-4 632.12			-4 769.77			-4 665.44	

Panel B

	Reneg.	Rounds	Amend.	Amount favorable	Maturity favorable	Amount & Maturity favorable	Reneg.	Rounds	Amend.	Amount favorable	Maturity favorable	Amount & Maturity favorable
Creditor rights	0.1663**	-0.0595	-0.1807	0.4697*	0.0000	4.6009*	-0.0366	0.1103	-0.3195	0.4085*	-0.2038	3.5826***
	(0.08)	(0.23)	(0.22)	(0.25)	(0.24)	(2.65)	(0.12)	(0.22)	(0.23)	(0.24)	(0.22)	(1.26)
Rule of law	0.4621*	-0.6620	0.4667	0.1380*	0.4570	2.1009*						
	(0.26)	(0.63)	(0.54)	(0.08)	(0.51)	(1.21)						
Renegotiation failure	-1.3687*	0.0104	2.5904	-2.9248*	0.2113	-4.3133**	-1.5052*	-0.2404	2.5099	0.5114	0.1852	14.5736
	(0.83)	(1.16)	(1.59)	(1.72)	(1.42)	(2.08)	(0.89)	(1.24)	(1.64)	(2.23)	(1.37)	(10.20)
Priority	-0.1233	0.8659*	0.4537	0.4598	-0.3796	-2.7534*	-0.0549	0.4627	0.6048	1.0144	-0.3404	1.1330
	(0.23)	(0.51)	(0.52)	(0.64)	(0.51)	(1.62)	(0.20)	(0.38)	(0.52)	(0.67)	(0.39)	(3.71)
Creditors recovery							1.6205**	-0.3724	0.8366	-1.5650	1.6726	4.8744
							(0.78)	(1.39)	(1.78)	(1.76)	(1.38)	(16.64)
Private credit	-0.0067	0.0073	-0.0007	0.0227**	-0.0030	0.0957**	-0.0039	-0.0007	0.0028	0.0203**	-0.0018	0.0620
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.05)	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)	(0.04)
Stock market	0.0057	-0.0067	-0.0043	-0.0084	-0.0031	-0.0977***	0.0031	-0.0034	-0.0064	-0.0078	-0.0050	-0.0820***
	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)	(0.04)	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)	(0.02)
Bank Z score	-0.0090	-0.0366	0.0606	0.0972*	0.0159	0.4606	-0.0006	-0.0439	0.0690	0.0765	0.0218	0.1250
	(0.02)	(0.03)	(0.04)	(0.05)	(0.03)	(0.32)	(0.02)	(0.03)	(0.04)	(0.06)	(0.03)	(0.15)
GDP growth	0.1775**	0.0889	-0.3755**	0.3616**	0.1071	-1.0310	0.1535**	0.0684	-0.3610**	0.3877**	0.0759	-0.5298
	(0.08)	(0.13)	(0.16)	(0.18)	(0.16)	(0.76)	(0.08)	(0.13)	(0.17)	(0.19)	(0.17)	(0.77)
Amount (log)	0.0739	-0.1467	0.4099**	-0.0097	-0.2545	1.2558**	0.0684	-0.1222	0.3974**	-0.0780	-0.2796*	1.0966**
	(0.08)	(0.16)	(0.17)	(0.20)	(0.16)	(0.58)	(0.08)	(0.16)	(0.17)	(0.20)	(0.16)	(0.47)
Maturity	0.0608*	0.0474	-0.0158	-0.1247*	0.0471	0.1988**	0.0664**	0.0411	-0.0146	-0.0676	0.0579	0.2556**
	(0.03)	(0.05)	(0.05)	(0.07)	(0.06)	(0.09)	(0.03)	(0.05)	(0.05)	(0.08)	(0.06)	(0.11)
Covenants	1.4182***	0.5518*	0.4878	-0.3749	-0.7352**	-2.6598**	1.4192***	0.5388*	0.4914	-0.4829	-0.7728**	-2.7685***
	(0.21)	(0.31)	(0.34)	(0.44)	(0.34)	(1.29)	(0.21)	(0.31)	(0.35)	(0.43)	(0.34)	(1.06)
Secured	0.6506***	1.0554***	-0.2254	-0.5441	-0.6785**	-3.6132**	0.6257***	1.0634***	-0.2336	-0.7078*	-0.7206**	-3.1278***
	(0.19)	(0.26)	(0.29)	(0.39)	(0.29)	(1.78)	(0.19)	(0.27)	(0.29)	(0.41)	(0.30)	(1.17)

Amount outstanding (log)	-0.1974**	0.1673	-0.4243**	0.1537	0.0865	-1.1146*	-0.1927**	0.1480	-0.4144**	0.2120	0.1064	-0.9602**
	(0.08)	(0.15)	(0.17)	(0.21)	(0.16)	(0.58)	(0.08)	(0.15)	(0.16)	(0.21)	(0.16)	(0.48)
Previous issues	0.0566	-0.1043*	0.1968***	-0.0633	0.0424	0.2492	0.0547	-0.0967*	0.1925***	-0.0837	0.0323	0.0518
	(0.04)	(0.06)	(0.06)	(0.08)	(0.06)	(0.22)	(0.04)	(0.06)	(0.06)	(0.09)	(0.06)	(0.20)
Lenders	0.0255	0.0198*	0.0185	-0.0168	0.0053	0.0044	0.0257	0.0206**	0.0182	-0.0199	0.0046	-0.0002
	(0.02)	(0.01)	(0.01)	(0.02)	(0.01)	(0.05)	(0.02)	(0.01)	(0.01)	(0.02)	(0.01)	(0.03)
League	0.5756***	0.5248	-0.2667	0.3461	-0.1078	0.4150	0.5834***	0.5006	-0.2486	0.3643	-0.0787	0.3870
	(0.21)	(0.39)	(0.36)	(0.41)	(0.32)	(0.70)	(0.21)	(0.39)	(0.36)	(0.41)	(0.32)	(0.66)
Relationship	-0.2904	0.1784	-1.0927***	-0.3612	-0.4871	0.5859	-0.2837	0.1989	-1.1034***	-0.2751	-0.4775	0.4557
	(0.21)	(0.38)	(0.37)	(0.43)	(0.39)	(1.31)	(0.21)	(0.39)	(0.37)	(0.43)	(0.39)	(1.02)
Same country	-0.0975	-0.5472*	0.0268	-0.2808	0.3312	-0.8482	-0.0634	-0.5733*	0.0440	-0.3990	0.3281	-1.3233
	(0.17)	(0.32)	(0.36)	(0.41)	(0.29)	(1.23)	(0.17)	(0.32)	(0.35)	(0.41)	(0.30)	(1.18)
Listed	0.5640**	-0.5875	0.0051	-0.5554	0.2623	-1.2043	0.5746**	-0.5763	0.0048	-0.4643	0.2781	-0.6798
	(0.22)	(0.42)	(0.42)	(0.43)	(0.35)	(1.13)	(0.23)	(0.40)	(0.42)	(0.42)	(0.35)	(0.94)
Borrower rated	0.1530	0.3972	0.3944	0.3665	0.3696	1.2959	0.1655	0.3115	0.4434	0.3736	0.4002	1.5040
	(0.23)	(0.28)	(0.32)	(0.43)	(0.32)	(1.21)	(0.23)	(0.28)	(0.31)	(0.44)	(0.31)	(1.05)
Sales (log)	0.0104	0.0574	-0.0553	-0.0799	0.0420	0.0479	0.0084	0.0672	-0.0594	-0.0757	0.0442	0.0495
	(0.05)	(0.06)	(0.08)	(0.07)	(0.07)	(0.13)	(0.05)	(0.06)	(0.08)	(0.07)	(0.08)	(0.17)
Debt / Equity	-0.0974	0.0700	-0.0760	0.0481	-0.1503	-0.6831**	-0.0999	0.0751	-0.0809	0.0395	-0.1484	-0.4655*
	(0.07)	(0.09)	(0.10)	(0.09)	(0.09)	(0.29)	(0.07)	(0.08)	(0.10)	(0.08)	(0.09)	(0.27)
Current ratio	13.9150	-26.9185	31.3837	18.8355	-7.0767	16.4329	14.0292	-25.9715	31.0932	13.6904	-7.6998	12.5573
	(12.21)	(17.07)	(20.62)	(22.19)	(21.14)	(57.16)	(12.27)	(16.74)	(21.10)	(22.49)	(21.16)	(57.62)
Operating margin	0.1804	-0.0651	-0.9030	-1.3511	0.7395	2.3597	0.1382	0.2062	-1.0203	-1.2635	0.6495	2.1145
	(0.77)	(1.05)	(1.21)	(1.30)	(1.34)	(3.62)	(0.77)	(1.03)	(1.21)	(1.26)	(1.36)	(3.75)
Facilities		1 805			1 805			1 838			1 838	
Chi2		152.65			180.79			156.33			187.58	
Log.L.		-2 478.77			-2 452.34			-2 490.71			-2 481.30	

Table 5 Sensitivity analysis

This table presents estimated coefficients and standard errors, clustered at the loan facility level (in parentheses) from sequential logit regressions.
Reneg., Rounds, Amend., Amount fav., Maturity fav., Amount & Maturity fav. correspond to the renegotiation decision (= 1 if a loan is renegotiated), the renegotiation dynamics decision (= 1 if the number of renegotiation rounds is greater than 1), the renegotiation scope decision (= 1 if the number of amended terms is greater than 1), the renegotiation outcomes (=1 if amount is amended and increased; =1 if maturity is amended and extended; =1 if amount and maturity are amended and increased / extended). Figure 1 illustrates the sequential logit approach. All variables are described in appendix B.
No lenders' pool variables: *Lenders, League, Relationship, Same country* variables are excluded from the regressions. No loan variables: *Amount, Maturity, Covenants, Secured, Amount outstanding, Previous issues* variables are excluded from the regressions. Weak rule of law: sub-sample with rule of law lower than 1.66 (median); No *Creditor rights* variable: *Creditor rights* variable excluded. No *Renegotiation failure* variable: *Renegotiation failure* variable excluded. With *Enforcing contract* variable: *Enforcing contract* variable included. No covenants: sub-sample without covenants attached in the initial loan agreement; Not secured: sub-sample without collateral pledged in the initial loan agreement; No term loan: sub-sample without term loans; No rating: sub-sample without rated borrowers; Maturity 2013 excluded: sub-sample excluding loans maturing in 2013; Global financial crisis: sub-sample excluding loans before October 2008; Eurozone crisis: sub-sample excluding loans before June 2010; Eurozone area only: sub-sample excluding loans to borrowers from countries outside of Euro Zone 12 core countries; UK excluded: sub-sample excluding loans to borrowers from UK.
Unless stated otherwise with respect to a particular sensitivity test, all regressions include country level, lenders' pool level, and loan level variables, as well as control variables for legal origin (French, German), loan currencies (USD and GBP), loan type (term), loan purposes (acquisition, general corporate, LBO, project finance, debt refinancing, working capital), year, and borrower industry sector.
*, **, and *** indicate a statistically significant coefficient at the 10%, 5%, and 1% confidence level.

	Reneg.	Rounds	Amend.	Amount fav.	Maturity fav.	Amount & Maturity fav.	Reneg.	Rounds	Amend.	Amount fav.	Maturity fav.	Amount & Maturity fav.
						No lenders' pool variables						
Creditor rights	0.3302***		0.1184	0.2212	-0.2939*	-0.0906	0.1024		0.2061	-0.0984	-0.3006**	-0.4324
	(0.10)		(0.17)	(0.17)	(0.15)	(0.28)	(0.09)		(0.16)	(0.16)	(0.15)	(0.29)
Rule of law	0.4423**		-0.1480	0.8801**	-0.0929	1.2142						
	(0.18)		(0.33)	(0.39)	(0.31)	(0.83)						
Renegotiation failure	-1.8526***		1.2098	-3.8766***	0.5040	-3.9375	-2.1122***		1.4374	-2.4561**	0.2856	-0.1603
	(0.54)		(0.95)	(1.38)	(0.87)	(3.59)	(0.59)		(1.00)	(1.25)	(0.89)	(2.15)
Priority	-0.2171		0.6740**	-0.8504**	0.1494	-0.9850	-0.1855		0.7287***	-0.4016	0.0105	-0.0770
	(0.17)		(0.33)	(0.38)	(0.28)	(0.70)	(0.13)		(0.25)	(0.28)	(0.20)	(0.39)
Creditors recovery							1.8632***		-0.8573	1.7705	0.4077	0.8899
							(0.51)		(0.98)	(1.08)	(0.83)	(1.97)
						No loan variables						
Creditor rights	0.1011		0.0674	0.1447	-0.2057	0.0086	-0.0688		0.0702	-0.0760	-0.2860*	-0.2741
	(0.10)		(0.14)	(0.15)	(0.15)	(0.27)	(0.10)		(0.16)	(0.16)	(0.16)	(0.27)
Rule of law	0.4283**		0.2180	0.6171*	-0.0216	0.8460						

	(0.19)		(0.34)	(0.36)	(0.31)	(0.74)						
Renegotiation failure	-1.3286**		1.2613	-2.8585**	0.5161	-2.2708	-1.4991**		1.7256	-2.5173*	0.0172	-1.0752
	(0.60)		(1.03)	(1.19)	(0.82)	(2.18)	(0.58)		(1.13)	(1.33)	(0.92)	(2.07)
Priority	0.1290		0.1391	-0.5875	-0.0146	-0.7850	0.1671		0.4521	-0.2868	-0.2844	-0.3055
	(0.19)		(0.32)	(0.36)	(0.28)	(0.69)	(0.15)		(0.33)	(0.33)	(0.24)	(0.56)
Creditors recovery							1.3612**		-0.7605	1.2981	1.2922	1.2468
							(0.54)		(1.30)	(1.24)	(1.04)	(2.21)
							Weak rule of law					
Creditor rights	0.3251	-0.3778	-0.7647	-1.0460	-0.2610		0.2488	0.3578	-0.3745	-0.3636	-0.1327	
	(0.25)	(0.52)	(0.55)	(0.71)	(0.45)		(0.19)	(1.01)	(0.49)	(0.45)	(0.32)	
Rule of law	0.3768	0.6289	-1.6657	3.1011*	-0.3418							
	(0.52)	(0.96)	(1.20)	(1.76)	(1.02)							
Renegotiation failure	-1.7344	1.1650	6.5367**	-1.6052	1.3610		-3.6980	-2.3631	1.5722	-3.2817	0.8872	
	(1.47)	(2.47)	(2.92)	(4.47)	(2.03)		(2.52)	(2.26)	(1.00)	(3.47)	(1.82)	
Priority	-0.0512	0.1684	1.4745*	-1.6354*	0.3867		-0.0085	-1.2263	1.9185*	0.1918	0.2178	
	(0.26)	(0.55)	(0.75)	(0.90)	(0.60)		(0.20)	(1.39)	(1.13)	(0.51)	(0.35)	
Creditors recovery							2.5383	2.1921	-1.1223	-1.8585	0.0105	
							(1.85)	(1.85)	(0.88)	(3.12)	(1.45)	
						No Creditor rights variable						
Rule of law	0.1907	0.2066	-0.1715	0.8328**	0.1938	1.3912*						
	(0.21)	(0.42)	(0.33)	(0.39)	(0.33)	(0.74)						
Renegotiation failure	-1.2768**	-0.6463	1.9869	-5.0260***	-0.1564	-1.2665***	-1.6942**	-0.3438	1.8518	-3.1162	0.2837	-2.3168
	(0.65)	(1.03)	(1.30)	(1.88)	(1.02)	(0.42)	(0.68)	(1.21)	(1.12)	(1.93)	(1.03)	(3.78)
Priority	0.2816	0.3172	0.4678	-0.5754	-0.1927	-1.4199**	-0.0101	0.5308	0.3214	-0.3439	0.0092	-0.1297
	(0.18)	(0.31)	(0.37)	(0.35)	(0.22)	(0.56)	(0.15)	(0.42)	(0.33)	(0.39)	(0.24)	(0.67)
Creditors recovery							1.8281***	-0.3927	0.2140	1.2103	-0.3870	-0.2784
							(0.52)	(1.30)	(1.05)	(1.19)	(0.82)	(1.95)
							No Renegotiation failure variable					
Creditor rights	0.2110**	-0.1312	0.1167	-0.0408	-0.2790	-0.2113	0.0445	-0.1195	0.0701	-0.1357	-0.3291	-0.1538

	(0.10)	(0.17)	(0.16)	(0.17)	(0.17)	(0.29)	(0.11)	(0.16)	(0.16)	(0.18)	(0.21)	(0.28)
Rule of law	0.3501	-0.0045	-0.0037	0.4712*	-0.0635	0.2295*						
	(0.22)	(0.46)	(0.35)	(0.27)	(0.35)	(0.13)						
Priority	0.0279	0.5961	0.2480	-0.1622	0.2154	-0.0629**	0.0671	0.6325*	0.1009	0.0678	0.0377	0.2087
	(0.19)	(0.42)	(0.35)	(0.39)	(0.30)	(0.03)	(0.15)	(0.37)	(0.31)	(0.34)	(0.24)	(0.56)
Creditors recovery							1.3700**	-0.1893	0.7460	0.4721	0.8585	-0.7524
							(0.55)	(1.20)	(1.09)	(1.13)	(0.97)	(1.74)
						With Enforcing contract variable						
Creditor rights	0.2522**	-0.2016	0.0958	0.1332	-0.2664*	0.3612	0.0398	-0.4254**		-0.0003	-0.2658	0.1296
	(0.11)	(0.17)	(0.16)	(0.18)	(0.15)	(0.33)	(0.13)	(0.19)		(0.22)	(0.19)	(0.44)
Rule of law	0.2876	0.5288	-0.5983	0.5753	-0.3702	1.6915						
	(0.25)	(0.46)	(0.44)	(0.55)	(0.45)	(1.12)						
Renegotiation failure	-1.4614**	-1.0432	2.2901**	-4.5669**	0.5844	-15.0737***	-1.7173**	-1.8002		-2.6874	0.2980	-1.5776
	(0.65)	(1.07)	(1.09)	(1.93)	(0.99)	(4.83)	(0.69)	(1.30)		(2.19)	(0.98)	(4.10)
Priority	-0.0333	0.5896	0.4218	-0.7352	0.2280	-2.1900**	-0.0218	0.5073		-0.4386	0.0268	-0.2274
	(0.20)	(0.41)	(0.37)	(0.46)	(0.31)	(0.88)	(0.16)	(0.35)		(0.43)	(0.25)	(0.71)
Creditors recovery							1.7366***	2.2009*		0.7784	0.3558	-1.3929
							(0.67)	(1.25)		(1.78)	(1.05)	(3.54)
Enforcing contract	0.0044	0.0318*	0.0261*	0.0262	0.0208	0.0200	-0.0011	0.0330*		0.0333*	0.0116	0.0435
	(0.01)	(0.02)	(0.02)	(0.02)	(0.02)	(0.03)	(0.01)	(0.02)		(0.02)	(0.01)	(0.03)
						No covenants						
Creditor rights	0.3291***	-0.2111	0.1261	-0.1002	-0.6354***		0.1272	-0.1545	0.0304	-0.4816**	-0.6934***	
	(0.12)	(0.22)	(0.20)	(0.22)	(0.19)		(0.13)	(0.23)	(0.21)	(0.23)	(0.21)	
Rule of law	0.3427	-0.3068	0.1614	0.8859*	-0.0248							
	(0.24)	(0.50)	(0.44)	(0.46)	(0.39)							
Renegotiation failure	-1.9270**	-0.5131	2.4921*	-3.6277*	0.9309		-1.9594***	-0.8524	2.2310	-3.7405*	0.7946	
	(0.76)	(1.37)	(1.44)	(2.13)	(1.24)		(0.76)	(1.50)	(1.45)	(2.15)	(1.22)	
Priority	-0.0466	0.5797	0.2153	-0.3765	0.5332		-0.0296	0.2958	0.1369	-0.1203	0.4061	
	(0.23)	(0.55)	(0.46)	(0.50)	(0.38)		(0.17)	(0.46)	(0.37)	(0.44)	(0.31)	

Creditors recovery							1.6827**	0.1611	1.0189	2.7278*	0.7762	
							(0.66)	(1.61)	(1.36)	(1.64)	(1.08)	
						Not secured						
Creditor rights	0.1674	-0.0437	0.0915	-0.5154*	-0.2610	-0.8193	0.0857	0.0554	-0.1715	-0.5010**	-0.0746	-0.9203***
	(0.11)	(0.27)	(0.25)	(0.27)	(0.21)	(0.70)	(0.12)	(0.26)	(0.23)	(0.23)	(0.22)	(0.32)
Rule of law	-0.0275	-0.3080	0.9155	0.3345	0.8257*	0.8934						
	(0.25)	(0.77)	(0.56)	(0.59)	(0.46)	(2.06)						
Renegotiation failure	-0.6555	-0.3561	2.6742	-1.9791	-0.5195	-2.3120*	-0.7295	-0.3177	2.5410	0.8039	-0.7952	-4.3858*
	(0.88)	(1.48)	(1.83)	(2.06)	(1.25)	(1.32)	(0.93)	(1.46)	(1.83)	(1.61)	(1.18)	(2.53)
Priority	0.2422	0.4954	0.1717	0.4290	0.6839	-3.9364	0.1299	0.4118	0.3613	-1.0983*	0.2140	0.2557
	(0.24)	(0.60)	(0.59)	(0.64)	(0.43)	(2.56)	(0.21)	(0.47)	(0.56)	(0.56)	(0.37)	(0.78)
Creditors recovery							0.9525	-0.6468	1.8711	-1.7798	-0.5034	-2.8746
							(0.86)	(1.94)	(1.68)	(1.63)	(1.21)	(2.23)
						No term loan						
Creditor rights	0.1457	0.1732	0.0840	-0.0879	-0.0156	-0.3186	-0.0566	0.2353	-0.1274	0.5805**	-0.0285	-0.7055
	(0.11)	(0.22)	(0.22)	(0.24)	(0.20)	(0.34)	(0.13)	(0.26)	(0.27)	(0.26)	(0.24)	(0.44)
Rule of law	0.5531*	-0.3654	1.2679**	2.9284**	0.0387	4.9799						
	(0.28)	(0.65)	(0.50)	(1.49)	(0.52)	(3.36)						
Renegotiation failure	-1.8274**	-3.1518**	1.1594	-2.0054	0.0787	-8.8568*	-2.3954***	-3.0926**	0.3514	-3.3945*	0.0500	-8.0543*
	(0.83)	(1.42)	(2.17)	(2.29)	(1.26)	(5.23)	(0.82)	(1.45)	(2.26)	(1.88)	(1.31)	(4.71)
Priority	0.0152	0.2186	-0.7109	-1.5468**	-0.1271	-2.3293*	0.0847	0.0564	-0.2893	-0.6517	-0.1209	0.0259
	(0.22)	(0.54)	(0.46)	(0.76)	(0.43)	(1.36)	(0.20)	(0.43)	(0.46)	(0.46)	(0.38)	(0.97)
Creditors recovery							1.7495**	-0.2151	1.3665	3.5773**	0.0997	1.3241
							(0.73)	(1.76)	(1.72)	(1.57)	(1.55)	(2.56)
						No rating						
Creditor rights	0.1775	-0.1239	-0.0491	0.3075	-0.3385*	0.0714	0.0644	-0.1272	0.1167	-0.0349	-0.3698*	-0.2587

	(0.12)	(0.19)	(0.19)	(0.22)	(0.19)	(0.38)	(0.12)	(0.19)	(0.19)	(0.23)	(0.21)	(0.34)
Rule of law	0.1025	-0.0418	-0.5703	1.0934**	-0.0994	1.5469						
	(0.24)	(0.55)	(0.42)	(0.52)	(0.40)	(1.07)						
Renegotiation failure	-1.7791**	-1.6177	1.9636*	-4.7463**	-1.3412	-1.4206***	-1.8360**	-1.7568	2.2674*	-2.8688	-1.3481	-0.4198
	(0.73)	(1.37)	(1.16)	(2.12)	(1.19)	(0.50)	(0.74)	(1.64)	(1.34)	(1.82)	(1.19)	(3.36)
Priority	0.1207	0.4411	1.0192**	-0.7495	0.4548	-1.5686	0.0298	0.3567	0.8696**	-0.1611	0.2854	0.2606
	(0.22)	(0.48)	(0.43)	(0.50)	(0.39)	(1.06)	(0.18)	(0.42)	(0.43)	(0.39)	(0.29)	(0.55)
Creditors recovery							1.2260*	0.2492	-1.1909	1.7886	0.6950	-0.3635
							(0.63)	(1.67)	(1.49)	(1.54)	(1.09)	(2.00)
						Maturity 2013 excluded						
Creditor rights	0.3180***	-0.2370	0.0845	0.0395	-0.2861	0.1875	0.0857	-0.2490	0.0436	-0.2705	-0.3437*	-0.0775
	(0.11)	(0.18)	(0.18)	(0.20)	(0.18)	(0.40)	(0.11)	(0.18)	(0.18)	(0.20)	(0.19)	(0.30)
Rule of law	0.4476**	0.0713	0.0332	0.9052*	-0.0376	0.9004						
	(0.23)	(0.48)	(0.41)	(0.48)	(0.40)	(0.92)						
Renegotiation failure	-2.0007***	0.4776	2.8094**	-5.2801**	-0.1794	-9.2306*	-2.1951***	0.5551	2.5387*	-3.0249	-0.6393	-0.1489
	(0.70)	(1.08)	(1.23)	(2.34)	(1.36)	(5.06)	(0.70)	(1.39)	(1.42)	(2.00)	(1.46)	(3.49)
Priority	-0.1700	0.4692	0.3670	-0.6000	0.2078	-1.1944	-0.1541	0.5278	0.2627	-0.1252	-0.0084	0.2355
	(0.21)	(0.42)	(0.38)	(0.50)	(0.37)	(1.14)	(0.15)	(0.44)	(0.38)	(0.40)	(0.32)	(0.69)
Creditors recovery							1.9939***	-0.0369	0.5879	1.8511	1.0247	-1.0142
							(0.58)	(1.67)	(1.49)	(1.47)	(1.30)	(2.15)
						Global financial crisis						
Creditor rights	0.2728**	-0.0637	0.1958	0.3205	-0.4211**	1.7533**	0.0920	-0.1150	0.1548	-0.3338	-0.3133	-1.0344
	(0.13)	(0.23)	(0.20)	(0.25)	(0.21)	(0.76)	(0.14)	(0.22)	(0.22)	(0.26)	(0.23)	(0.64)
Rule of law	0.2843	0.1904	0.4204	1.5685**	-0.3213	8.5112***						
	(0.26)	(0.53)	(0.49)	(0.74)	(0.46)	(1.99)						
Renegotiation failure	-1.6034**	0.6917	2.3471	-9.2205**	2.1697	-3.2562***	-1.8460**	0.7184	2.4917	-1.0998**	2.3073	-2.0690

	(0.80)	(1.04)	(1.79)	(3.99)	(1.45)	(1.00)	(0.82)	(1.17)	(1.81)	(0.43)	(1.46)	(1.33)
Priority	-0.0694	0.1217	-0.1123	-1.4265**	0.3598	-7.8517***	-0.0565	0.2433	0.2835	-1.0013**	0.2354	-2.1642**
	(0.25)	(0.51)	(0.48)	(0.70)	(0.43)	(2.10)	(0.19)	(0.38)	(0.38)	(0.51)	(0.33)	(0.99)
Creditors recovery							1.5397**	0.1954	-0.3200	4.8013**	-0.7388	1.0423*
							(0.71)	(1.37)	(1.37)	(2.13)	(1.06)	(0.55)
Eurozone crisis												
Creditor rights	0.2364*	-0.3332*	0.3127*	0.1700	-0.4476**	0.1955	0.0397	-0.1185	0.2898	-0.2290	-0.4325**	-0.6285
	(0.12)	(0.19)	(0.19)	(0.22)	(0.19)	(0.54)	(0.13)	(0.20)	(0.20)	(0.24)	(0.19)	(0.40)
Rule of law	0.2177	-0.6571	0.0855	1.2788**	-0.2161	2.9458**						
	(0.24)	(0.45)	(0.41)	(0.56)	(0.39)	(1.24)						
Renegotiation failure	-1.4302*	-0.6072	2.5904*	-6.4712*	1.9781*	-9.6613*	-1.5695**	-0.3703	2.5862*	-2.6171	1.9387*	-0.3154
	(0.73)	(0.99)	(1.35)	(3.61)	(1.15)	(5.37)	(0.75)	(1.23)	(1.38)	(2.67)	(1.11)	(3.86)
Priority	0.1199	1.3292***	0.0350	-1.1330**	0.5399	-2.4211*	0.0163	1.1466**	0.0758	-0.3610	0.3832	0.2115
	(0.25)	(0.45)	(0.38)	(0.58)	(0.37)	(1.40)	(0.19)	(0.56)	(0.32)	(0.43)	(0.31)	(0.93)
Creditors recovery							1.8942***	-1.4405	0.1121	2.0568	0.1558	1.0338
							(0.70)	(1.95)	(1.27)	(1.61)	(1.00)	(2.71)
Eurozone area only												
Creditor rights	0.2871**	0.0649	-0.1679	-0.1503	-0.1286	1.4924	-0.0684	0.0628	-0.1103	-0.3519	-0.1276	0.6042
	(0.14)	(0.30)	(0.23)	(0.31)	(0.23)	(3.92)	(0.12)	(0.28)	(0.24)	(0.33)	(0.29)	(0.84)
Rule of law	1.0009**	-0.0110	-0.9134	0.8432	0.3820	2.7006						
	(0.49)	(1.30)	(1.03)	(1.26)	(1.06)	(5.59)						
Renegotiation failure	-1.1229	-2.1589	2.8737*	-4.1141	0.3693	-3.6632	-3.4860**	-2.3219	1.9188	-0.6916	1.3975	7.8459
	(0.90)	(1.37)	(1.50)	(2.83)	(1.30)	(8.61)	(1.51)	(2.51)	(2.61)	(4.62)	(2.63)	(8.02)
Priority	-0.2131	0.4370	0.9191	-0.3299	-0.0997	-5.9239	-0.6834	0.3860	0.1186	0.4840	0.3989	2.7642
	(0.34)	(0.83)	(0.61)	(0.85)	(0.56)	(12.47)	(0.48)	(1.04)	(0.91)	(1.35)	(0.92)	(3.00)
Creditors recovery							4.4334**	0.1644	1.5475	-0.3835	-1.2814	-14.6797

							(1.74)	(3.88)	(3.49)	(5.18)	(3.97)	(13.04)
						UK excluded						
Creditor rights	0.2402**	-0.1479	0.0638	0.0958	-0.3165**	0.3347	0.0495	-0.1745	0.0914	-0.2457	-0.3385**	-0.3441
	(0.10)	(0.17)	(0.16)	(0.18)	(0.16)	(0.33)	(0.11)	(0.17)	(0.17)	(0.19)	(0.17)	(0.31)
Rule of law	0.3621*	0.0472	-0.1050	0.9917**	-0.1410	2.2052**						
	(0.22)	(0.47)	(0.37)	(0.42)	(0.36)	(1.03)						
Renegotiation failure	-1.5039**	-0.5128	1.9106*	-5.4560***	0.2294	-1.5970***	-1.6989**	-0.6413	1.9373*	-3.7304**	-0.0396	-2.5130
	(0.65)	(1.05)	(1.04)	(1.92)	(1.05)	(0.46)	(0.67)	(1.30)	(1.13)	(1.87)	(1.05)	(4.12)
Priority	-0.0288	0.5487	0.3647	-0.7468*	0.2996	-2.3767**	-0.0279	0.5108	0.3275	-0.2959	0.0854	-0.1939
	(0.20)	(0.43)	(0.36)	(0.44)	(0.31)	(1.00)	(0.15)	(0.41)	(0.33)	(0.38)	(0.25)	(0.67)
Creditors recovery							1.6882***	0.3283	-0.1678	2.1487	0.6993	1.4296
							(0.59)	(1.49)	(1.19)	(1.37)	(0.99)	(2.48)

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