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Debt renegotiation and the design of financial contracts

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Debt renegotiation and the design of financial contracts

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Abstract

I study the impact of bank loan renegotiation on the design of financial contracts. Debt renegotiation can be beneficial for borrowers and lenders but its impact on the design of financial contracts is less clear. However, contract design is crucial for borrower's investment, operating and financing policies. I find that the design of renegotiated credit agreements is not homogenous. Main renegotiation packages contain amendments to loan amount and maturity. I show that secured loans with longer maturities experience broader amendments. Creditors' friendly environment and the presence of reputable, sound, and profitable lenders have a similar effect.

JEL classification: G10, G21, G24

Keywords: financial contracts design, bank loans, debt renegotiation.

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1. Introduction

By their nature, loans are flexible contracts that can be revised and amended from time to time and this flexibility is considered one of the major advantages of corporate financing through bank loans. However, we still have a very limited knowledge on how credit agreements are redesigned following a renegotiation[1]. For instance, are amendments marginal, with few loan characteristics being renegotiated? Or on the contrary, are all contract terms amended during a renegotiation? This is a crucial issue because of the role of debt contract design for firm's investment, operating and financing policies, with important consequences for the company's stakeholders. Indeed, the design of credit agreements serves to allocate contractual control and decision rights. Under asymmetric information, debt contracts yield control rights to lenders, especially through covenants (Dessein, 2005; Garleanu and Zwiebel, 2009), which are frequently amended to relax constraints on borrower's investment and financial policies (Denis and Wang, 2014) and to mitigate underinvestment problems (Pawlina, 2010) and involuntary liquidity defaults (Acharya et al., 2005).

This article provides empirical evidence on two important issues: how renegotiation shapes the design of credit agreements and what the determinants of the renegotiation package are. My explained variable capture the content or composition of renegotiation packages; i.e. the number of different loan characteristics that are amended. I use detailed data on amendments to more than 1,500 bank loan facilities between 1999 and 2014. I investigate how the initial loan characteristics, the structure of the lending pool, legal environment, and borrower and lender financial conditions affect the renegotiation package.

[1] Debt renegotiation occurs when the contracting parties are unable or unwilling to commit to the initial terms of the contract. Often, it is because the borrower-lender relationship reaches a point where the initial contract stipulates an ex post inefficient outcome. This is more likely to occur when unanticipated or non-contractible states of the world occur.

I focus on the European credit market for two main important reasons. First, the design of credit agreements is much more important in Europe because the European financial system is bank based (de Haan et al., 2012) and European companies are much more dependent of private credit to finance their growth than in the United States. Second, European legal environment is less protective of creditors when compared to US. According to Favara et al. (2012), creditors' recovery rate in US is close to 90% while it is below 70% in the European Union. In such a legal environment, the issue of credit contract design is if utmost interest for borrowers, lenders but also policy makers.

Following notably Moraux and Silaghi (2014) and Hege and Mella-Barral (2005), I consider amendments as concessions that the counterparties to the contract are willing to accept, in order to achieve a better mutual outcome in terms of contract's completeness. The willingness for concessions will depend on the borrower's investment, operational and financial conditions, the potential agency problems, and the lenders situation. These elements depend ultimately on the bargaining power of the borrower and the lender(s), the contractual allocation of control and decision rights, the informational frictions shaping the initial contract design, and the adverse effects of ex ante incentives. To capture those features, I focus on four categories of variables related to the loan and syndicate structure at origination, the legal environment of the borrower country, and the borrower and lenders financial conditions.

I find that renegotiation packages are far from being homogenous. Loan amount (35%) and maturity (22%) are the most frequent material amendments. These two loan characteristic are also the most frequently amended when a renegotiation package involves the renegotiation of only one loan characteristic (respectively 45% and 24% of the cases). The breakdown of amended loan terms becomes more homogenous for more complex renegotiation packages, i.e. when multiple loan terms are amended. However, renegotiating the entire credit agreement and amending all loan characteristics is very rare (3%), while amending two or three loan terms is more common (34% and 12% respectively).

Among loan and syndicate characteristics at origination, collateral, maturity and lender reputation are the only significant variables with a positive influence on the number of amended terms following renegotiation. Creditors' friendly legal environments, especially in terms of priority and recovery rate, have a similar impact. Lenders' financial conditions, in particular their soundness and profitability, also allow to amend larger parts of the credit agreement. These effects are economically significant as each standard deviation increase translates into 0.15 to 0.3 standard deviations changes of the number of amended loan characteristics. Overall, these findings are robust to periods of financial crises, specific conditions at loan origination, borrower country effects, and alternative estimation methods.

I contribute to a growing empirical literature dealing with private debt contracts renegotiation (Godlewski, 2015a, 2015b, 2014; Nikolaev, 2015; Roberts, 2015; Roberts and Sufi, 2009). The closest articles are empirical studies of bank loan renegotiations, mostly focused on the US credit market. Nikolaev (2015) studies renegotiation frequency and finds that amendments help to complete the credit agreement in response to unforeseen contingencies. He also shows that contracting frictions and monitoring drive the scope for renegotiation. Roberts (2015) finds that most loans in his sample are renegotiated multiple times over relatively short horizons, leading to significant changes to the contract terms. As Denis and Wang (2014), he shows that loan amendments are driven by borrowers' investment, operating, or financing policies. He also confirms findings by Shibata and Tian (2012, 2010) that lenders learn of the quality of the borrower through ex post renegotiation as new information becomes available. Finally, Godlewski (2015, 2014) provides empirical evidence on the determinants of multiple bank loan renegotiations and their dynamics in Europe. He finds that bank loans experience multiple renegotiation rounds, leading to substantial amendments to main loan terms. Multiple renegotiations concern very large loans, which are funded by large pools of lenders with fewer lead banks. Overall, he concludes that the renegotiation process adapts to informational frictions in the borrower–lender relationship.

The rest of the article is structured as follows. An overview of the literature is provided in section 2. Section 3 is dedicated to the presentation of data, methodology and hypotheses. Results are discussed in section 4. Finally, section 5 concludes the article.

2. Literature review

In this section I provide an overview of the theoretical and empirical literature on the renegotiation of financial contracts.

2.1. Theory

Due to ex post inefficiency of the initial contract, the occurrence of unanticipated or non-contractible states of the world may lead contracting parties to be unable or unwilling to commit to the initial terms of their agreement. Thus, various contracting frictions may result in debt renegotiation (Hart and Moore, 1999, 1998, 1988), related to the initial contract design and the adverse effects of ex ante incentives. The latter are related to the disciplining role of the contract and thus the bargaining power of the contracting parties.

The initial contract design stems from a bargaining process on how the initial, and eventually subsequent, surplus is shared. Contractual allocation of control and decision rights drives the incentives alignment which may trigger renegotiation. In an optimal setting, the contractual rights are assigned to the party with better incentives (Aghion and Bolton, 1992). Under asymmetric information and greater uncertainty, the initial loan contract hands stronger control rights to the lender. Indeed, better-informed borrowers usually yield control rights to less informed lenders, especially through covenants (Dessein, 2005)[2]. Garleanu and Zwiebel (2009) find that stronger rights are granted to the lender by the borrower in the initial contract

[2] Fan and Sundaresan (2000) also provide an analysis of the implications of relative bargaining power of claimants on optimal reorganization and debt valuation.

when information asymmetry is greater, when it is more costly to acquire information by the lender, and when it is less costly to renegotiate. Placing the entire bargaining power with lenders can eliminate firm's underinvestment problem in case of debt renegotiation at default (Pawlina, 2010). Covenant renegotiation mitigates agency costs of debt, solves the overleverage problem at investment and mitigates overinvestment (Arnold and Westermann, 2015).

Moraux and Silaghi (2014) provide a rich theoretical analysis of debt renegotiation. They show that bargaining power plays a critical role in determining the size of the concessions obtained in a renegotiation. Firms with lower bargaining power experience a larger number of renegotiation rounds and obtain relatively larger concessions in the last renegotiation rounds. Hege and Mella-Barral (2005) also propose a dynamic analysis of debt renegotiation with multiple creditors and strategic interaction between shareholders and creditors. The possibility of subsequent renegotiations severely limits the size of concessions. This aspect may look attractive from an ex ante perspective as debt dispersion protects creditors from excessive opportunistic expropriation[3]. Therefore the scope for renegotiation decreases with the number of lenders (Bolton and Scharfstein, 1996) or conflicting incentives among creditors (Berglöf and von Thadden, 1994). Allowing for strategic debt service[4] leads to a decline in involuntary firm liquidity defaults, especially for firms with lower cost of outside capital (Acharya et al., 2005). Thus, debt reorganization can enhance the market value of debt as the process enables creditors to avoid ill-timed liquidation (Mella-Barral, 1999)[5].

[3] Dumitrescu (2007) also provides a complementary insight on these issues by analyzing the role of multiple creditors and different capital structures on corporate debt renegotiation and debt valuation.
[4] When equity holders exploit the incentives of debt holders to avoid costly liquidation and thus renegotiate the terms of the loan.
[5] However Berlin and Mester (1992) show that firms with a high ex ante credit risk find the option to renegotiate most valuable.

2.2. Empirical evidence

Several interesting empirical implications can be drawn from the work of Moraux and Silaghi (2014). First, renegotiating firms tend to have a higher leverage ratio, lower return on equity, and more likely to be non-investment grade. Smaller firms with a concentrated group of creditors (i.e. closer monitoring) obtain smaller concessions during renegotiation. The number of renegotiation rounds decrease with its costs, which are higher for firms with more public than private debt, complex capital structure and international creditors. Higher bargaining power of creditors implies larger leverage for the firm while a higher initial coupon implies greater number of renegotiation rounds.

Using a sample of credit agreements for publicly traded US firms, Roberts and Sufi (2009) show that 90% of contracts are renegotiated prior to maturity. These renegotiations occur early in the life of the loan, generating large changes to the terms of the initial contract. The accrual of new information concerning the credit quality, investment opportunities, and the collateral of the borrower, as well as macroeconomic fluctuations in credit and equity market conditions are the main determinants of renegotiation and its outcomes. The renegotiation process is partially controlled by the contractual assignment of bargaining power.

By focusing on the dynamic aspect of debt renegotiation, Roberts (2015) finds that most loans are renegotiated multiple times over relatively short horizons, leading to significant changes to the contract terms. Modifications to the initial loan contract are driven largely by borrowers' desire to alter their investment, operating, or financing policies, while lenders learn of the quality of the borrower through ex post renegotiation as new information becomes available. Furthermore, the timing of renegotiations is governed by the financial health of the loan parties, the uncertainty regarding the borrower's future profitability, and the outcome of the renegotiation.

Nikolaev (2015) 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. However, his results point to other important determinants of renegotiation frequency, notably contracting frictions and monitoring. Thus renegotiation is also driven by agency or information problems of the borrower-lender relationship and by demand for lender's monitoring process.

Using a large sample of private debt renegotiations, Denis and Wang (2014) focus exclusively on debt covenants renegotiation. They find that such covenants are frequently renegotiated, primary to relax existing restrictions and result in economically large changes in existing limits. Furthermore, borrower's post-renegotiation investment and financial policies are strongly associated with the covenant changes.

Godlewski (2015, 2014) provides empirical evidence on the determinants of bank loan renegotiations and their dynamics in Europe. Bank loans experience multiple renegotiation rounds, leading to substantial amendments to main loan terms. Multiple renegotiations concern very large loans, which are funded by large pools of lenders with fewer lead banks. The renegotiation of financial covenants is the most significant amendment type with the largest certification value, leading to an increase of a borrower's CAR by 10–15%. Shareholder value is also positively affected when renegotiation arrives early in the course of the lending relationship and when it is less frequent. These findings support the idea that the renegotiation of financial contracts can be seen as signaling and certification devices regarding a borrower's quality. Overall, the renegotiation process adapts to informational frictions in the borrower–lender relationship. The accrual of new information and reduction of information asymmetry between the borrower and the lender allow completing the contract.

3. Data, methodology and hypotheses

In this section, I present the empirical hypotheses, the data and the methodology used to investigate the determinants of the composition of renegotiation packages.

3.1. Hypotheses

Following Moraux and Silaghi (2014) and Hege and Mella-Barral (2005), I consider amendments as concessions that the counterparties to the contract are willing to accept, in order to achieve a better mutual outcome in terms of contract's completeness. The willingness for concessions will depend on the borrower's investment, operational and financial conditions, the potential agency problems, and the lenders situation. These elements depend ultimately on the bargaining power of the borrower and the lender(s), the contractual allocation of control and decision rights, the informational frictions shaping the initial contract design, and the adverse effects of ex ante incentives. To capture those features, I focus on four categories of variables related to the loan and syndicate structure at origination, the legal environment of the borrower country, and the borrower and lenders financial conditions.

The characteristics of the initial loan contract play an important role in the development of the borrower-lender relationship, because they indirectly determine the likelihood of renegotiation (Bester, 1994). Loan terms at origination reflect the available information set between the borrower and the lender at that time as well as their respective bargaining power and the allocation of control and decision rights. Large facilities can signal lenders' greater confidence in the borrower success due to less uncertainty and information asymmetry (Mosebach, 1999) but are also at stake in determining the bargaining power of the counterparties. Berger et al. (2005) show that loan maturity increases when information asymmetry is reduced.

Other important contract features are collateral and covenants, which aim to resolve the consequences of informational frictions between the borrower and the lender. Collateral helps the bank obtain private information owned by the borrower, and thus serves as a signaling and screening device to reduce adverse selection problems (Besanko and Thakor, 1987; Bester, 1985). However, Bester (1994) shows that collateral requirements make it more likely that the initial debt contract is renegotiated. Collateral can also be viewed as leverage for the bargaining power of the counterparties and a contractual allocation of control and decision rights. The latter is even more pronounced for covenants, which are associated with greater initial contracting frictions (Dessein, 2005; Garleanu and Zwiebel, 2009).

Syndicated deals are complex and sophisticated debt contracts involving a pool of lenders organized in a hierarchical structure, with major financial institutions acting as the syndicate leaders (agents or arrangers). More concentrated syndicates (with respect to retained shares of the loan) are usually associated with greater informational frictions (Bosch and Steffen, 2011; Lee and Mullineaux, 2004; Sufi, 2007) because better suited to coping with free-riding, moral hazard problems, and hold-up problems in cases of borrower distress, as well as during any subsequent reorganizations and renegotiations (Bolton and Scharfstein, 1996; Esty and Megginson, 2003).

An important aspect of the syndicated lending market is the reputation of the lead banks. Reputable leaders can enhance monitoring and the ability to attract participants, help show the quality of the borrower and the deal, and reduce agency costs (Gatti et al., 2013; Johnson, 1997; Panyagometh and Roberts, 2010; Ross, 2010). Gopalan et al. (2011) show that a borrower's ex post poor performance leads to reputational losses for the arranger and thus hampers its ability to attract participants and to syndicate future loans. Large reputation can also give greater bargaining power to the lender but is at stake if the renegotiation leads to an inefficient outcome ex post.

Borrower-lender proximity helps overcome adverse consequences of information asymmetry (Hauswald and Marquez, 2006), as greater cultural and geographical distance influence lending decisions and debt contract characteristics (Giannetti and Yafeh, 2012; Mian, 2006). Such proximity can be related to geographical factors (e.g. when lenders and borrowers are from the same country) or when a durable bank-borrower relationship is established (Bharath et al., 2007). In a broader sense, one can also consider the proximity between the borrower and the credit market, for instance when the firm often taps the market for external funding and thus should be well known from the lenders.

The dynamics of the renegotiation process are an important feature in shaping the design of the debt contract (Moraux and Silaghi, 2014; Roberts, 2015). This dynamic perspective can be captured via the timeline of the renegotiation process, i.e. the number of renegotiation rounds and the time duration between each round. On one hand, early or frequent renegotiations should be valuable for both parties, as information revelation comes quicker and the terms of the loan are adjusted earlier. But such timeline may hamper the lender's reputation regarding their screening and monitoring quality. On the other hand, later or less frequent renegotiations allow more information to be revealed in the course of the relationship, as well as the realization of (ex ante uncertain) events.

Firm opacity increases uncertainty and information asymmetry within the borrower-lender relationship. Firms listed on a stock exchange are usually considered as less opaque. Furthermore, firm size, leverage or profitability may also be considered as important financial characteristics that affect contracting frictions and thus renegotiation packages. Also, larger and established borrowers with better financial profiles might have an advantage in terms of bargaining power at loan origination and/or at the renegotiation stage. Similar arguments can be applied regarding the lenders' financial profile. Larger, well capitalized, profitable and efficient financial institutions should have more important bargaining power in the bank-borrower relationship. Such lenders might also be better equipped to manage the complexity of renegotiating a contract.

Finally, the legal and institutional environment of a country, such as the quality of creditor rights' legal protection and the enforceability of property rights protection, influences the design of financial contracts (Bae and Goyal, 2009; la Porta et al., 1997; Qian and Strahan, 2007). The origins of the legal system and the level of creditors' rights protection are essential features of the legal environment (la Porta et al., 1998). However, their impact on the composition of renegotiation packages is ambiguous. Better protection can reduce incentives to renegotiate in order to acquire new information and update the contract, as lenders ultimately believe that their claims are well protected. One can also expect the costs of renegotiating to be lower in an environment with better legal protection for creditors. I also consider various measures of frictions in the renegotiation of debt contracts following Favara et al. (2012). These frictions are related to creditors' power to enforce their claims and their expected payoff in default, and should impact the renegotiation packages.

3.2. Data and methodology

I collect data from several sources. Information on bank loan amendments and the characteristics at origination of loan agreements and bank lending pools are extracted from the Bloomberg Professional Terminal Server. Characteristics of the borrowing firms come from FactSet while financial information on syndicated loan agents come from Orbis. Country level data come from Djankov et al. (2007) and Favara et al. (2012).

I extract all amendments to loans to European borrowing companies occurring between January 1999 (start of the Euro) and December 2014 (last available information). This initial data set contains the names of the borrowing companies, loan identifiers, the effective dates of the amendments, and information on amended terms (such as changes to loan facility or tranche amount, outstanding amount, maturity, covenants, or pricing grid).

Using loan identifiers, I merge this initial data set with data on the characteristics at origination of the loan agreement and the lending pool. This allows augmenting the data with information on loan facility amount, maturity, type of loan, loan purpose, the existence of covenants and/or collateral, etc. It also gives information on the number of lenders, their retained shares of the loan and nationality, and the identity of syndicate lead banks (loan agents). At this stage, the sample size is reduced mostly due to missing information on lenders, in particular the retained shares of the loan. Next, using borrower and loan agent identifiers (ISIN and ticker), I complete my sample with data from their respective financial statements. I am able to pull this additional information for listed companies only, which severely reduces the sample size. Finally, I add (borrower) country level data to include various relevant characteristics of the legal environment, in particular those capturing frictions in the renegotiation of debt contracts. Again, data availability affects the sample size at this final stage.

The final sample contains 1,455 companies (772 with an ISIN) that renegotiated 1,508 loan facilities, arranged by 84 different loan agents (with a ticker) for a total of 5,551 observations. The timespan of my sample goes from January 1, 1999 until December 31, 2014, and covers 32 European countries (including the Russian Federation and Turkey).

From the methodological perspective, I estimate the following equation:

$$Renegotiation\ package_i = \alpha + \beta \times Loan\ variables_i + \gamma \times Syndicate\ variables_i + \delta \times Borrower\ variables_i + \theta \times Lender\ variables_i + \vartheta \times Country\ variables_i + \lambda \times Control\ variables_i + \varepsilon_i$$

where $Renegotiation\ package$ is modelled using the number of amended loan characteristics following a renegotiation. I apply an ordered logit regression and cluster standard errors at the facility, borrower or lender level, depending on the type of explanatory variables I use.

4. Results

This section is devoted to the presentation of the main descriptive statistics and the discussion of multivariate results, as well as robustness checks.

4.1. Descriptive statistics and univariate results

For ease of tractability, initial types of amended terms are aggregated into six main categories, covering amendments to the amount (such as the facility or tranche amount), financial covenants, non-financial covenants, definition, maturity, and pricing (such as the pricing grid or loan fee)[6].

Figure 1 provides preliminary insights into renegotiation packages. The upper figure shows the breakdown of amended characteristics. On average, following a renegotiation the amount is the most often amended term (35%), followed by maturity (22%) and definition (21%). For comparison, the major amended term in the US is covenants (34%), followed by all other terms (around 25% each) according to Roberts (2015).

The middle figure shows the breakdown of amended loan characteristics by renegotiation package (1: amendment to one loan characteristic – 6: amendments to six different loan characteristics). Amending the amount accounts for 45% of the cases when the renegotiation packages contains only one amendment to a loan characteristic, while renegotiation of maturity or definition accounts for around 24% and 19% of the cases respectively. Those two loan characteristics represent altogether half of the renegotiations when a package involves amending two terms of the credit contract, while amount represents 34%. The breakdown of amended characteristics becomes more and more homogenous with the number of amended terms during a renegotiation.

[6] Appendix A provides details on amended terms and how they were aggregated into the main categories.

Finally, the lower figure shows the breakdown of amended loan characteristics by renegotiation round (1: one renegotiation round – 5: fifth or higher renegotiation round)[7]. The breakdown of amended characteristics for unique renegotiations is similar to the full sample breakdown. Then the proportion of amendments to definition increases with the renegotiation round, as well as to maturity but to a lesser extent.

A snapshot of renegotiation packages is shown in figure 2. Amending one loan characteristic accounts for 44% of the cases. Renegotiating two, three, four or five terms of the credit contract accounts for 34%, 12%, 6% and 2% of the cases respectively. Amending all the characteristics of a contract is rare (less than 1% of the sample). Figure 3 provides more detailed insight into the content of renegotiation packages. Each bar shows the percentage of renegotiations involving a particular package of amendments to different loan characteristics. To visualize those packages I order the six amendment types (Maturity, Definition, Financial covenants, Non-financial covenants, Pricing, Amount) and use binary coding (0/1) where 1 means that a particular characteristic of the loan was amended (0 otherwise). I notice five larger bars. The largest bar (20%) corresponds to the renegotiations involving an amendment to the loan amount only (000001). In around 14% of the cases the maturity and the amount are amended (100001). Amendments to maturity only (100000) represent 10% of the sample. Finally, amending definition only (010000) or definition and amount (010001) occur in 8% of the cases respectively.

The distributions of loans, firms and renegotiation packages by borrower country and renegotiation year can be found in Table 1. Borrowers and renegotiated loans from United Kingdom account for the majority of the sample, followed by France, Germany, and the Netherlands. On average, the number of amended loan characteristics ranges between 1 (e.g.

[7] More than 65% of the loans are renegotiated only once. Then, 18% of the loans are renegotiated twice, 8% pass through three renegotiation rounds, 3% are renegotiated four times, and the reminder five times or more. US based empirical evidence shows that between 30% and 50% of the loans are renegotiated only once (Nikolaev, 2015; Roberts, 2015).

Slovenia) and almost 3 (e.g. Luxembourg). Most of the renegotiations take place between 2005 and 2013, with a peak in 2007 (214 loans and 211 firms). During that period, the average number of amended loan characteristics ranges between 1.48 and 1.92.

Table 2 provides descriptive statistics for all explanatory variables.[8] At origination, the average loan amount is large, about 1.5 billion USD, with a long maturity (more than 7 years) and a spread of 273 bps. Loans are secured in 20% of the cases and half of them have covenants. An average syndicate is quite large, composed of 15 lenders, with a relatively low concentration index of retained shares of the loan at 0.04. For 19% of the loans, at least one syndicate agent belongs to the top 3 of a league table. On average, a borrower has previously issued 4 loans while only 4% of the loans involve a previous relationship between the syndicate agent and the borrowing firm. However, 22% of the members of a syndicate are from the same country as the borrower. The average duration between renegotiation rounds is 2 years and 8 months, for almost 2 renegotiation rounds.

Regarding borrower characteristics, the majority (65%) of renegotiating firms are listed, are large (almost 7 billion USD of sales), with a debt to assets ratio at 35% and 2% of return on assets. Lenders (loan agents) have total assets of 1.5 trillion USD, of which 39% are loans. Their equity ratio equals 3% and a return on equity equal to 9%. Net interest margin stands at 2% with an efficiency ratio equal to 67%.

Finally, there is an equal split between English and French legal origin borrower countries (35% each), while 19% of the borrowers are from German law countries. Creditor rights index equal 2.56 (the higher, the stronger the protection of creditors' rights) renegotiation frictions' indexes stand at 0.38 (*Renegotiation failure*), 3.52 (*Priority*), and 0.65 (*Creditors recovery rate*). The index of the frictions that shareholders will face if they try to renegotiated on the outstanding debt is below 0.5 on a scale from 0 to 1, while the index

[8] Appendix B provides definitions for all the variables.

recording the order in which creditors' claims are paid upon default is close to 4 (its maximum) and their recovery rate is quite large.

Table 3 provides the variables' means by renegotiation package ranging from 1 to 6 (one to six different loan characteristics amended). Although not completely linear, several tendencies emerge from the observation of the link between some variables and renegotiation packages. When comparing renegotiations involving 1 vs. 6 amended loan characteristics, smaller loans with shorter maturity get more concessions (i.e. more amendments). These loans have lower spreads, have more often covenants attached, are less often secured and are renegotiated later. Larger syndicates with greater concentration are funding such loans. The borrower who renegotiates all the loan terms has issued fewer loans in the past but enjoys more often a relationship with the lead banks although the syndicate has no lenders from the same country as the firm nor reputable loan agents. He is also less often a listed company and is much smaller with a reduced debt to assets ratio. More concessions are achieved in legal environments of English origin with weaker renegotiation frictions, where creditors' rights are well protected so that their recovery rate is almost 100%. Finally, lead banks according more concessions during renegotiations are slightly smaller, better capitalized and more profitable, with lower efficiency ratios.

These univariate results indicate that loans with more informational frictions at origination are more likely to be completely amended at renegotiation. Borrower characteristics, especially with respect to opacity issues, also support this conclusion. This process is facilitated by larger and concentrated syndicate structures which are better suited to cope with the adverse consequences of informational asymmetries as well as lenders' voting issues during renegotiation. Established relationships between the borrower and the lead lender can also help overcome these problems and compensate for the lack of reputable loan agents. Such renegotiations are possible when lead banks are in a better financial position but less cost efficient. Finally, larger concessions are more likely in more creditors' friendly legal environments.

I now move to a multivariate analysis in order to provide a more complete view on the determinants of renegotiation packages in Europe.

4.2. The determinants of the renegotiation packages - multivariate results

Table 4 provides the results of ordered logit regressions. The explained variable is the renegotiation package and ranges from 1 to 6 (one amended loan characteristic to six amended loan characteristics). Explanatory variables are loan and syndicate characteristics at the time of loan origination[9]. I start with a simple model including loan variables only (1) which I then subsequently augment adding syndicate variables. I also include variables for renegotiation dynamics[10].

We notice that three variables are consistently significant across all specifications: *Maturity, Secured, and League*. *Concentration* is significant in one regression only (2). These multivariate results differ from the univariate findings in the previous section. When taking all loan and syndicate variables into account, longer maturities have a positive impact on the number of concessions during a loan renegotiation while secured loans have the opposite effect. The presence of reputable loan agents decreases the number of amendments to the credit contract. The effect of syndicate concentration increases the probability of multiple concessions but vanishes away when taking the reputation of the syndicate into account. Considering the full specification (11), each standard deviation increase in maturity increases the number of amended loan characteristics by 0.31 standard deviations. A standard deviation

[9] All regressions include control variables for main loan currencies (USD and GBP), loan type (revolving), loan purposes (acquisition, general corporate, LBO, debt refinancing, working capital), loan amendment year, borrower industry sector and country.

[10] I also tested for the impact of loan spread and found it's not significant without altering other coefficients but drastically reducing the sample size. For all these reasons I do not include the spread in the regressions. Similar conclusions apply regarding the variable *Lenders* (without the impact on sample size) that is why I keep the alternative variable for syndicate which is *Concentration* in all the regressions.

increase of *Secured* or *League* decreases the number of concessions during renegotiation by 0.15 standard deviations.

Maturity can be extended as information asymmetries are reduced (Berger et al., 2005). Loans with less informational frictions are therefore more easy to renegotiate and more prone to multiple concessions. Theoretically, collateral helps to alleviate adverse selection but empirical results do not support this hypothesis. On the contrary, the “observed risk” hypothesis is more often validated, i.e. more risky borrowers have to pledge collateral (Godlewski and Weill, 2010). Besides, secured loans are also more prone to be renegotiated (Bester, 1994). This explains the negative sign of the *Secured* coefficient. Lender reputation reinforces his bargaining power and is also at risk when renegotiating a contract. For these two reasons, reputable loan agents enjoying greater bargaining power are more reluctant to accept multiple concessions. They can also be reluctant in order to avoid losing their reputation of expertise in screening and monitoring by rewriting completely the loan contract.

These results hold when considering alternative explained variables. For instance, grouping the last categories into one (i.e. combining the categories for 5 and 6 amendments into one, and combining the categories for 4, 5, and 6 amendments into one) do not alter main findings[11].

Next I include legal environment characteristics of the borrower country in the regressions and provide the results in Table 5[12]. Previous results still hold while several legal variables have a significant influence on variety of amendments. The creditor rights index has a positive influence (equivalent to 0.21 standard deviation increase) but this effect vanishes away when taking into account the variables capturing renegotiation frictions. When doing so, the French legal origin becomes significantly positive, while *Priority* and *Creditors recovery rate* are positive. For each standard deviation increase in one of these three variables increase

[11] These results are available upon request.
[12] I do not include borrower country fixed effects in these regressions as I include country level variables.

the number of amended loan characteristics by 0.21 to 0.29 standard deviations. What matters the most to allow more concessions during renegotiation is the creditors rank and their recovery rate. Overall, more creditors' friendly environments allow for more concessions and multiple amendments during renegotiation. This result confirms partially the conclusions of the univariate analysis.

I now include the borrower characteristics in my analysis (Table 6)[13]. The sample size is severely reduced due to data availability but allows considering only listed companies that provide their financial statements. Apart from *Maturity,* which coefficient remains significant and positive, I notice that *Secured* and *League* become now insignificant, while *Concentration* and especially *Relationship* are significant with opposite signs. Among the borrower variables, only *Sales* is significant and negative, with an impact equivalent to 0.14 standard deviations. It appears that the existence of collateral and the reputation of the syndicate do not matter for amendments when considering listed borrowers. It can be argued that pledging collateral and having reputable lenders is more important for less established, opaque companies, and informationally problematic borrowers. Previous relationship matters now with a positive impact on the number of concessions made during renegotiation. The value added of an established relation between the borrower and the lender allows also accepting a more complete renegotiation of the credit contract. For listed companies, such a relationship should be more equilibrated and thus the repartition of bargaining power might also be more homogenous between the contracting parties, allowing amending deeply the loan. However, a concentrated syndicate and being a larger borrower have a negative impact on the number of concessions. These two variables capture the frictions in the bargaining power: on one hand, a concentrated debt ownership by the syndicate raises its bargaining power during renegotiation and may hamper the willingness to allow for more concessions.

[13] Standard errors are now clustered at the borrower level. I also omit the *Listed* variable as borrower variables are available for listed companies only.

On the other hand, larger borrowers might also be reluctant to amend completely their contracts.

Finally, I consider lenders' characteristics by including several financial variables of the syndicate agent[14]. Results are shown in Table 7. The coefficients for *Maturity, Secured* and *League* are now consistent with results observed in Tables 4 and 5. Regarding lead bank characteristics, variables capturing capitalization, profitability, efficiency and intermediation are significant. Lead banks with larger equity ratio and interest margin are more prone to accept multiple concessions as they are better equipped to do so[15]. Indeed, the more a bank is sound and profitable the less reluctant it will be to accept costly and complex renegotiations with multiple concessions and amendments. On the contrary, less cost efficient banks are less willing to allow for multiple amendments as renegotiating the entire contract is a costly process. The negative coefficient for the *Loans / Assets* variable indicates that banks perceive multiple amendments as more risky regarding the lender's assets structure as well as considering that their bargaining power is eventually weaker with larger loan portfolios on their balance sheet.

To summarize, renegotiation packages in Europe are driven by four types of determinants. First, initial loan and syndicate characteristics such as maturity, collateral, and lead bank reputation matter. The main explanations for these findings are related to the impact of contractual frictions on contract design following renegotiation. Second, more creditors' friendly environment and fewer frictions in the law governing renegotiations, particularly creditors' priority and recovery rate, allow for larger concessions and deep redesign of the loan contract. Third, only borrower size seems to matter when taking firm's characteristics into account. Finally, sound and profitable banks are more willing to accept larger

[14] Standard errors are now clustered at the loan agent level. The sample is larger than for Table 6 as I do not include the borrower variables anymore.
[15] Notice that the effect of the *TC Equity Ratio* vanishes away when taking all lead bank variables into account altogether.

concessions when renegotiating a loan. These effects are economically significant as each standard deviation increase translates into 0.15 to 0.3 standard deviations changes of the renegotiation packages content.

4.3. The determinants of the renegotiation packages – robustness checks

The aim of this section is to perform several robustness checks of previously obtained results. First, I analyze the determinants of the renegotiation package during periods of deep disruptions in the functioning of the financial markets: the Financial Crisis and the Euro Zone Crisis. During such periods of economic uncertainty and greater informational frictions one can wonder if and how previously uncovered determinants impact the design of credit contracts following renegotiation. Second, I consider specific conditions regarding loan and syndicate characteristics which may make informational and contracting frictions potentially more severe. To do so I rely on variables previously significant in the regressions: *Maturity, Secured, League*. Third, I check the robustness of previous results with respect to the country composition of the sample. Fourth, I use alternative methods of estimation.

For the impact of crises, I consider two subsamples in my analysis: the first one drops all renegotiations before October 2008 while the second one covers the period from June 2010 until December 2014. These dates are based on the Lehman Brothers Bankruptcy, marking the beginning of the Financial Crisis, and the first Greek rescue package in May 2010.

Regarding the Financial Crisis (Table 8), we remark that except for *Maturity* which remains significant and positive, *Secured* and *League* are not significant anymore. Syndicate concentration becomes significant and positive in models with renegotiation frictions variables. The influence of collateral and lead bank reputation on renegotiation packages vanishes away during the Financial Crisis, as the disruption of normal functioning of credit markets imply doubts on the value of the pledged collateral and of lead bank reputation as well. On the contrary, a tight syndicate structure with greater concentration of retained shares of the loan is much better suited to handle adverse consequences of increased informational frictions and uncertainty to achieve larger concessions during renegotiation. It allows also for a better control of the process of rewriting the contract in a period of crisis. The impact of legal environment remains significant, with the notable exception of French legal origin. Creditors' rights protection and renegotiation frictions are still positively related to the number of concessions during renegotiation. Finally, borrower and lender characteristics play a weaker role during the Financial Crisis.

Results are quite similar when considering the Euro Zone Crisis (Table 9). The positive impact of maturity remains while all other loan and syndicate characteristics are mostly not significant, with the notable exception of covenants. This contractual feature has a negative influence on the renegotiation package size, meaning that initial contracting frictions still play a role in reducing the scope for concessions during the European crisis. Creditors' protection variables remain a positive factor for the renegotiation packages while borrower and lenders characteristics are less important.

I consider now subsamples of renegotiations with shorter loan maturity (median lower than 7 years), no collateral (*Secured* = 0), no league table lead banks (*League* = 0)[16]. Table 10 provides the results. Again we remark that the coefficient for *Maturity* is robust across specifications, remaining significant and positive. It is the only contract feature that is significant. Concentration of the syndicate is significant and positive for shorter maturity loans only. Characteristics of the legal environment remain robust with positive and significant coefficients for *Creditor rights* and for renegotiation frictions variables.

I also perform a robustness check with respect to borrower country effects on a subsample without borrowers from the four major countries (FR, DE, GB, NL). Table 11

[16] Due to sample size, I am unable to provide reliable results for models including borrower or lender characteristics. Therefore, I present the results for the specifications including loan, syndicate and country variables only.

provides the results[17]. Overall, main results hold, particularly for *Maturity* and legal environment variables, although their significance level is weaker. I also notice that *Secured* and *League* are not significant anymore, as well as French legal origin.

Finally, I consider alternative estimation methods to ordered logit regressions. I rerun all estimations for specifications 1 to 7 from previous tables but applying three different estimation techniques: ordered probit, Poisson, and negative binomial regressions respectively. The results remain qualitatively similar[18].

5. Conclusion

I contribute to a growing empirical literature on private debt contracts renegotiation by studying the determinants of bank loan contract design following renegotiation. I provide several interesting findings based on the analysis of a sample of renegotiated credit agreements in Europe. First, initial maturity and collateral, and lead bank reputation increase the number of different loan characteristics that are amended. The main explanations for these findings are related to the impact of contractual frictions on contract design following renegotiation. Second, more creditors' friendly environment or fewer renegotiation frictions allow for larger concessions and deep redesign of the loan contract, particularly creditors' priority and recovery rate. Third, only borrower size matters for contract design while sound and profitable banks are more willing to accept larger concessions when renegotiating a loan. These effects are economically significant as each standard deviation increase translates into 0.15 to 0.3 standard deviations changes of the renegotiation packages content. The results survive several robustness checks based on crisis periods, specific characteristics of the loan at origination, borrower country, and estimation methods.

[17] Due to sample size issues I cannot provide reliable results for models with borrower or lender variables.
[18] These additional results are available from the author upon request.

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

Loan, syndicate & amendment 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.
Spread = loan spread over the benchmark rate (in bps).
Secured = 1 if loan is secured.
Previous issues = Number of loans previously issued by a firm.
Lenders = Number of lenders in the syndicate.
Concentration = Herfindahl-Hirschman index computed on the retained shares of the loan by syndicate members.
League = 1 if the loan agent was listed among the top 3 of the Bloomberg European league table one year before the amendment year.
Relationship = 1 if the loan agent syndicated a loan for the same borrower during the last 3 years before the amendment year.
Same country = Percentage of lenders in the pool which are from the same country as the borrower.
Duration = Time between renegotiation rounds (in months).
Round = Counter of renegotiation rounds by borrower.

Firm variables (source: Factset)
Listed = 1 if a firm is listed on a stock exchange.
Sales = Net sales or revenue of the firm (in MLN USD).
Debt / Assets = Total debt to total assets.

RoA = Net income / average total assets.

Country variables (sources: Djankov et al. (2007) and Favara et al. (2012))
English = 1 if the borrower’s country has English legal origin.
French =1 if the borrower's country has French legal origin.
German = 1 if the borrower's country has German legal origin.
Creditor rights = Average creditor rights index.
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.

Bank variables (source: Orbis)
Total Assets = Total assets (in BLN USD).
TC Equity Ratio = tangible common equity ratio: total equity – (intangible assets + goodwill + preferred stock equity) / tangible assets (total assets less goodwill and intangibles).
Net Interest Margin = (Interest received - interest paid) / average invested assets.
RoCE = Return on common equity: net income / average common shareholder’s equity.
Efficiency Ratio = Overhead / revenue.
Loans / Assets = Total loans / total assets.

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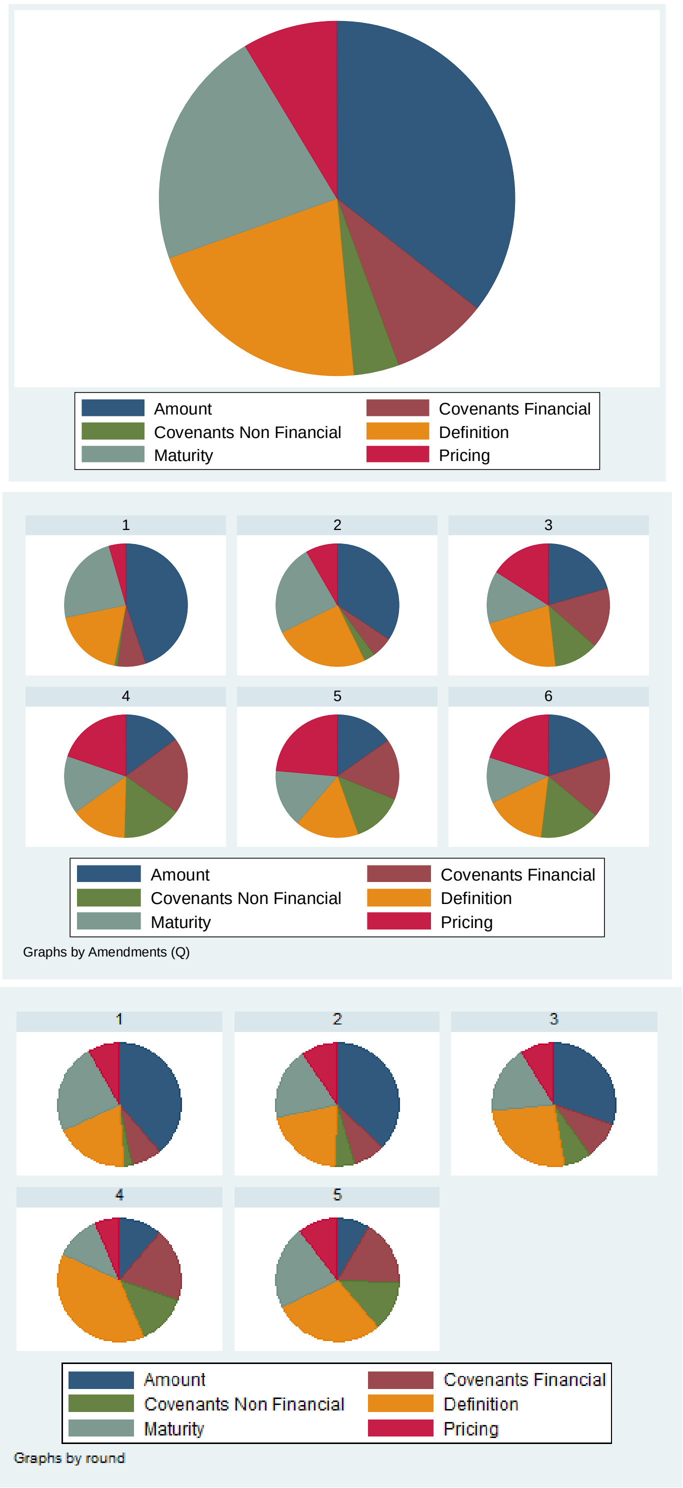

Figure 1 Amended loan characteristics

The upper figure shows the breakdown of amended loan characteristics. For instance, amendments to the loan amount account for 35% of all amendments to loan characteristics.

The middle figure shows the breakdown of amended loan characteristics by renegotiation package (1: one loan characteristic amended – 6: six different loan characteristics amended). For instance, when only one loan characteristic is amended, in 45% of the cases it concerns the loan amount.

The lower figure shows the breakdown of amended loan characteristics by renegotiation round (1: one renegotiation round – 5: fifth or more renegotiation round). For instance, amendment to the loan amount represents 39% of all amendments to loan characteristics during a first renegotiation round.

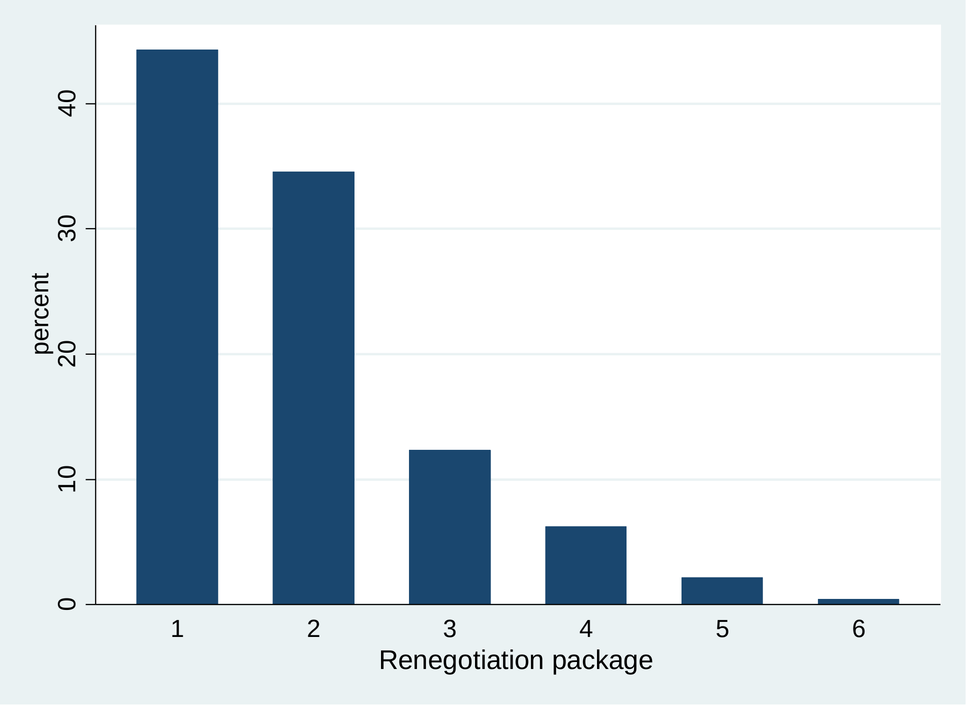

Figure 2 Renegotiation packages

This figure shows the breakdown of renegotiation packages with respect to the number of distinct contract characteristics that are amended during a renegotiation. For instance, in more than 10% of the renegotiations, three distinct loan characteristics are amended.

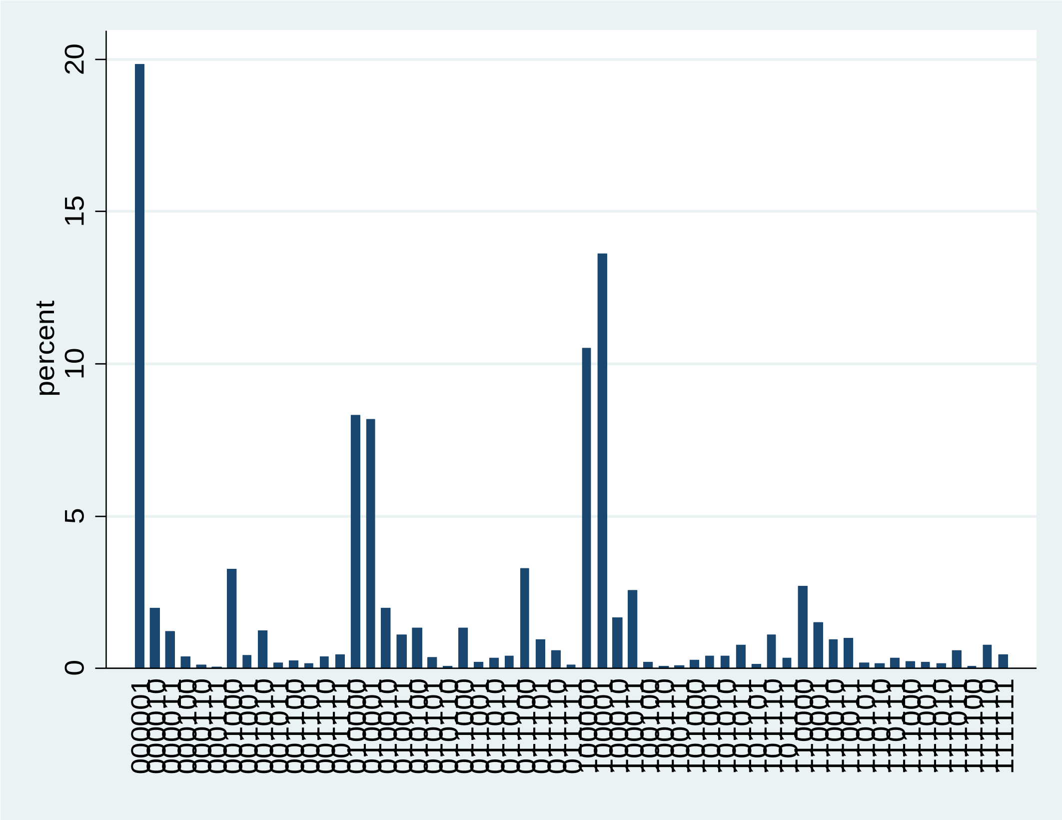

Figure 3 Renegotiation packages composition in details

This figure shows the breakdown of renegotiation packages in details. 1 means that a particular characteristic of the loan was amended (0 otherwise). Each bar corresponds to a distinct package that can involve amending up to six different loan characteristics, according to the following ordering: Maturity, Definition, Financial covenants, Non-financial covenants, Pricing, Amount. For instance, around 20% of the renegotiations involve amendment to the loan amount (000001), while in around 14% of the cases the maturity and the amount are amended (100001).

Table 1 Sample composition by borrower country and renegotiation year

This table presents the number of loans, borrowing firms and average number of amendments in a renegotiation package by borrower country and renegotiation year.

Country	Loans	Firms	Package	Year	Loans	Firms	Package
Austria	5.00	6.00	1.27	1999	5.00	5.00	1.50
Belgium	31.00	27.00	1.86	2000	9.00	9.00	2.21
Bulgaria	2.00	2.00	1.40	2001	11.00	11.00	1.77
Cyprus	5.00	5.00	1.50	2002	17.00	16.00	2.40
Czech Republic	8.00	7.00	1.71	2003	18.00	18.00	2.17
Danemark	6.00	5.00	1.68	2004	57.00	55.00	2.33
Estonia	5.00	4.00	1.19	2005	98.00	100.00	1.73
Finland	30.00	25.00	1.44	2006	167.00	160.00	1.81
France	167.00	134.00	1.76	2007	214.00	211.00	1.88
Germany	148.00	134.00	1.83	2008	170.00	153.00	1.48
Greece	2.00	2.00	2.33	2009	174.00	157.00	1.64
Hungary	10.00	7.00	1.71	2010	140.00	134.00	2.34
Ireland	28.00	25.00	1.65	2011	194.00	195.00	1.88
Italy	53.00	46.00	1.56	2012	130.00	130.00	1.90
Latvia	3.00	3.00	1.75	2013	85.00	83.00	1.92
Lithuania	1.00	1.00	1.00	2014	19.00	18.00	1.80
Luxembourg	60.00	50.00	2.68				
Malta	2.00	2.00	1.71				
Moldavia	1.00	1.00	2.00				
Netherlands	127.00	107.00	2.16				
Norway	47.00	37.00	1.68				
Poland	25.00	16.00	1.18				
Portugal	1.00	1.00	2.00				
Romania	3.00	3.00	1.33				
Russian Federation	66.00	39.00	1.36				
Slovenia	2.00	2.00	1.00				
Spain	65.00	52.00	2.04				
Sweden	33.00	33.00	1.45				
Switzerland	57.00	46.00	2.02				
Turkey	5.00	4.00	2.00				
Ukraine	8.00	8.00	1.38				
United Kingdom	473.00	405.00	1.89				

Table 2 Descriptive statistics

This table provides descriptive statistics for all variables. Definitions of variables are provided in appendix B.

Variable	Obs.	Mean	Median	Std. Dev.
Loan and syndicate variables				
Amount	5263	1460.00	512.00	3180.00
Maturity	3267	7.43	7.01	3.31
Covenants	5524	0.56	1.00	0.50
Spread	3019	273.60	250.00	179.06
Secured	5524	0.20	0.00	0.40
Previous issues	4827	4.25	3.00	4.44
Lenders	5127	15.53	10.00	18.11
Concentration	5127	0.04	0.00	0.12
League	4221	0.19	0.00	0.39
Relationship	4177	0.04	0.00	0.21
Same country	5524	0.22	0.00	0.41
Duration	5499	32.69	26.37	24.93
Round	5524	1.69	1.00	1.32
Firm variables				
Listed	5524	0.65	1.00	0.48
Sales	2776	6720.00	1630.00	14200.00
Debt / Assets	2749	0.35	0.31	0.24
RoA	2707	0.02	0.03	0.09
Country variables				
English	5156	0.35	0.00	0.48
French	5156	0.35	0.00	0.48
German	5156	0.19	0.00	0.39
Creditor rights	5156	2.56	3.00	1.36
Renegotiation failure	3364	0.38	0.38	0.15
Priority	3364	3.52	4.00	0.67
Creditors recovery rate	3364	0.65	0.59	0.21
Lender variables				
Total Assets	3988	1460.00	1460.00	871.00
TC Equity Ratio	3943	0.03	0.03	0.04
Net Interest Margin	3801	0.02	0.01	0.01
RoCE	3961	0.09	0.11	0.13
Efficiency Ratio	3830	0.67	0.63	0.22
Loans / Assets	3806	0.39	0.38	0.15

Table 3 Descriptive statistics by renegotiation package content

This table provides mean of variables by the number of amendments in a renegotiation package (1: one loan characteristic amended – 6: six loan characteristics amended). Definitions of variables are provided in appendix B.

Variable / Mean	1	2	3	4	5	6
Amount	1550.00	1250.00	1740.00	1710.00	930.00	547.00
Maturity	7.18	6.98	8.23	10.66	7.57	6.16
Covenants	0.19	0.18	0.17	0.36	0.35	0.32
Spread	273.42	283.71	273.99	247.81	262.47	176.25
Secured	0.53	0.57	0.48	0.79	0.71	0.40
Previous issues	4.28	3.97	4.74	5.02	3.43	1.76
Lenders	13.54	14.51	18.95	24.25	21.85	24.44
Concentration	0.03	0.03	0.05	0.08	0.11	0.26
League	0.25	0.15	0.17	0.13	0.00	0.00
Relationship	0.05	0.03	0.05	0.07	0.05	0.40
Same country	0.22	0.25	0.19	0.13	0.05	0.00
Duration	30.97	31.21	37.58	40.38	39.95	39.83
Round	1.57	1.54	1.87	3.07	1.67	1.48
Listed	0.66	0.60	0.76	0.62	0.75	0.36
Sales	6720.00	6360.00	9860.00	2370.00	7050.00	698.00
Debt / Assets	0.36	0.33	0.35	0.46	0.22	0.19
RoA	0.02	0.03	0.02	-0.01	0.05	0.02
English	0.35	0.35	0.27	0.48	0.37	0.76
French	0.34	0.29	0.56	0.47	0.22	0.24
German	0.18	0.24	0.14	0.02	0.41	0.00
Creditor rights	2.47	2.65	2.42	2.88	2.98	3.76
Renegotiation failure	0.38	0.40	0.33	0.38	0.41	0.25
Priority	3.45	3.63	3.57	2.95	4.00	4.00
Creditors recovery rate	0.64	0.65	0.70	0.69	0.71	0.94
Total Assets	1470.00	1400.00	1710.00	1160.00	1390.00	1100.00
TC Equity Ratio	0.03	0.03	0.03	0.05	0.04	0.05
Net Interest Margin	0.01	0.02	0.02	0.02	0.02	0.04
RoCE	0.09	0.09	0.11	0.12	0.07	0.18
Efficiency Ratio	0.69	0.67	0.65	0.60	0.60	0.57
Loans / Assets	0.40	0.39	0.35	0.43	0.43	0.43

Table 4 Loan and syndicate determinants of the renegotiation packages

This table presents the results of ordered logit regressions of the renegotiation package (ranging from 1 to 6 depending on the number of amended loan characteristics) on loan and syndicate variables at origination. Standard errors clustered at the loan facility level in parentheses. All variables are defined in appendix B. All regressions include control variables for main loan currencies (USD and GBP), loan type (revolving), loan purposes (acquisition, general corporate, LBO, debt refinancing, working capital), loan amendment year, borrower industry sector and country. *, **, and *** indicate a statistically significant coefficient at the 10%, 5%, and 1% confidence level.

	1	2	3	4	5	6	7	8	9	10	11
Amount	-0.0797	-0.0662	-0.0543	-0.0559	-0.0498	-0.0513	-0.0515	-0.0504	-0.0487	-0.0522	-0.0571
	(0.06)	(0.06)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)
Maturity	0.1711***	0.2011***	0.2127***	0.2313***	0.2154***	0.2337***	0.2273***	0.2380***	0.2355***	0.2310***	0.2296***
	(0.05)	(0.04)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)
Covenants	0.2534	0.2620	0.0320	-0.0188	0.0456	-0.0060	0.0293	-0.0482	-0.0552	0.0024	0.0197
	(0.33)	(0.35)	(0.38)	(0.39)	(0.38)	(0.39)	(0.39)	(0.46)	(0.45)	(0.40)	(0.40)
Secured	-0.3827*	-0.5829***	-0.5430**	-0.5469**	-0.5303**	-0.5354**	-0.5646**	-0.5391**	-0.5769**	-0.5408**	-0.5326**
	(0.20)	(0.22)	(0.24)	(0.24)	(0.24)	(0.24)	(0.24)	(0.24)	(0.24)	(0.24)	(0.24)
Previous issues	-0.0020	-0.0065	0.0179	0.0159	0.0191	0.0168	0.0142	0.0141	0.0100	0.0143	0.0137
	(0.04)	(0.05)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Concentration		2.2475**	0.1496	-0.0193	0.1075	-0.0594	-0.1426	-0.0762	-0.1886	-0.1054	-0.1139
		(1.03)	(1.07)	(1.06)	(1.07)	(1.07)	(1.07)	(1.07)	(1.08)	(1.07)	(1.09)
League			-0.6422**	-0.6218**	-0.6483**	-0.6267**	-0.6138**	-0.6176**	-0.6007**	-0.6171**	-0.6229**
			(0.29)	(0.29)	(0.29)	(0.29)	(0.29)	(0.29)	(0.29)	(0.29)	(0.29)
Relationship				0.7063		0.7293	0.5270	0.7362	0.4815	0.7229	0.6923
				(0.57)		(0.57)	(0.64)	(0.58)	(0.63)	(0.58)	(0.58)
Same country					0.2382	0.2221	0.2641	0.2408	0.2918	0.2556	0.2550
					(0.29)	(0.29)	(0.29)	(0.29)	(0.29)	(0.29)	(0.29)
Round							0.1000		0.1246		
							(0.12)		(0.12)		
Duration								-0.0010	-0.0030		
								(0.01)	(0.01)		
Round x Duration										0.0006	0.0005
										(0.00)	(0.00)
Listed											0.1403
											(0.22)
cut1	0.5883	0.5148	0.2056	0.0388	0.4363	0.2594	0.1956	0.2586	0.2269	0.1842	0.1913
	(1.40)	(1.39)	(1.47)	(1.46)	(1.45)	(1.44)	(1.42)	(1.43)	(1.42)	(1.42)	(1.42)
cut2	2.4901*	2.4462*	2.1544	2.0221	2.3869*	2.2441	2.1827	2.2497	2.2218	2.1749	2.1833
	(1.40)	(1.39)	(1.48)	(1.47)	(1.45)	(1.44)	(1.42)	(1.43)	(1.42)	(1.42)	(1.42)

cut3	4.1105***	4.1030***	3.9477***	3.7880**	4.1799***	4.0097***	3.9591***	4.0175***	4.0043***	3.9450***	3.9572***
	(1.43)	(1.41)	(1.52)	(1.51)	(1.49)	(1.48)	(1.46)	(1.47)	(1.47)	(1.46)	(1.46)
cut4	5.2399***	5.2830***	5.3408***	5.1800***	5.5736***	5.4022***	5.3603***	5.4113***	5.4100***	5.3406***	5.3549***
	(1.50)	(1.46)	(1.63)	(1.63)	(1.60)	(1.60)	(1.58)	(1.59)	(1.58)	(1.56)	(1.56)
cut5	7.1426***	7.2433***	7.7320***	7.5783***	7.9639***	7.7996***	7.7537***	7.8092***	7.8042***	7.7358***	7.7504***
	(1.75)	(1.64)	(1.90)	(1.89)	(1.89)	(1.87)	(1.85)	(1.85)	(1.84)	(1.83)	(1.83)
Obs.	2612	2417	2105	2087	2105	2087	2087	2079	2079	2079	2079
Adj.R2	0.1092	0.1301	0.1228	0.1266	0.1233	0.1270	0.1279	0.1271	0.1284	0.1272	0.1275

Table 5 Loan, syndicate and legal environment determinants of the renegotiation packages

This table presents the results of ordered logit regressions of the renegotiation package (ranging from 1 to 6 depending on the number of amended loan characteristics) on loan and syndicate variables at origination and borrower country legal environment variables. Standard errors clustered at the loan facility level in parentheses. All variables are defined in appendix B. All regressions include control variables for main loan currencies (USD and GBP), loan type (revolving), loan purposes (acquisition, general corporate, LBO, debt refinancing, working capital), loan amendment year, borrower industry sector. *, **, and *** indicate a statistically significant coefficient at the 10%, 5%, and 1% confidence level.

	1	2	3	4	5
Amount	-0.0463	-0.0406	-0.0485	-0.0679	-0.0420
	(0.05)	(0.05)	(0.06)	(0.06)	(0.06)
Maturity	0.1748***	0.1651***	0.2334***	0.2433***	0.2369***
	(0.05)	(0.05)	(0.06)	(0.06)	(0.06)
Covenants	-0.2851	-0.2690	-0.4598	-0.5895	-0.4656
	(0.41)	(0.41)	(0.52)	(0.55)	(0.53)
Secured	-0.5913**	-0.5163**	-0.6017**	-0.5883**	-0.5518*
	(0.25)	(0.24)	(0.30)	(0.30)	(0.30)
Previous issues	0.0029	-0.0051	0.0074	0.0246	0.0329
	(0.03)	(0.03)	(0.04)	(0.04)	(0.04)
Concentration	-0.1344	-0.2578	0.6586	1.0218	0.6534
	(1.07)	(1.09)	(1.66)	(1.46)	(1.62)
League	-0.5839*	-0.5121*	-0.6288*	-0.6680**	-0.6423*
	(0.31)	(0.29)	(0.33)	(0.33)	(0.33)
Relationship	0.6829	0.7215	1.3453	1.3493	1.3881*
	(0.59)	(0.60)	(0.85)	(0.83)	(0.84)
Same country	0.1813	0.1877	0.2558	0.1831	0.2982
	(0.26)	(0.26)	(0.29)	(0.29)	(0.29)
Round x Duration	-0.0009	-0.0007	-0.0019	-0.0022	-0.0018
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Listed	0.1421	0.1165	0.1004	0.0985	0.0770
	(0.22)	(0.23)	(0.26)	(0.27)	(0.26)
Creditor rights	0.1759*	0.2647**	0.1460	-0.0814	-0.1282
	(0.10)	(0.11)	(0.12)	(0.15)	(0.16)
French		0.4663	0.8681**	1.2424***	1.1087***
		(0.29)	(0.43)	(0.42)	(0.40)
German		-0.2149	0.2633	0.4715	1.1444*
		(0.35)	(0.47)	(0.48)	(0.59)
Renegotiation failure			0.3386		
			(1.06)		
Priority				0.8381**	
				(0.33)	
Creditors recovery rate					2.2747**
					(0.92)
cut1	-0.2811	0.5186	0.9508	3.1142	2.4776
	(1.44)	(1.43)	(1.86)	(2.04)	(1.86)
cut2	1.6931	2.5168*	3.0803	5.2737**	4.6391**
	(1.46)	(1.44)	(1.88)	(2.05)	(1.88)
cut3	3.5707**	4.4183***	5.4888***	7.7053***	7.0745***

	(1.44)	(1.48)	(1.91)	(2.20)	(2.03)
cut4	4.4720***	5.3212***	5.9533***	8.1747***	7.5420***
	(1.44)	(1.48)	(1.93)	(2.18)	(2.01)
cut5	6.7839***	7.6345***	8.1298***	10.3873***	9.7398***
	(1.78)	(1.77)	(2.18)	(2.36)	(2.21)
Obs.	1900	1900	1331	1331	1331
Adj.R2	0.0976	0.1028	0.1463	0.1551	0.1535

Table 6 Loan, syndicate and borrower determinants of the renegotiation packages

This table presents the results of ordered logit regressions of the renegotiation package (ranging from 1 to 6 depending on the number of amended loan characteristics) on loan and syndicate variables at origination and borrower variables. Standard errors clustered at the borrower level in parentheses. All variables are defined in appendix B. All regressions include control variables for main loan currencies (USD and GBP), loan type (revolving), loan purposes (acquisition, general corporate, LBO, debt refinancing, working capital), loan amendment year, borrower industry sector and country. *, **, and *** indicate a statistically significant coefficient at the 10%, 5%, and 1% confidence level.

	1	2	3	4
Amount	0.1725	0.1088	0.1224	0.2083*
	(0.11)	(0.09)	(0.10)	(0.11)
Maturity	0.3019***	0.3006***	0.2832***	0.2909***
	(0.07)	(0.08)	(0.08)	(0.08)
Covenants	1.2868	1.1574	1.1705	1.4818*
	(0.83)	(0.75)	(0.75)	(0.81)
Secured	-0.4712	-0.1594	-0.2085	-0.4158
	(0.40)	(0.41)	(0.40)	(0.45)
Previous issues	-0.0225	-0.0286	-0.0318	-0.0371
	(0.05)	(0.04)	(0.04)	(0.05)
Concentration	-2.0024	-2.2895*	-2.3127*	-1.9975
	(1.27)	(1.24)	(1.21)	(1.30)
League	-0.5316	-0.5469	-0.4058	-0.5344
	(0.44)	(0.43)	(0.44)	(0.49)
Relationship	0.9502*	0.8375	1.0094**	1.2227**
	(0.51)	(0.51)	(0.51)	(0.53)
Same country	0.1382	0.3165	0.3872	0.3057
	(0.45)	(0.47)	(0.47)	(0.47)
Round x Duration	-0.0004	-0.0005	-0.0003	-0.0002
	(0.00)	(0.00)	(0.00)	(0.00)
Sales	-0.2236*			-0.2406*
	(0.13)			(0.13)
Debt / Assets		-0.2480		-0.6318
		(0.87)		(0.85)
RoA			3.7452	4.3261
			(2.85)	(2.89)
cut1	3.4161	7.4200**	7.2601***	3.5018
	(3.55)	(2.89)	(2.80)	(3.59)
cut2	5.3590	9.3526***	9.1990***	5.4129
	(3.56)	(2.91)	(2.82)	(3.59)
cut3	6.9557*	10.9472***	10.7927***	7.0180*
	(3.59)	(2.92)	(2.85)	(3.63)
cut4	8.6885**	12.6793***	12.5199***	8.7556**
	(3.67)	(2.97)	(2.88)	(3.69)
Obs.	936	933	926	915
Adj.R2	0.1697	0.1669	0.1689	0.1740

Table 7 Loan, syndicate and lender determinants of the renegotiation packages

This table presents the results of ordered logit regressions of the renegotiation package (ranging from 1 to 6 depending on the number of amended loan characteristics) on loan and syndicate variables at origination and lender (loan agent) variables. Standard errors clustered at the loan agent level in parentheses. All variables are defined in appendix B. All regressions include control variables for main loan currencies (USD and GBP), loan type (revolving), loan purposes (acquisition, general corporate, LBO, debt refinancing, working capital), loan amendment year, borrower industry sector and country. *, **, and *** indicate a statistically significant coefficient at the 10%, 5%, and 1% confidence level.

	1	2	3	4	5	6	7
Amount	-0.0444	-0.0456	-0.0444	-0.0452	-0.0260	-0.0322	-0.0271
	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)
Maturity	0.2322***	0.2319***	0.2300***	0.2358***	0.2257***	0.2262***	0.2408***
	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)
Covenants	0.0353	0.0294	0.0480	0.0424	0.0082	0.0249	-0.0134
	(0.53)	(0.54)	(0.54)	(0.54)	(0.55)	(0.55)	(0.54)
Secured	-0.4839**	-0.4885**	-0.5114**	-0.4962**	-0.5781**	-0.5248**	-0.6379***
	(0.23)	(0.23)	(0.24)	(0.23)	(0.23)	(0.24)	(0.25)
Previous issues	0.0118	0.0118	0.0261	0.0117	0.0249	0.0275	0.0161
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Lenders	-0.0050	-0.0053	-0.0070	-0.0052	-0.0070	-0.0063	-0.0060
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Concentration	-0.5410	-0.6836	-0.3556	-0.6946	-0.1356	0.0332	-0.2576
	(1.16)	(1.14)	(1.41)	(1.13)	(1.25)	(1.26)	(1.33)
League	-0.6804**	-0.6136**	-0.6676**	-0.6553**	-0.6407**	-0.6490**	-0.5825**
	(0.27)	(0.28)	(0.27)	(0.30)	(0.26)	(0.26)	(0.29)
Relationship	0.4270	0.4215	0.4049	0.4256	0.3671	0.3397	0.4727
	(0.42)	(0.41)	(0.42)	(0.42)	(0.49)	(0.45)	(0.45)
Same country	0.3808	0.3503	0.4031	0.3272	0.3487	0.3041	0.6333*
	(0.36)	(0.36)	(0.39)	(0.36)	(0.37)	(0.37)	(0.37)
Round x Duration	0.0009	0.0009	0.0005	0.0009	0.0009	0.0011	0.0008
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Listed	0.1666	0.1745	0.1824	0.1678	0.1487	0.2632	0.2299
	(0.22)	(0.22)	(0.23)	(0.21)	(0.22)	(0.20)	(0.21)
Total Assets	0.0397						-0.0493
	(0.05)						(0.25)
TC Equity Ratio		2.5265**					-0.6287
		(1.27)					(8.97)
Net Interest Margin			23.7583*				45.6750*
			(14.42)				(23.95)
RoCE				-0.9608			-1.7115
				(1.86)			(1.50)
Efficiency Ratio					-1.5886*		-2.4506*
					(0.85)		(1.49)
Loans / Assets						-0.6782	-2.8996**
						(0.80)	(1.17)
cut1	1.1766	0.1286	0.5386	0.1017	-1.1973	0.7624	-2.8745
	(2.09)	(1.86)	(2.05)	(1.82)	(2.21)	(1.78)	(6.86)
cut2	3.1615	2.1018	2.5228	2.0891	0.8023	2.7552	-0.8284

	(2.09)	(1.84)	(2.03)	(1.80)	(2.19)	(1.74)	(6.88)
cut3	4.9568**	3.9026**	4.3750**	3.8859**	2.6943	4.5761**	1.0570
	(2.25)	(1.94)	(2.13)	(1.89)	(2.25)	(1.85)	(6.94)
cut4	6.4448***	5.3950***	5.8413***	5.3749***	4.2580*	6.0236***	2.6137
	(2.24)	(1.95)	(2.13)	(1.90)	(2.29)	(1.89)	(6.86)
Obs.	2010	2002	1944	2008	1946	1938	1918
Adj.R2	0.1293	0.1299	0.1354	0.1300	0.1390	0.1349	0.1510

Table 8 The determinants of renegotiation packages during the Financial Crisis

This table presents the results of ordered logit regressions of the renegotiation package (ranging from 1 to 6 depending on the number of amended loan characteristics) on all variables for renegotiations that took place from October 2008 until December 2014 only. Standard errors clustered at the facility level (models 1-5), borrower level (model 6), and loan agent level (model 7) in parentheses. All variables are defined in appendix B. All regressions include control variables for main loan currencies (USD and GBP), loan type (revolving), loan purposes (acquisition, general corporate, LBO, debt refinancing, working capital), loan amendment year, borrower industry sector and country. Intercepts (cuts) not shown. *, **, and *** indicate a statistically significant coefficient at the 10%, 5%, and 1% confidence level.

	1	2	3	4	5	6	7
Amount	-0.1109	-0.0958	-0.1146	-0.1550	-0.1219	0.1450	-0.0585
	(0.09)	(0.08)	(0.12)	(0.12)	(0.11)	(0.12)	(0.09)
Maturity	0.3075***	0.2868***	0.3537***	0.3629***	0.3519***	0.3808***	0.3209***
	(0.07)	(0.07)	(0.10)	(0.09)	(0.09)	(0.13)	(0.08)
Covenants	-0.8245	-1.3009**	-0.9098	-0.8868	-0.7786	0.8166	-0.7447
	(0.60)	(0.55)	(0.66)	(0.66)	(0.67)	(0.93)	(0.60)
Secured	-0.3241	-0.2321	-0.3696	-0.3902	-0.3778	-0.7069	-0.4357
	(0.29)	(0.28)	(0.34)	(0.33)	(0.33)	(0.50)	(0.31)
Previous issues	-0.0764*	-0.0737*	-0.0533	-0.0269	-0.0264	-0.0942	-0.0811**
	(0.04)	(0.04)	(0.06)	(0.06)	(0.07)	(0.06)	(0.04)
Concentration	2.1014	1.5777	6.3152**	5.8838**	5.6181**	2.4299	1.6114
	(1.79)	(1.73)	(2.62)	(2.47)	(2.50)	(2.76)	(1.93)
League	-0.3100	-0.1764	-0.1205	-0.1283	-0.1230	-0.0285	-0.2374
	(0.30)	(0.31)	(0.38)	(0.38)	(0.38)	(0.67)	(0.16)
Relationship	0.7413	0.7517	1.3126	1.3900	1.4264	0.8418	0.3566
	(0.66)	(0.72)	(1.09)	(1.07)	(1.09)	(0.69)	(0.62)
Same country	-0.0327	-0.0736	0.0893	-0.0627	0.0456	0.3220	0.4497
	(0.31)	(0.28)	(0.32)	(0.33)	(0.31)	(0.51)	(0.36)
Round x Duration	0.0043	0.0006	0.0028	0.0022	0.0029	0.0035	0.0063
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.01)	(0.00)
Listed	0.2535	0.3201	0.4585	0.4111	0.3732		0.2837
	(0.24)	(0.26)	(0.34)	(0.34)	(0.34)		(0.25)
Creditor rights		0.6248*	1.1124**	1.2420**	1.1122**		
		(0.35)	(0.50)	(0.49)	(0.46)		
French		0.1051	0.3846	0.5525	1.1400*		
		(0.37)	(0.48)	(0.49)	(0.67)		
German		0.1292	-0.0455	-0.2537	-0.2906		
		(0.11)	(0.13)	(0.17)	(0.19)		
Renegotiation failure			1.5344				
			(1.34)				
Priority				0.7770*			
				(0.41)			
Creditors recovery rate					2.0645*		
					(1.25)		
Sales						-0.3192*	
						(0.17)	
Debt / Assets						0.4950	
						(1.15)	
RoA						2.6862	

						(3.70)	
Total Assets							0.0983
							(0.23)
TC Equity Ratio							-0.1395
							(10.92)
Net Interest Margin							29.4011
							(32.14)
RoCE							-3.3441**
							(1.60)
Efficiency Ratio							-2.4834
							(1.71)
Loans / Assets							-1.4637
							(1.09)
Obs.	1551	1385	932	932	932	707	1437
Adj.R2	0.1722	0.1395	0.2010	0.2058	0.2044	0.2043	0.1920

Table 9 The determinants of renegotiation packages during the Euro Zone Crisis

This table presents the results of ordered logit regressions of the renegotiation package (ranging from 1 to 6 depending on the number of amended loan characteristics) on all variables for renegotiations that took place from June 2010 until December 2014 only. Standard errors clustered at the facility level (models 1-5), borrower level (model 6), and loan agent level (model 7) in parentheses. All variables are defined in appendix B. All regressions include control variables for main loan currencies (USD and GBP), loan type (revolving), loan purposes (acquisition, general corporate, LBO, debt refinancing, working capital), loan amendment year, borrower industry sector and country. Intercepts (cuts) not shown. *, **, and *** indicate a statistically significant coefficient at the 10%, 5%, and 1% confidence level.

	1	2	3	4	5	6	7
Amount	-0.0997	-0.0695	-0.1125	-0.1431*	-0.0972	0.0240	-0.0832
	(0.07)	(0.07)	(0.08)	(0.08)	(0.08)	(0.12)	(0.08)
Maturity	0.2646***	0.2109***	0.2471***	0.2665***	0.2534***	0.2864***	0.2584***
	(0.05)	(0.06)	(0.07)	(0.08)	(0.07)	(0.09)	(0.07)
Covenants	-1.3257***	-1.5707***	-1.3209**	-1.4301**	-1.2481*	-0.3577	-1.1841***
	(0.46)	(0.49)	(0.66)	(0.68)	(0.65)	(0.90)	(0.44)
Secured	-0.4390	-0.4246	-0.2762	-0.2550	-0.2312	-0.4443	-0.5813*
	(0.27)	(0.28)	(0.34)	(0.34)	(0.34)	(0.48)	(0.31)
Previous issues	0.0300	0.0101	0.0283	0.0540	0.0604	-0.0025	0.0437*
	(0.04)	(0.03)	(0.04)	(0.05)	(0.04)	(0.05)	(0.03)
Concentration	-0.0178	-0.2226	1.1758	1.5636	1.1845	-1.4022	0.3199
	(1.21)	(1.30)	(1.65)	(1.51)	(1.63)	(1.82)	(1.28)
League	-0.4226	-0.3019	-0.2407	-0.2607	-0.2621	-0.7066	-0.3562*
	(0.31)	(0.33)	(0.36)	(0.36)	(0.36)	(0.60)	(0.21)
Relationship	0.9140	0.9965	1.7667	1.8021*	1.8263*	1.2099**	0.6196
	(0.64)	(0.68)	(1.10)	(1.04)	(1.05)	(0.56)	(0.52)
Same country	0.0270	0.0178	0.1051	0.0019	0.1509	0.5491	0.4153
	(0.30)	(0.27)	(0.29)	(0.29)	(0.28)	(0.52)	(0.38)
Round x Duration	-0.0003	-0.0016	-0.0006	-0.0011	-0.0005	0.0013	-0.0001
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Listed	0.2059	0.1745	0.3579	0.3851	0.3426		0.2640
	(0.24)	(0.26)	(0.30)	(0.30)	(0.29)		(0.24)
Creditor rights		0.4963	1.0453**	1.4706***	1.3262***		
		(0.33)	(0.48)	(0.48)	(0.44)		
French		-0.2047	0.5307	0.7811	1.5244**		
		(0.40)	(0.50)	(0.52)	(0.67)		
German		0.2077*	-0.0289	-0.2634	-0.3211*		
		(0.12)	(0.13)	(0.16)	(0.18)		
Renegotiation failure			0.4401				
			(1.15)				
Priority				0.9122**			
				(0.39)			
Creditors recovery rate					2.5480**		
					(1.08)		
Sales						-0.2182	
						(0.14)	
Debt / Assets						-0.7784	
						(1.01)	
RoA						4.3920	

						(3.31)	
Total Assets							-0.0948
							(0.26)
TC Equity Ratio							-4.4383
							(10.61)
Net Interest Margin							38.0242
							(27.17)
RoCE							0.1024
							(2.01)
Efficiency Ratio							-3.1035*
							(1.61)
Loans / Assets							-2.2953*
							(1.23)
Obs.	1790	1617	1117	1117	1117	802	1654
Adj.R2	0.1410	0.1138	0.1678	0.1775	0.1760	0.1831	0.1597

Table 10 The determinants of renegotiation packages – loan and syndicate frictions at origination

This table presents the results of ordered logit regressions of the renegotiation package (ranging from 1 to 6 depending on the number of amended loan characteristics) on loan, syndicate and legal environment variables for loans with shorter maturity (median lower than 7 years), not secured (Secured = 0), and without league table members in the syndicate (League = 0). Standard errors clustered at the facility level. All variables are defined in appendix B. All regressions include control variables for main loan currencies (USD and GBP), loan type (revolving), loan purposes (acquisition, general corporate, LBO, debt refinancing, working capital), loan amendment year, borrower industry sector and country. Intercepts (cuts) not shown. *, **, and *** indicate a statistically significant coefficient at the 10%, 5%, and 1% confidence level.

	Shorter maturity					Not secured					No league				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Amount	-0.0992	-0.1176	0.0854	-0.0355	-0.0088	0.0350	0.0515	-0.0083	0.0005	0.0093	-0.0458	-0.0374	-0.0439	-0.0574	-0.0300
	(0.08)	(0.08)	(0.18)	(0.18)	(0.17)	(0.09)	(0.09)	(0.12)	(0.12)	(0.13)	(0.06)	(0.06)	(0.08)	(0.08)	(0.08)
Maturity	0.4716***	0.4755***	0.4044***	0.4124***	0.4226***	0.3305***	0.3331***	0.5563***	0.5749***	0.6031***	0.2738***	0.2246***	0.3306***	0.3471***	0.3364***
	(0.12)	(0.12)	(0.15)	(0.15)	(0.15)	(0.11)	(0.10)	(0.17)	(0.17)	(0.17)	(0.05)	(0.06)	(0.08)	(0.08)	(0.08)
Covenants	0.5089	0.3120	0.0366	0.1388	0.3193	0.6252	0.5887	0.8691	0.9885	1.2904	0.2584	0.0458	-0.0574	-0.1759	-0.0776
	(0.56)	(0.58)	(0.90)	(0.83)	(0.87)	(0.92)	(0.92)	(1.45)	(1.44)	(1.56)	(0.42)	(0.46)	(0.60)	(0.62)	(0.60)
Secured	-0.4878	-0.3941	0.0679	-0.0904	-0.0743						-0.4741*	-0.4017	-0.3863	-0.4198	-0.3578
	(0.36)	(0.35)	(0.41)	(0.44)	(0.44)						(0.27)	(0.28)	(0.36)	(0.35)	(0.35)
Previous issues	-0.0525	-0.0860	-0.1145	-0.0681	-0.0272	-0.0216	-0.0666	-0.0604	-0.0310	-0.0463	-0.0364	-0.0504	-0.0372	-0.0037	-0.0026
	(0.06)	(0.06)	(0.11)	(0.13)	(0.13)	(0.05)	(0.05)	(0.10)	(0.10)	(0.10)	(0.04)	(0.04)	(0.06)	(0.06)	(0.07)
Concentration	4.6073*	4.2724*	12.0418***	9.8801***	9.8377**	0.5994	0.0146	0.9950	0.8144	0.7043	-0.2975	-0.6654	0.6819	1.0860	0.6495
	(2.53)	(2.20)	(3.62)	(3.75)	(3.99)	(1.89)	(1.57)	(2.14)	(2.20)	(2.19)	(1.17)	(1.09)	(1.61)	(1.59)	(1.55)
League	0.3618	0.2647	0.5599	0.4938	0.5436	-0.2971	-0.0011	0.1730	0.0044	0.0333					
	(0.39)	(0.40)	(0.51)	(0.50)	(0.51)	(0.45)	(0.41)	(0.51)	(0.53)	(0.52)					
Relationship	0.8803	1.0061	1.6251	1.2209	1.3104	1.1177	1.7670	1.8756	1.8879	2.0404	0.6752	0.6963	1.1868	1.1825	1.2205
	(0.82)	(0.76)	(1.00)	(1.09)	(1.10)	(0.90)	(1.16)	(1.31)	(1.25)	(1.29)	(0.57)	(0.63)	(0.98)	(0.95)	(0.97)
Same country	0.0778	-0.1126	0.3416	-0.0593	0.1200	0.0007	-0.0667	-0.2801	-0.2993	-0.0524	0.0018	-0.0570	0.1761	0.0793	0.2022
	(0.37)	(0.36)	(0.44)	(0.45)	(0.43)	(0.52)	(0.43)	(0.56)	(0.54)	(0.57)	(0.30)	(0.28)	(0.34)	(0.34)	(0.33)
Round x Duration	0.0003	-0.0009	0.0031	0.0013	0.0021	0.0010	0.0014	0.0035	0.0027	0.0028	0.0024	0.0010	0.0015	0.0013	0.0016
	(0.00)	(0.00)	(0.01)	(0.01)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Listed	0.1506	0.1289	0.3390	0.1430	0.1530	0.0165	0.1407	0.1107	0.0661	0.0728	0.2976	0.2788	0.2379	0.2494	0.1870
	(0.31)	(0.31)	(0.45)	(0.47)	(0.49)	(0.35)	(0.34)	(0.48)	(0.49)	(0.50)	(0.27)	(0.27)	(0.34)	(0.34)	(0.33)
Creditor rights		0.0615	1.4003***	0.8393	0.9186*		1.0216**	1.5540**	2.0527***	2.4857***		0.3846	0.9553**	1.1863***	1.0486**

		(0.44)	(0.54)	(0.58)	(0.51)		(0.49)	(0.69)	(0.72)	(0.82)		(0.30)	(0.48)	(0.46)	(0.44)
French		0.1392	0.6140	0.7547	1.8616***		0.3976	0.8621	1.2243	3.2477**		-0.1895	0.2255	0.4733	1.1229*
		(0.42)	(0.55)	(0.56)	(0.70)		(0.54)	(0.71)	(0.75)	(1.43)		(0.38)	(0.52)	(0.53)	(0.67)
German		0.1983	0.0037	-0.2017	-0.4465**		0.2793*	0.2135	-0.0352	-0.4170		0.2444**	0.1381	-0.1208	-0.1522
		(0.14)	(0.20)	(0.24)	(0.22)		(0.15)	(0.19)	(0.25)	(0.37)		(0.11)	(0.14)	(0.17)	(0.19)
Renegotiation failure			5.0650***					0.5692					1.0552		
			(1.59)					(1.53)					(1.21)		
Priority				0.5237					0.9048					0.8427**	
				(0.49)					(0.62)					(0.41)	
Creditors recovery rate					3.4347**					4.9410*					2.2365**
					(1.38)					(2.71)					(1.08)
Obs.	800	748	487	487	487	975	937	654	654	654	1733	1565	1037	1037	1037
Adj.R2	0.1309	0.1196	0.2250	0.2055	0.2199	0.1823	0.1669	0.2432	0.2499	0.2545	0.1436	0.1212	0.1695	0.1767	0.1754

Table 11 The determinants of renegotiation packages – borrower country effect

This table presents the results of ordered logit regressions of the renegotiation package (ranging from 1 to 6 depending on the number of amended loan characteristics) on loan, syndicate and legal environment variables for a subsample of renegotiations excluding borrowers from DE, FR, GB, and NL. Standard errors clustered at the facility level. All variables are defined in appendix B. All regressions include control variables for main loan currencies (USD and GBP), loan type (revolving), loan purposes (acquisition, general corporate, LBO, debt refinancing, working capital), loan amendment year, borrower industry sector and country. Intercepts (cuts) not shown. *, **, and *** indicate a statistically significant coefficient at the 10%, 5%, and 1% confidence level.

	1	2	3	4	5
Amount	-0.0137	0.0007	-0.0182	-0.0587	-0.0207
	(0.08)	(0.08)	(0.08)	(0.09)	(0.08)
Maturity	0.2974***	0.1822**	0.2115**	0.2294**	0.1914**
	(0.07)	(0.08)	(0.09)	(0.09)	(0.10)
Covenants	0.3329	-0.4504	-0.3585	-0.5106	-0.3421
	(0.66)	(0.58)	(0.60)	(0.66)	(0.61)
Secured	-0.3866	0.3122	0.4955	0.4436	0.5392
	(0.46)	(0.50)	(0.56)	(0.54)	(0.54)
Previous issues	-0.1079**	-0.1108*	-0.0926	-0.0765	-0.0609
	(0.05)	(0.06)	(0.06)	(0.05)	(0.07)
Concentration	0.7328	-0.6306	-0.2425	0.7803	-0.5474
	(3.71)	(3.15)	(3.49)	(3.35)	(3.50)
League	-0.7881	-0.9710	-0.9839	-0.9392	-0.9084
	(0.56)	(0.72)	(0.76)	(0.74)	(0.73)
Relationship	0.3018	0.9871	-0.1421	-0.5960	-0.3928
	(0.81)	(1.20)	(1.74)	(1.58)	(1.66)
Same country	-0.1859	-0.1011	0.1023	-0.0709	0.1146
	(0.40)	(0.38)	(0.39)	(0.42)	(0.39)
Round x Duration	0.0090	-0.0020	-0.0005	-0.0015	-0.0003
	(0.01)	(0.00)	(0.00)	(0.00)	(0.00)
Listed	0.0208	-0.0363	0.0076	0.0794	0.0184
	(0.32)	(0.39)	(0.43)	(0.44)	(0.42)
Creditor rights		0.4740	0.8222	1.3873**	1.2259**
		(0.49)	(0.57)	(0.67)	(0.62)
French		0.4534	0.3029	0.2824	0.7681
		(0.63)	(0.74)	(0.74)	(0.79)
German		0.1277	0.0312	-0.2156	-0.2440
		(0.36)	(0.44)	(0.41)	(0.40)
Renegotiation failure			1.8417		
			(1.46)		
Priority				0.7126*	
				(0.41)	
Creditors recovery rate					2.0459
					(1.25)
Obs.	649	469	445	445	445
Adj.R2	0.1727	0.0942	0.1092	0.1176	0.1140

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