Working Paper

Working Paper
2013-03

**Does renegotiation of financial contracts matter for shareholders?
Empirical evidence from Europe**

Christophe J. Godlewski

February 2013

IFS

Institut de Finance
de Strasbourg

Does renegotiation of financial contracts matter for shareholders? Empirical evidence from Europe

Christophe J. Godlewski♣

University of Haute Alsace & EM Strasbourg Business School

LaRGE Research Center

PEGE, 61 avenue de la Forêt Noire, 67000 Strasbourg, France

godlewski@unistra.fr ; +33(0)3 68 85 21 21

First draft

November 2012

Abstract

Using a large sample of bank loan renegotiations by European firms, I show that renegotiation of financial contracts matters for shareholders and can increase their wealth. I find that amendments to financial covenants and to loan amounts increase borrower's cumulative abnormal return by 10% to 15%. Early and less frequent renegotiations of bilateral loans with short maturity also imply a positive stock market reaction. Amendments signaling the early accrual of new, valuable and positive information allow increasing shareholders value. The renegotiation of financial contracts bears a certification role as contracts become more efficient over time, to the benefits of the shareholders.

Keywords: renegotiation, financial contracts, bank loans, shareholders value, event studies, Europe.
JEL classification: G14, G20.

Does renegotiation of financial contracts matter for shareholders?
Empirical evidence from Europe

First draft

November 2012

Abstract

Using a large sample of bank loan renegotiations by European firms, I show that renegotiation of financial contracts matters for shareholders and can increase their wealth. I find that amendments to financial covenants and to loan amounts increase borrower's cumulative abnormal return by 10% to 15%. Early and less frequent renegotiations of bilateral loans with short maturity also imply a positive stock market reaction. Amendments signaling the early accrual of new, valuable and positive information allow increasing shareholders value. The renegotiation of financial contracts bears a certification role as contracts become more efficient over time, to the benefits of the shareholders.

1. Introduction

Corporate lending is a key route that European companies use to access the debt markets, especially since the launch of the euro in 1999. Bank private credit to GDP reached 115% in 2010 for the Eurozone, while corporate bonds to total bonds outstanding or stock market capitalization to GDP were considerably lower, respectively at 44% and 26% (Cihak et al. 2012). Thus, bank loans are the major external source of capital for European companies to finance their growth, which is currently a critical issue in the aftermath of the Global Financial Crisis.

Financial intermediation theory argues that banks are unique institutions because they produce valuable private information about borrowing firms through initial screening and monitoring (Fama 1985; Diamond 1991). Therefore, lending decisions reveal positive private information about the firms. This certification effect is supported by empirical evidence finding positive and significant abnormal returns for borrower's stocks around the date of a bank loan announcement (James 1987; Lummer and McConnell 1989; Preece and Mullineaux 1996; Focarelli et al. 2008). In other words, bank loans have a positive impact on shareholders' value, at least in the short run.

However, there is far less empirical evidence on the impact of bank loan renegotiation on borrower's stock. This paper aims to fill this loophole by investigating the influence of loan renegotiations on shareholders' value in Europe since 1999. Indeed, the lack of empirical evidence on these issues is surprising for several reasons. First, by their nature loans are flexible documents that can be revised and amended from time to time and this flexibility is considered as one of the major advantage of corporate financing through bank loans. For instance, Roberts and Sufi (2009) find that 3 out of 4 loans to US borrowers are renegotiated prior to maturity. Second, renegotiation plays a crucial role in many corporate finance theories and a large number of theoretical studies show that renegotiation has an important influence on security design or incentives (Hart and Moore 1998; Dessein 2005; Garleanu and Zwiebel 2009). Third, while theory suggests that renegotiation is a crucial issue for financial contracting, there are very few empirical studies dealing with bank loan renegotiation (outside of default or bankruptcy), especially in Europe.

The few empirical results on bank loan renegotiations are provided by Roberts and Sufi (2009) and Roberts (2012). Using US data, they show that frequent renegotiation is an integral part of bank lending. They find that renegotiations generate large changes to the terms of the initial contract, which are mostly driven by the accrual of new information concerning credit quality and outside options of the borrower. They also show that bank loans are repeatedly renegotiated in order to modify contractual constraints designed to mitigate information asymmetry.

I provide in this article the first empirical evidence on bank loan renegotiations in Europe since the launch of the euro. Although related to previous studies, my analysis differs in several important aspects. First, I focus on bank loan renegotiations in Europe where access to corporate credit is of crucial importance. Second, I explore the cross-country dimension of my sample by taking financial development and law & finance factors into account. Third, my main research question deals with the stock market perception of bank loan renegotiations as I investigate the impact of loan amendments on firm's abnormal returns, using event study methodology.

Using a sample of 833 amended loan tranches to 393 firms from 25 European countries I find that the major changes concern loan amount (36% of amendments), maturity (25%), and covenants (10%). European firms are not renegotiating as frequently as their US peers. Less than 35% of them do it more than once during the time span of my sample. However, the initial renegotiation occurs quite fast, on average after two and a half years since loan origination for a stated maturity of almost 6 years. Quantitative changes to loan terms are substantial: an average tranche amount is increased by more than 100 MLN USD while maturity is extended by more than one and a half years.

Univariate results show that the renegotiation of financial covenants is the most significant amendment type, leading to an increase of borrower's abnormal return by 14%. Non material amendments, such as definition change, lead to negative stock market reaction, reducing the average abnormal return by 7%. Early and rare renegotiations with few amended tranches of bilateral loans with short maturity are also positively related to shareholders value. Furthermore,

4

stock market reaction to loan renegotiation is positive for larger and leveraged firms with more growth opportunities, while it is similarly negative to rated and unrated borrowers.

These findings are largely confirmed by multivariate results. Regressions of abnormal returns on various amendment characteristics lead to several important findings. Change in financial covenants but also positive changes to loan amount have the largest positive effect on abnormal returns, ranging from 10% to 15%. Late and frequent renegotiations lead to negative stock market reactions. Most of these results are robust to the inclusion of loan, country and borrower variables, as well as to several sensitivity analyses.

Overall, empirical findings support theoretical and previous US empirical results. Renegotiations of financial contracts are informative events which reduces informational frictions between the borrower and the lender. Thus they can be considered as signaling and certification devices with significant effects on borrower's abnormal return and thus shareholder's value.

The rest of the article is structured as follows. I discuss the relevant literature and provide empirical hypotheses in the next section. Section 3 is devoted to the methodology and data description. Results are provided and discussed in section 4. Finally, section 5 concludes the article.

2. Literature review and hypotheses

In this section I survey the recent relevant theoretical and empirical literature dealing with bank loan renegotiations in order to establish empirically testable hypotheses linking loan renegotiations with shareholders' value[1].

Typically, the process begins with the borrower contacting the lender (although both parties can initiate it) as a consequence of the restrictiveness of the initial contract. Indeed, the borrowing company may wish to increase their capital expenditures, undertake an acquisition, or increase dividends, etc. These activities may be explicitly restricted by the initial loan agreements, in particular through various financial and non-financial covenants. However, these renegotiations bear several costs in terms of a fee that varies with the size and complexity of the loan, time and effort.

---

[1] I do not consider the case of renegotiations when a default (technical or payment) occurs, which is beyond the scope of my analysis.

Furthermore, in the case of a large (syndicated) loan with a large banking pool, the amendments must be approved by a certain percentage of lenders[2].

Following Roberts and Sufi (2009)[3], one can consider that under the initial loan agreement terms an ex post surplus exist so that loan renegotiation is a game played by the contracting parties which is more likely to occur when unanticipated or non-contractible states of the world occur. A positive shock to the borrower that improves credit quality should shift the bargaining power in his favor, allowing renegotiating more advantageous terms. A negative shock can also lead to loan renegotiation when liquidation is ex post Pareto-inefficient leading to less favorable terms. In other words, a loan renegotiation (outside of default) can be viewed as the result of new information accrual and as a shift in bargaining power in the borrower-lender relationship.

In an incomplete contracts and symmetric information setup, Hart and Moore (1998) show that debt contracts are not renegotiation proof and that a positive shock to the entrepreneur alters the allocation of bargaining power between borrower and lender. Assuming an agency conflict between borrowers and lenders, Dessein (2005) provides a model in which better informed borrowers yield control rights to the less informed lender. Furthermore, good borrowers are willing to cede formal control in the contract to signal their congruent preferences to lenders. In a similar setting, Garleanu and Zwiebel (2009) analyze the design and renegotiation of covenants in debt contracts as a particular example of the contractual assignment of property rights under asymmetric information[4]. They show that stronger rights are granted to the lender in the initial contract, in particular when information asymmetry is greater, it is more costly for the lender acquire information and it is less costly to renegotiate.

---

[2] More precisely, there are three levels of approval: required-lenders level, full vote and supermajority. The first level is a simple majority used of approval of nonmaterial amendments and waivers or changes affecting one facility. A full vote, including participants, is required to approve material changes such as RATS (rate, amortization, term, security). A supermajority, typically 70% to 80% of lenders is required for certain material changes such as changes in amortization and release of collateral.

[3] I choose to focus on recent theoretical results dealing explicitly with the design and renegotiation of private debt contracts.

[4] Indeed, covenants are a common feature of debt contracts as they serve to protect lenders from activities that prevent transfers to borrowers. In practice, covenants are remarkably tight (Chava and Roberts 2008) and are frequently renegotiated as the conditions imposed on the firm are routinely relaxed.

To my knowledge, Roberts and Sufi (2009) are the first to provide empirical evidence on the determinants and the implications of renegotiation for financial contracting. They explore the renegotiations in a sample of 1,000 private credit agreements between financial institutions and publicly listed U.S. firms from 1996 to 2005. They find that nearly all credit agreements are renegotiated prior to maturity and early in the life of the loan. Furthermore, renegotiations generate large changes to the terms of the initial contract, which are mostly driven by the accrual of new information concerning credit quality and outside options of the borrower, such as investment opportunities, collateral, fluctuations in credit market conditions, the financial health of lenders and the aggregate stock market. On the contrary, initial contract features are largely unrelated to whether or not a renegotiation takes place.

In a recent paper, Roberts (2012) shows that bank loans are repeatedly renegotiated in order to modify contractual constraints designed to mitigate information asymmetry. He finds that the financial health of the contracting parties, the uncertainty of the borrower's credit quality, and the purpose of the renegotiation govern the timing of this process. Furthermore, temporal dependence reflects a decline in information asymmetry during the relationship so that lenders can write more efficient contracts and rely more on observable signals of borrower quality when amending the contracts.

Although scarce, these empirical results tend to support theoretical findings showing that loan renegotiations signal decreasing information asymmetry between the borrower and the lender. A positive shock to the borrower modifies his bargaining power allowing easing initial loan agreement restrictiveness. This initial restrictiveness can be considered as a signal of borrower quality and hence be related to the large empirical literature on bank loan's "specialness", which shows that announcements of bank loan agreements are associated with positive abnormal returns for borrowers on average[5].

---

[5] In contrast, announcements of SEO (seasoned equity offerings) generate an average negative abnormal return, whereas announcements of public bond issues generate zero or slightly negative equity returns, according to previous research.

According to the seminal contributions by Diamond (1984, 1991) and Fama (1985), financial intermediaries are considered as efficient in evaluating, screening and monitoring borrowers. Thus they play a specific role in managing the problems resulting from imperfect information on firms. Hence, debt plays an important role in shaping corporate behavior because it influences several problems steaming from information asymmetry between various stakeholders of a firm, such as reducing adverse selection between insiders and outsiders or moral hazard in the shareholders-managers relationship, but also increasing agency costs in the shareholders-debtholders relationship (Jensen and Meckling 1976; Ross 1977; Jensen 1986). Furthermore, bank loans, or debt more generally, can create value by reducing overinvestment by non-congruent managers (Jensen and Meckling 1976) or by giving a manager the opportunity to signal the quality of the firm and his willingness to be monitored by lenders (Diamond 1991). As banks are believed to produce valuable private information regarding borrower's risk profile and quality, bank loan announcement convey valuable information to the market about the borrower's financial situation. Effectively, bank loans are considered as "special", starting with the seminal work of James (1987) who finds a sizeable average excess return following announcements that firms have signed a bank loan agreement[6].

But what stock market reaction to a bank loan renegotiation announcement can we expect? One can first consider that loan renegotiation is informative per se because it signals the accrual of new information in the course of the borrower-lender relationship. Hence, a significant stock market reaction can be expected. Second, a decrease in information asymmetry in the borrower-lender relationship should enhance the certification role of the amended loan, leading to a positive stock market reaction. Indeed, Roberts (2012) reports that lenders learn through ex post renegotiation the quality of the borrower allowing to improve the efficiency of the initial contract over time.

---

[6] Lummer and McConnell (1989) report significant average excess returns for favorable loan revision announcements while Slovin et al. (1992) show that bank loan announcements are particularly good news for firms with severe information asymmetry, such as small firms. According to Best and Zhang (1993), firms that face greater earnings uncertainty and lack sufficient evaluation and monitoring by other stakeholders benefit most from bank loan announcements. Higher positive excess returns following loan announcements are also associated with more reputable lenders (Billett et al. 1995).

However, the stock market reaction can differ according to the type of shock (good or bad) to the borrower and the type of new information (good or bad) available to the lender. In the case of a good state of the world and good new information, the bargaining power shift should be more favorable to the borrower translating into more advantageous terms of the amended loan contract. Hence, stock market reaction should be positive if such amendments occur. On the contrary, less advantageous terms of the amended loan could signal a bad shock and bad news, leading to a negative borrower's abnormal return.

According to Roberts (2012), lenders demand strong control rights throughout the lending relationship because the incentives for borrowers to engage in ex post moral hazard are persistent. However, financial weakness of the borrower could accelerate the renegotiation because it has stronger incentives to engage in moral hazard. Thus early information acquisition through renegotiation should mitigate the potential for ex post moral hazard. Hence, one can also expect to find a positive stock market reaction to early renegotiations or frequently renegotiating firms. Such renegotiations could also signal earlier or more frequent information update within the borrower-lender relationship allowing for more efficient financial contracts. A similar abnormal return sign can be expected when a larger number of loan tranches are amended or when the renegotiation process leads to several types of amendments if we consider the quantity of amendments or the diversity of amendments as proxies for greater information revelation.

3. Empirical strategy

In this section, I start with a presentation of the methodology used to compute abnormal returns and the subsequent univariate and multivariate analyses. A description of the data collection and management process in order to obtain my sample follows.

3.1. Methodology

I use a standard event study methodology to compute the abnormal returns of listed borrowing companies which renegotiate their loans in order to investigate the impact of bank debt renegotiations on shareholders' value.

First, I need to identify the event dates. I consider a loan amendment (i.e. renegotiation) as an event and use the announce / declared date from Bloomberg Professional Terminal Server (Bloomberg) as day 0. I exclude all contaminated dates, i.e. when another major event for the company occurs (such as an earnings call, sales release or analyst, investor and shareholder meeting) two days before and two days after day 0. I also drop all the clustered amendments when different events (i.e. loan renegotiations) for the same borrower are within a range of two days one from another since I cannot isolate the company's return in such conditions. This conservative procedure reduces considerably the sample size.

Second, I need to apply a proper method to estimate the abnormal returns in a multi-event and a multi-country setting. Indeed, companies can have several consecutive loan renegotiations and they are from different countries. I follow Fuller et al. (2002) for the multi-event aspect and estimate the abnormal returns using a modified market model defined as $AR_i = R_i - R_m$, where R_i is the return on company i and R_m is the market index return[7]. For the multi-country setting I rely on Campbell et al. (2010) who show that the use of local-currency national market indexes are sufficient. Therefore, I use the main stock market index for each country in my sample as a proxy for the market index return[8].

I compute a three-day period CAR (-1, 1) and consider it as a proxy for shareholders value. In my univariate analysis I rely on t-tests to assess if the stock market reaction is significant for various characteristics of loan renegotiations. I also consider several loan agreement, country and borrower characteristics which might affect abnormal returns.

Finally, in the multivariate case, I perform the following regression:

---

[7] I do not estimate market parameters based on a time period before each loan renegotiation since for frequent renegotiating companies there is a high probability that previous amendments would be included in the estimation period making beta estimations less meaningful. Furthermore, Brown and Warner (1980, 1985) show that for short-window event studies, weighting the market return by the firm's beta does not significantly improve estimation.

[8] The main stock market indexes (with country codes in parentheses) are : ATX (AT), BEL-20 (BE), SMI (CH), CSE (CY), PX-50 (CZ), DAX (DE), OMXC20 (DK), OMXT (EE), IBEX35 (ES), HEX (FI), CAC40 (FR), FTSE (UK), BUX (HU), ISEQ (IE), MIB (IT), LUXX (LU), OMXR (LV), MSE (MT), AEX (NL), OSEOBX (NO), WIG (PL), BET (RO), RTS (RU), OMXS30 (SE), SBITOP (SI), ISE100 (TR), PFTS (UA).

$$CAR(-1,1) = \alpha + \beta \times Amendment\ variables_i + \gamma \times Loan\ variables_i$$

$$+ \delta \times Country\ variables_j + \theta \times Borrower\ variables_i + \varepsilon_i$$

where the main focus is on the amendment variables. As in Roberts (2012), the level of analysis is the loan tranche. I use OLS regressions with robust standard errors clustered at the company level. I test several specifications including loan country and borrower variables separately or jointly. I control for borrower's industry sector, loan currency, and renegotiation year fixed effects in each regression.

3.2.   Data

I start by extracting all bank loan amendments (i.e. renegotiations) for European companies from January 1999 to June 2011 using the Bloomberg Professional Terminal Server (Bloomberg). The initial data set contains the name of the company, unique loan tranche(s) identifier(s), announce / declared date of the event, undertaken action types (such as changes to loan facility or tranche amount, outstanding amount, maturity, covenants or pricing grid), and, if applicable, old and new terms of the contract, which refer to any quantitative changes to an amount or a maturity.

Using the unique loan tranche(s) identifier(s) I merge the amendments dataset with the loan agreement characteristics at origination, also extracted from the Bloomberg[9]. This allows me to enrich the data with information such as the loan and tranche(s) amounts, spread, maturity, type of loan, loan purpose, the existence of covenants and/or collateral, etc. I also gather information on main bank lending pool characteristics, such as the number of lenders, if the loan is syndicated or bilateral, and the percentage of lead banks in the pool.

Using the borrowing company ticker allows me to extract its daily stock prices over the entire time span of the sample from Factset. I also extract daily values of main local stock market indices for each country in the sample for abnormal returns' calculations. This limits the final sample to listed companies only. Using the borrower's ticker I also use Factset to gather accounting variables to

---

[9] I also use these identifiers to merge the dataset with information on corporate defaults from Bloomberg in order to exclude loan amendments related to borrower's distress. I identify a residual percentage (less than 1%) of the initial dataset as corporate default renegotiations and eliminate them.

control for the company's characteristics, such as its sales or return on assets. I also gather information on borrowers' ratings from Bloomberg.

Finally, I use Cihak et al. (2012) Global Financial Development Database (World Bank) and Djankov et al. (2007) databases to control for country variables such as their private credit or corporate bond markets development and "law and finance" characteristics such as their legal origin or creditors' rights protection.

Due to my conservative procedure for the identification of events and data availability regarding stock market prices I end up with a final sample containing 393 companies which renegotiated 465 loan facilities or 883 loan tranches for a total of 1,367 observations. The timespan of my sample goes from January 1, 1999 until June 30, 2011 and covers 25 European countries.

4. Results

In this section I first discuss descriptive statistics to get a better insight into the loan renegotiation process dynamics. Next I focus on the results of a univariate analysis to check which particular features of the renegotiation process, but also of the initial loan agreement terms, country and borrower variables, are associated with a significant abnormal return around the bank loan renegotiation date. Then, I perform a multivariate analysis where I regress the three day window borrower CAR on loan amendment, initial financial contract, country and borrower characteristics. Finally, I provide several sensitivity analyses.

4.1. Descriptive statistics

Table 1 presents the sample composition by borrower's countries. A total of 25 countries are represented with a majority from Western Europe and 13 out of the 17 members of the Euro Zone, although I also include Russia and Turkey in the sample. We remark that more than 30% of loan renegotiations are for UK, followed by France with more than 16%. Netherlands, Germany, Spain and Italy account each for 5% to 10% of the renegotiations.

Figure 1 presents the distribution of renegotiations by year. I remark that loan renegotiations start to increase in 2007 with a sharp jump in 2009 and a slow decrease in 2010. Approximately 3 out

of 4 renegotiations occur in 2009 or 2010. The small number of renegotiations in 2011 is partially explained by the fact that I only have data until June 30, 2011, but could also signal a decrease in the renegotiations' dynamic. This graphical analysis may suggest that the strong pick up in loan renegotiations starting in 2009 could be attributed to the Global Financial Crisis and the beginning of the Eurozone Sovereign Crisis[10]. Thus, I can expect to encounter more renegotiations due to negative shock or news to the borrowers in my sample.

Figure 2 provides the breakdown of different amendment types (which are not necessarily mutually exclusive for a given loan or borrower) in the sample[11]. We remark that the major type of amendment is Maturity Change (25%), followed by Tranche and Facility Amounts (19% and 17% respectively). Main other material amendments are Covenant Financial (8%), Pricing Grid (7%), and Outstanding Amount (6%). Non material amendment such as Definition Change represents 13% of the sample. For comparison, major changes in Roberts (2012) sample are covenants, spread, maturity, and amount (34%, 26%, 24%, and 23% respectively). Hence, except for change in covenants, our sample is similar to their US sample in terms of types of loan amendments.

Figure 3 presents the distribution of renegotiations by borrower and by loan tranche. 66.37% of the borrowers renegotiate their loan(s) only once and 80.47% of the loan tranches are also renegotiated only once. However, although residual, a proportion of borrowers renegotiate seven times (0.15%). On average, a borrower renegotiates 1.5 times and a loan tranche is amended 1.27 times (see Table 2). Furthermore, a typical borrower renegotiates more than 6 tranches with 2.35 different types of amendments on average. The initial renegotiation occurs after 2.44 years since loan origination for stated original maturity of almost 6 years. For frequently renegotiating borrowers, the average duration between each renegotiation round is 7.89 months. For comparison,

---

[10] Let recall that 3.5 months before the beginning of 2009, Lehman Brothers bankruptcy sent shockwaves across the financial sector worldwide. As to the European context, 2009 marks the beginning of the Greek crisis with downgrades of its sovereign rating to below investment-grade in December 2009 and to junk in April 2010. This is also the period of first austerity measures implemented by various countries of the Euro Zone as well as massive interventions by central authorities, such as the ECB, and the implementation of the Securities Market Programme and the European Financial Stability Facility.
[11] A brief description of amendment types is provided in the appendix.

a typical US loan is renegotiated 2.7 times for a maturity at origination of 4.25 years while only 1/3 of borrowers renegotiate only once. Hence, a typical European borrower renegotiates less frequently as compared to a US company but does it quite early in the life of the loan.

Regarding quantitative changes, I find that the average tranche amount amendment is the most important. It is positive and represents more than 28%, which translates into an increase of 100 MLN USD when taking the average tranche amount as a benchmark. The increase for a facility amount amendment is less important (7.2% on average or almost 78 MLN USD). The change in loan outstanding is of a similar magnitude but negative, translating into a reduction of 1 MLN USD if we take as a benchmark the total amount of loans outstanding by borrower[12]. Change in loan maturity is more substantial, equal to one year and a half or more than 25% of the maturity at origination. For comparison, Roberts and Sufi (2009) find an average change in amount and maturity of 193 MLN USD and 2.127 years. Furthermore, the breakdown of positive and negative changes of loan or tranche amounts and maturity are similar to Roberts (2012), equal to +60.67% and -32.49% and +21.76 months and -10.07 months respectively. Overall, I uncover that bank loan renegotiations in Europe imply substantial changes to major loan terms such as the amount or maturity, similar in magnitude as in US.

Finally, I discuss the remaining descriptive statistics in Table 2. The average facility amount at origination is quite large exceeding 1 BLN USD, with a loan spread roughly equal to 213 bps. The figures for loan amounts are larger than for US as reported by Roberts and Sufi (2009) or Roberts (2012) but spread and maturity are more similar. A majority of renegotiated loans had multiple tranches and were syndicated at origination. This could explain the large amounts as well as the less frequent renegotiation dynamic as well as the complexity of amendments (6 tranches and more than 2 types of amendments on average). The breakdown by loan type (term vs. revolver) is symmetric (40% of sample each), while half of the loans were secured and 40% had covenants. An average borrower has issued more than 4 loans in the past and has a total outstanding amount on all of his

---

[12] However this benchmark is imperfect as it corresponds to all the loans outstanding by borrower and not only the loan concerned by the renegotiation.

loans equal to 15.5 MLN USD. Bank lending pools are quite large with more than 12 lenders on average (roughly the double of lenders reported for US by Roberts and Sufi (2009) or Roberts (2012)), of which more than half can be considered as lead banks. This figure is also linked to the large proportion of syndicated or club deals in my sample.

A majority of renegotiating borrowers is from French or English law countries, with an average creditor rights index at 2.4 and with relatively well developed financial sectors regarding corporate bond and stock markets, as well as bank credit. This is a somehow natural consequence of the sample composition where nearly half of renegotiations concern firms from UK and France. It also suggests that firms in my sample should have an easy access to outside options in terms of external financing.

Finally, I am also able to report several borrower variables on a reduced sample due to this type of data availability. Companies are large (almost 14 BLN USD of sales) with average leverage below 1/3 and negative return on assets but with market to book ratios at 3. A vast majority of these companies were never rated by Moody's or S&P's. Firms in my sample are much larger with greater growth opportunities and less frequently rated but have a similar leverage when compared to Roberts and Sufi (2009)[13].

4.2.   Univariate analysis

Results are displayed in Table 3. For each variable of interest I present the mean and median CAR (-1,1) as well as the t-test statistic to assess if the abnormal return is significantly different from 0 or if relevant, the difference in abnormal returns for two variables is significantly different from 0.

The first part of the table presents the results for main amendment types[14]. Only four out of ten amendment types imply a significant average abnormal return, with the largest and positive CAR for financial covenants amendment. All else equal, a change in financial covenants leads to an

---

[13] Furthermore, main loan purposes are general corporate (42%), debt refinancing (32%), and acquisition (11%) with main loan currencies being EUR (50.81%), GBP (22.69%), USD (19.02%). The main industry sectors are consumer (cyclical & non-cyclical) (26.29%), industrial (20.48%), and communications (14.17%).

[14] I exclude residual amendment types such as Borrowing base amount, LOC amount, and Prepay amount.

increase of borrower's abnormal return by 14%. Changes in loan fee[15], tranche amount and (non-material amendment) definition change imply each a negative abnormal return. These first results point that not all amendment types are perceived as informative by shareholders. Financial covenants are the main contractual mechanism aiming at restricting borrower's behavior and mitigating moral hazard. They also represent the allocation of stronger control rights to the lender at loan origination. The renegotiation of financial covenants implies a redistribution of the bargaining power among the contracting parties, usually in favor of the borrower, following the accrual of new information reducing informational frictions in the lending relationship.

The negative result for a change in tranche amount is to be related to the second part of the table where I investigate in more details several amendment characteristics. Indeed, I find that both changes (positive or negative) in facility or tranche amount have significantly different negative CAR although positive changes imply an almost null stock market reaction. Hence, the modification of borrower's financial structure is considered as bad news by the investors, especially if the loan amount is reduced, which means less funding for the company and thus less prospects for growth and profitability.

The other important results concern the frequency and scope of renegotiations. I find negative abnormal returns when many tranches are renegotiated, when the renegotiation occurs late in the life of the loan and when the borrower renegotiates frequently. On the contrary, unique renegotiations are associated with a positive CAR. These results partially validate my hypotheses. On one hand, early information acquisition is perceived as less negative by investors as compared to late renegotiation. Hence, shareholder seem to favor early modification of the initial loan agreement to reflect as fast as possible new information and bargaining power repartition as well as a (eventually) more efficient contract. On the other hand, many amended tranches or frequent renegotiations are considered as bad news by shareholders. These results do not support the hypothesis that large or frequent information updating by the lender is beneficial. Many amended tranches could signal a

---

[15] This particular result should be taken with caution as change in loan fee occurs for a residual portion of the sample.

large and complex deal and thus a costly renegotiation process while frequent renegotiations may cast doubts regarding firm's viability as well as lender's screening and monitoring capacities, hence eroding the certification role of loan amendment for shareholders.

In the third part of the table I present results for loan variables at origination. I find that loans with smaller spreads and shorter maturities are less negatively perceived by investors when renegotiated. These contractual features are usually associated with less risky borrowers thus the result for abnormal returns is not surprising. Interestingly, other major contract terms such as amount, collateral or covenants do not generate significant abnormal returns. I also find that syndicated loans or loans funded by a large pool of banks imply a negative CAR which can be related to the complexity of loan renegotiation in such cases with more coordination problems due to the need to reach an approval level by sometimes all the members of the syndicate. Renegotiations by borrowers with a large amount of loans outstanding exhibit positive CAR which is consistent with the fact that the informative role of renegotiation is even more important when the outstanding loan amount is larger.

In the fourth part of the table I display results for variables related to the legal and financial development of the borrower's country. The most significant result is for French legal origin with a large negative CAR. As French law is usually the least protective of the shareholders, the latter could sanction bank debt renegotiation in such a legal environment where their interests might not be well protected, especially during an important event for the company such as a loan renegotiation. Other characteristics such as creditor rights protection or financial development are not associated with significant abnormal returns. Let also note that the stock market reaction do not differ during the Global Financial Crisis nor when the renegotiating company is from the Eurozone or not.

Finally, in the fifth and last part of the table I test the average CAR for selected borrower variables at the time of loan renegotiation. The average CARs are significant for all borrower characteristics, and unsurprisingly, stock market perception is more negative when smaller companies (in terms of sales), with smaller leverage, RoA and market to book renegotiate their

17

loan(s). Smaller, less profitable borrowers with fewer growth opportunities and less leverage are thus sanctioned by investors. Furthermore, whether the borrower has always been rated by a major rating agency or not yield a very similar significant and negative abnormal return. Hence, the opacity or transparency of the renegotiating firm doesn't change stock market reaction, which is negative in both cases.

Overall, according to my univariate results, to make of a loan renegotiation a "success" for shareholders, companies with large amount of outstanding loans should renegotiate very rarely bilateral loans with short maturities and should privilege amendment to financial covenants.

4.3.   Multivariate analysis

In this section I present and discuss multivariate results from OLS regressions using the three day window CAR as explained variable. I proceed in four steps. First I provide the results of regressions with amendment characteristics as explanatory variables (Table 4). Then I also include loan variables at origination in Table 5. Third, I also take country characteristics into account (Table 6). Finally, in Table 7 I include borrower variables[16].

Results in Table 4 confirm most of the univariate results regarding different amendment types. Changes to financial covenants exhibit the largest significantly positive coefficients across all specifications, translating into an increase in CAR between 10% and 13%. Changes to tranche amount, loan fee and definition change, as well as non-financial covenants have virtually all significant and negative coefficients, the largest impact on abnormal return coming from non-financial covenant, although significant at the 10% confidence level only.

Results for other amendment characteristics also largely confirm univariate findings. Large and positive change in loan maturity is not significant while positive change in facility or tranche amount is now significantly positive, with an almost 10% increase in CAR. Hence, contrary to the univariate

---

[16] Due to data availability for balance sheet variables, I cannot include all the variables (amendment, loan, country and borrower) in the regressions. I thus provide results taking amendment and borrower characteristics only. Furthermore, including variables computed from the existence or absence of a rating does not alter other coefficients while the effect of rating variables is never significant. Therefore I do not report these results although they are available upon request.

analysis, a positive amendment to loan amount is now positively perceived by investors, signaling the accrual of new (and possibly advantageous) information. Renegotiation frequency has an important and negative influence on shareholders' value. Although significantly negative, the magnitude of coefficients for renegotiation complexity (number of amended tranches and number of amendment types) is much lower. Duration until renegotiation exhibits a significant and negative coefficient as well, while duration between renegotiation rounds is not significant. When taken all together, only the number of amended securities becomes not significant (column I.1)[17]. Hence, as in the univariate case, investors sanction frequent (and costly) renegotiations with numerous amended tranches and amendment types which arrive late in the life of the loan. Such renegotiations are costly and cast doubts on lender's capacity to screen, monitor and write more efficient contracts, which erodes its certification value. Early renegotiation allows using new information and bargaining power repartition faster to adapt financial contracts more efficiently.

These findings remain robust to the inclusion of loan characteristics at origination (Table 5), with the notable exception of the number of amended securities, which becomes not significant in specification E.2 but significant and positive in specification I.2. Furthermore, the duration between renegotiation rounds becomes significant and positive. This result is consistent with the "preference" of investors for rarely renegotiating borrowers. Although not displayed, amendment types coefficients remain robust, except for definition change and non-financial covenants which become not significant. Regarding loan variables, three have a significant impact on abnormal returns. Loans with multiples tranches and with covenants have positive coefficients while Past loan issues has a negative coefficient. The effect of Multiple tranches is to be related to the change in the effect of the number of amended securities. Tranching is a frequent technique for large (especially syndicated) loans offering a wider "menu" for potential investors and thus greater diversification and flexibility. This could explain the positive impact of this variable if the flexibility to renegotiate multiple tranches is larger than its renegotiation costs. The positive effect of covenants is related to the positive

---

[17] Due to scarce data availability for Duration between renegotiations variable I am unable to include it with other amendment characteristics variables in specification I.

influence of covenants amendments following its role in controlling borrower behavior, limiting asset substitution, and mitigating moral hazard, all in favor of shareholders' interests. The negative effect of past loan issues can be considered as a sanction by the stock market of the lender's misjudgment in its initial financial contract for a borrower who should be better known on the credit market.

When including country variables at time of loan renegotiation (Table 6), results for amendment characteristics remain robust while the magnitude of the coefficients increases. For instance, a positive change in loan amount translates now into an increase of almost 13.5% in the CAR. Although not displayed, amendment types and loan characteristics at origination variables also remain robust, with the notable exception of Prepay amount amendment type which becomes significant and positive. Among all the country characteristics, only Private credit exhibits a significant and negative coefficient. A greater credit markets' development provides more outside option in terms of external financing for borrowers. Hence, investors might sanction loan renegotiation considered here as a redistribution of bargaining power, more favorable for the borrower if he has more financing opportunities, and thus eroding lender's power in terms of monitoring. This can negatively affect shareholder's interests and thus value.

Finally, the last series of results take borrower variables at time of renegotiation into account (Table 7). Due to data availability for balance sheet variables I am able to provide results only for specifications displayed in the table[18]. Borrower's leverage, profitability and, to a lesser extent, growth opportunities have significant and positive influence on abnormal returns at time of loan renegotiation. These results are consistent with the univariate analysis. Loan renegotiations by borrowers with a better risk profile are expected to signal the accrual of positive new information, translating into more efficient financial contracts and thus into larger certification value, appreciated by investors. Amendment types exhibit similar coefficients as in previous tables, as well as amendment characteristics variables, with the notable exception of borrower's renegotiation frequency and the number of amendment types, which become not significant. Hence, in

---

[18] These results should be interpreted with caution because the sample size is drastically reduced due to balance sheet data availability.

specification I.4 when all variables are taken into account, only the number of amended tranches and the duration until renegotiation exhibit significant coefficients, as in previous tables.

Overall, multivariate results confirm univariate findings and support theoretical hypotheses regarding the impact of loan renegotiations on shareholders' value. Among material amendment types, change in financial covenants and positive change in loan amount imply the major significant and positive impacts on abnormal returns according to the signaling and certification role of loan renegotiation. Frequent and late renegotiations with numerous different amendments are associated with a significant and negative stock market reaction. This result can be explained by the costs and complexity of the renegotiation process, the dynamic of new information accrual, and the perception of bank's monitoring effort and borrower's moral hazard by investors. Most of these results are robust to the inclusion of loan, country and borrower variables.

4.4.   Sensitivity analyses

This section is devoted to a series of sensitivity analyses of main multivariate results. My objective is to test if the impact of main amendment characteristics on abnormal returns is sensitive to different factors related to the temporal and geographical composition of the sample as well as different renegotiation dynamics and loan characteristics. The choice of these factors is mostly dictated by their significance in the univariate or multivariate analysis as well as theoretical hypotheses. I perform the same type of regression as for Table 6 (i.e. including loan amendments, characteristics at origination and country variables) as it seems to be the most complete model I can provide. Moreover, I focus on three specifications in particular: with positive change in loan amount (B), change in maturity greater than one year (C), and with all loan amendment characteristics altogether (I) [19]. I present the results in Table 8, which is divided in three panels (1, 2, and 3). Each time I compare them to results obtained in table 6 which serve here as a benchmark. When significant and relevant changes occur, I also discuss unreported results concerning loan amendments and loan characteristics at origination as well as country variables.

---

[19] Due to data availability, I am not always capable of providing results for all specifications.

In Panel 1, I deal with loan renegotiations which occurred during the Global Financial Crisis (after September 2008), from all the countries in the sample excluding UK, and from countries with weak creditor rights (creditor rights index below 3). Results are very similar during the Crisis period (except for the number of types of amendments variable which becomes not significant) with larger coefficients suggesting that renegotiation costs and concerns regarding borrower moral hazard and lender monitoring are reinforced during times of financial distress and larger information asymmetries. However, change to covenants and covenants at origination are not significant anymore whereas lead banks variables become significantly positive. Hence although the dynamics of renegotiation have a similar impact on abnormal returns, the particular signaling role of covenants does not matter or do not function during a period of more bad news. What matters is a larger arranger / agent section of a syndicate which is expected to better handle a renegotiation process.

The results for a subsample excluding borrowers from the UK are also similar to main results, with the exception of positive change in loan amount variable which becomes not significant. Coefficients for other (unreported) variables remain also similar. Hence, the large proportion of loan renegotiations for borrowers from UK (30% of the sample) which has eventually a specific financial and legal environment as compared to other countries do not significantly affect main results.

In legal environments with weaker creditor rights, results are relatively similar as well, with the notable exceptions of the positive change in loan amount and renegotiations by borrower variables (not significant). I also note that a vast majority of coefficients for amendment types become significantly positive, while the number of lenders and creditor rights index are now significant and negative. It appears that the full spectrum of amendments becomes more informative in countries where lenders are less protected by law, and the decision to renegotiate might be more challenging for them as opposed to more creditors' friendly environments. A more concentrated banking pool is thus more appropriate to handle efficiently a complex renegotiation process to avoid coordination and free riding risks and to implement tighter monitoring of the borrower.

In panel 2, I present results for loan renegotiations for borrowers who renegotiated only once and where renegotiation occurs early in the life of the loan (cutoff value equals 2 years). Unique renegotiations regressions exhibit similar coefficients as main results with the notable exception of large change in maturity which becomes significantly negative, while the coefficient for positive change in loan amount largely increases to an impact of 24% on the CAR (hence 10 points more than for specification B.4 in table 6). Other coefficients remain similar as well while syndicated or club deal becomes significant and negative. Hence the "good news" signal of a unique positive change in loan amount is greatly increased in this case whereas the diffuse organization of the banking pool seems to be sanctioned by investors. They rather favor bilateral loans where the value of relationship lending, screening and monitoring, and thus capitalization of information accrual is perceived as more suitable to write more efficient contracts following renegotiation. I draw similar conclusions from early renegotiations regressions. Here the coefficient for positive change in loan amount is even larger, almost the double of the coefficient in specification B.4 in table 6. Other variables have similar coefficients as in main regressions, while syndicated or club deal becomes negative as for unique renegotiation regressions.

Panel 3 displays results for loan renegotiations without covenants in the initial loan agreement, which were not bilateral loans at origination, and to borrowers who were never rated (at origination and at renegotiation) by Moody's or S&P's. The absence of a major ex post contractual mechanism to monitor the borrower leads to several changes in the coefficients: large change in maturity becomes significantly negative, while renegotiations by borrower, number of amended tranches and duration between renegotiations becomes not significant. Extended maturity at renegotiation while no covenants were attached at origination can be perceived by investors as a negative signal regarding lender's monitoring effort. The other coefficients remain similar as in the main regressions with the exception of syndicated or club deal, number of lenders and creditor rights. The first two variables are negative and positive respectively, suggesting that shareholders prefer bilateral renegotiations or, if the loan is syndicated, a larger proportion of lead banks who are

usually borrower's relationship lenders. This particular lending organization structure, with more intense relationship, information production and monitoring could offset the absence of initial covenants. Creditor rights become positive which is not surprising because of the absence of contractual mechanism to protect the interests of creditors (and by extension those of shareholders).

Regressions for loan renegotiations of syndicated or club deals provide very similar results as in main regressions, hence the impact of renegotiation dynamics on shareholders' value is not affected by the organization of the lending pool. Other coefficients remain also similar, with the notable exceptions of loan amount and stock markets which become significant and positive. The former is related to the fact that syndicated deal are usually very large while the latter can be explained by the fact that borrowers who obtain syndicated loan are usually large and well established companies who have more outside options to refinance, including stock markets.

Overall, my main conclusions drawn from univariate and multivariate analysis regarding the effect of loan renegotiations on shareholders' value remain quite robust to changes of sample composition in terms of time, geography, legal environment, renegotiation dynamics, and loan characteristics at origination.

5. Conclusion

Using a large sample of bank loan renegotiations in Europe, I find that firms renegotiate mostly their loan amounts, maturity and covenants. These renegotiations occur early in the life of the loan (before half of the original maturity is reached), as in the US, but are less frequent. Loan amendments lead to substantial changes in the loan terms: on average the tranche amount is increased by 100 MLN USD while the maturity is extended by 1.6 years.

I show that the renegotiation of financial covenants is the most significant amendment type, leading to an increase of borrower's three-day period cumulative abnormal return by 10% to 15%. Shareholders 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

borrower's quality, the accrual of new information, and thus the reduction of information asymmetry between the borrower and the lender, allowing writing more efficient contracts. Furthermore, stock market reaction to loan renegotiation is positive when bilateral loans with short maturities and few amended tranches are renegotiated, as well as when larger and leveraged firms with more growth opportunities engage into the renegotiation process. Most of these results are robust to the inclusion of loan, country and borrower variables, as well as to several sensitivity analyses, including changes in the temporal or geographical composition of the sample or focusing on sub-samples with particular amendment or loan characteristics.

Overall, with this first empirical analysis of bank loan renegotiations in Europe, I show that renegotiating financial contracts matters for shareholders. Amendments imply sometimes very large changes in the borrower's financial structure. They also reflect the evolution of information asymmetry, moral hazard, monitoring, and bargaining power. In other words, renegotiation shapes the borrower-lender relationship and thus the efficiency of the financial contract. Hence, the dynamic of the renegotiation process matters as well, especially its timing, frequency and scope. All these features should be taken into account by both parties to the contract with respect to shareholders' value.

Appendix

<u>Brief description of amendment types</u>

- Borrowed 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
- Covenant 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)
- Covenant 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)
- 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)
- 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
- Loan Fee = change to loan fees (such as upfront fee, commitment fee, facility fee, etc.)
- Maturity Change = change to loan maturity
- Outstanding Amount = change to loan outstanding amount
- Prepay Amount = change to prepay amount
- Pricing Grid = change to pricing grid such as altering the level of applicable margin contingent on borrower's leverage (for instance when borrower's average leverage is greater than 1.75 then the applicable margin equals Libor + 2.00 + Prime rate + 0.25 + Commitment fee + 0.50 whereas when its average leverage drops below 1.00 then the applicable margin becomes Libor + 1.25 + Prime rate + 0.00 + Commitment fee + 0.25)
- Tranche Amount = change to tranche amount

References

Best, Ronald, and Hang Zhang (1993), "Alternative Information Sources and the Information Content of Bank Loans," *The Journal of Finance*, 48(4), 1507–22.

Billett, Matthew T., Mark J. Flannery, and Jon A. Garfinkel (1995), "The Effect of Lender Identity on a Borrowing Firm's Equity Return," *The Journal of Finance*, 50(2), 699–718.

Brown, Stephen J., and Jerold B. Warner (1980), "Measuring security price performance," *Journal of Financial Economics*, 8(3), 205–58.

——— (1985), "Using daily stock returns : The case of event studies," *Journal of Financial Economics*, 14(1), 3–31.

Campbell, Cynthia J., Arnold R. Cowan, and Valentina Salotti (2010), "Multi-country event-study methods," *Journal of Banking & Finance*, 34(12), 3078–90.

Chava, Sudheer, and Michael R. Roberts (2008), "How Does Financing Impact Investment? The Role of Debt Covenants," *Journal of Finance*, 63(5), 2085–2121.

Cihak, Martin, Asli Demirgüç-Kunt, Erik H. Feyen, and Ross Levine (2012), "Benchmarking Financial Systems Around the World," *SSRN eLibrary*.

Dessein, Wouter (2005), "Information and Control in Ventures and Alliances," *Journal of Finance*, 60(5), 2513–49.

Diamond, Douglas W (1984), "Financial Intermediation and Delegated Monitoring," *Review of Economic Studies*, 51(3), 393–414.

——— (1991), "Monitoring and Reputation: The Choice between Bank Loans and Directly Placed Debt," *Journal of Political Economy*, 99(4), 689–721.

Djankov, S., C. McLiesh, and A. Shleifer (2007), "Private Credit in 129 Countries," *Journal of Financial Economics*, 84, 299–329.

Fama, Eugene F. (1985), "What's different about banks?," *Journal of Monetary Economics*, 15(1), 29–39.

Focarelli, Dario, Alberto Franco Pozzolo, and Luca Casolaro (2008), "The pricing effect of certification on syndicated loans," *Journal of Monetary Economics*, 55(2), 335–49.

Fuller, Kathleen, Jeffry Netter, and Mike Stegemoller (2002), "What Do Returns to Acquiring Firms Tell Us? Evidence from Firms That Make Many Acquisitions," *The Journal of Finance*, 57(4), 1763–93.

Garleanu, Nicolae, and Jeffrey Zwiebel (2009), "Design and renegotiation of debt covenants," *Review of Financial Studies*, 749–81.

Hart, Oliver, and John Moore (1998), "Default And Renegotiation: A Dynamic Model Of Debt," *The Quarterly Journal of Economics*, 113(1), 1–41.

James, Christopher (1987), "Some evidence on the uniqueness of bank loans," *Journal of Financial Economics*, 19(2), 217–35.

Jensen, Michael C. (1986), "Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers," *The American Economic Review*, 76(2), 323–29.

Jensen, Michael C., and William H. Meckling (1976), "Theory of the firm: Managerial behavior, agency costs and ownership structure," *Journal of Financial Economics*, 3(4), 305–60.

Lummer, Scott L., and John J. McConnell (1989), "Further evidence on the bank lending process and the capital-market response to bank loan agreements," *Journal of Financial Economics*, 25(1), 99–122.

Preece, Dianna, and Donald J. Mullineaux (1996), "Monitoring, loan renegotiability, and firm value: The role of lending syndicates," *Journal of Banking & Finance*, 20(3), 577–93.

Roberts, M.R., and A. Sufi (2009), "Renegotiation of financial contracts: Evidence from private credit agreements," *Journal of Financial Economics*, 93(2), 159–84.

Roberts, Michael R. (2012), "The Role of Dynamic Renegotiation and Asymmetric Information in Financial Contracting," *SSRN eLibrary*.

Ross, Stephen A. (1977), "The Determination of Financial Structure: The Incentive-Signalling Approach," *The Bell Journal of Economics*, 8(1), 23–40.

Slovin, Myron B., Shane A. Johnson, and John L. Glascock (1992), "Firm size and the information content of bank loan announcements," *Journal of Banking & Finance*, 16(6), 1057–71.
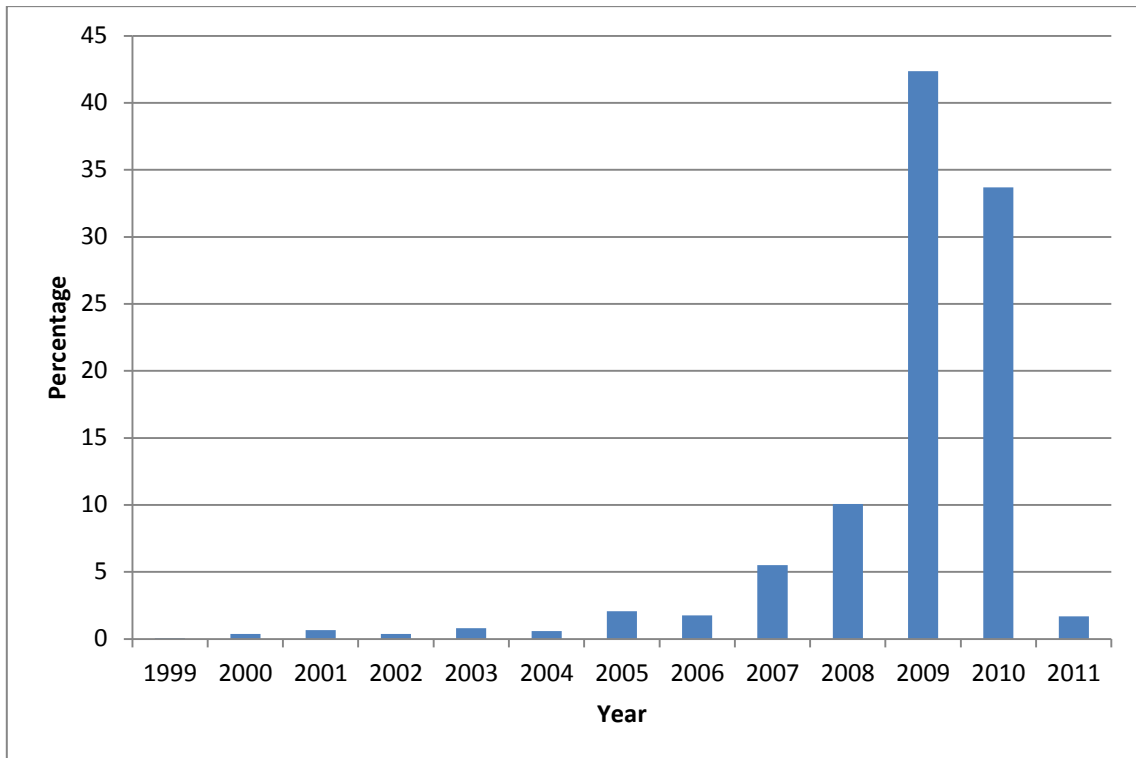
Figure 1 Distribution of bank loan renegotiations by year

This figure presents the distribution of loan renegotiations by year (for 2011: January to June).
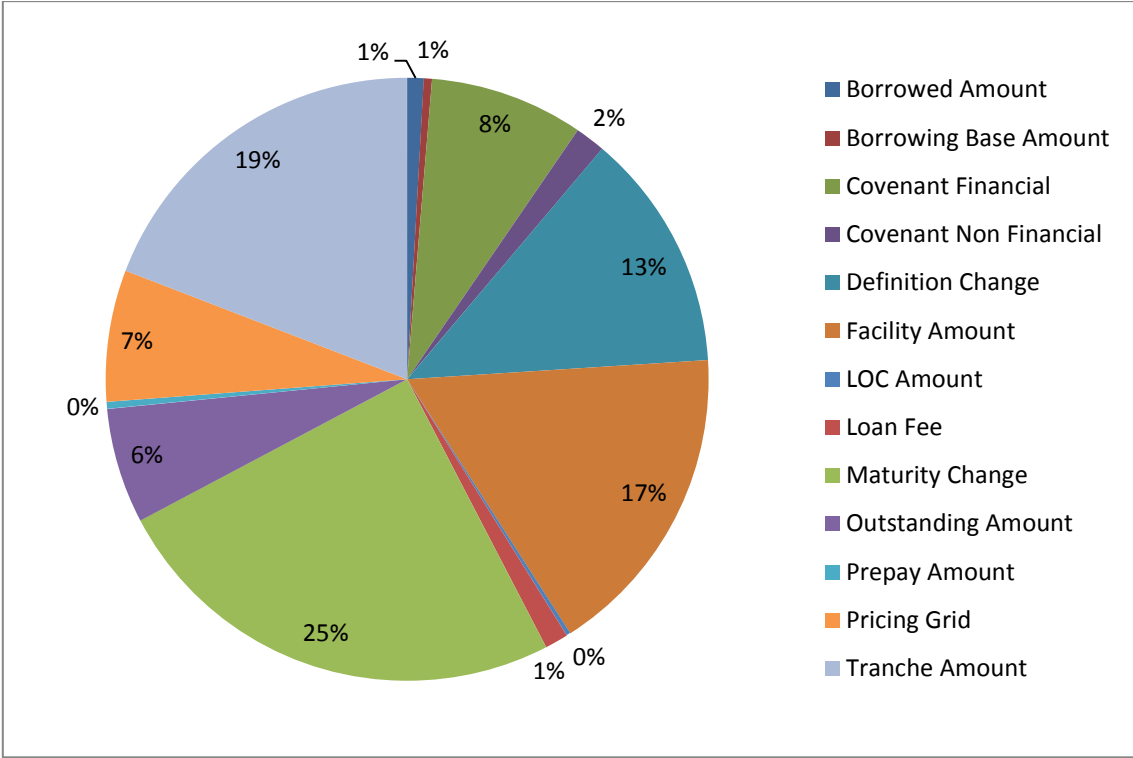
Figure 2 Breakdown of loan amendment types

This figure presents the breakdown of amendment types for all loan renegotiations.
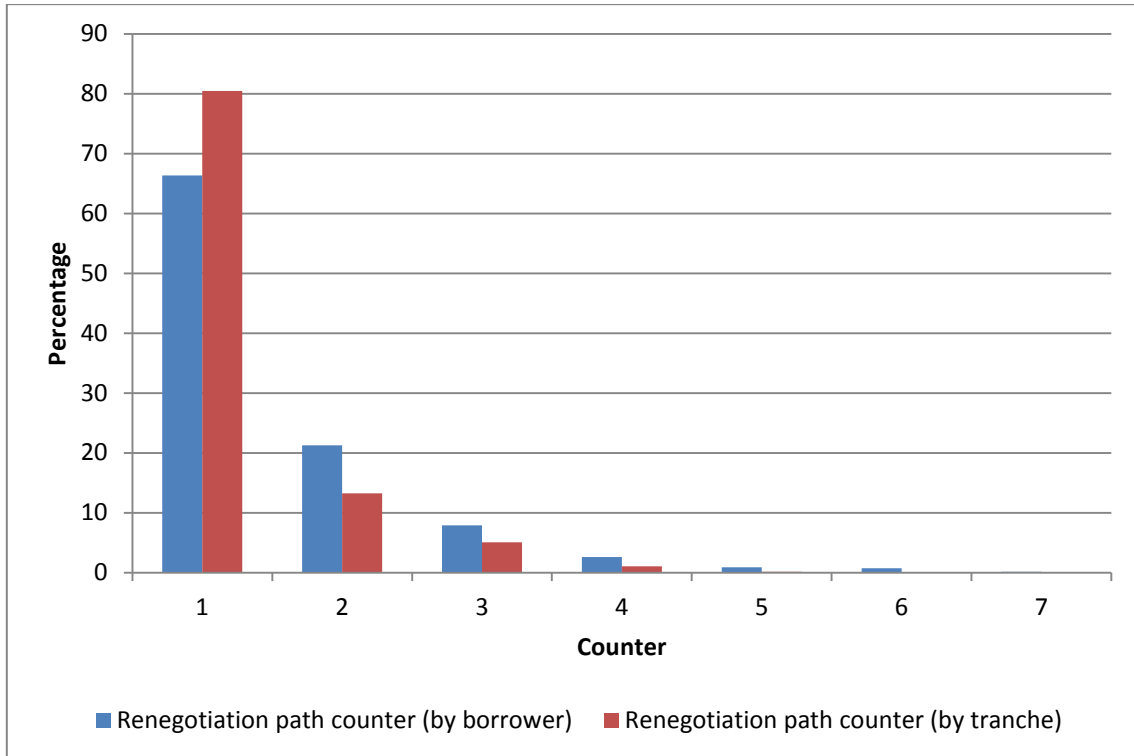
Figure 3 Distribution of renegotiations by borrower and by loan tranche

This figure presents the distribution of renegotiations by borrower and by loan tranche. For example, more than 65% of the borrowers in the sample renegotiate their loan(s) only once. 80% of the tranches in the sample are renegotiated only once.

This table presents the list of borrower countries in the sample with their respective percentage (Perc.), number of observations (Obs.), and number of tranches (N. Security ID), loans (N. Loan facility ID), and borrowers (N. Borrower ID).

Borrower country	Perc.	Obs.	N. Security ID	N. Loan facility ID	N. Borrower ID
Austria	0.95	13	5	3	4
Belgium	2.64	37	17	7	7
Cyprus	0.15	4	2	2	2
Czech Republic	0.22	3	2	1	1
Denmark	0.07	1	1	1	1
Estonia	0.29	4	2	1	1
Finland	1.32	18	13	8	7
France	16.08	219	139	59	51
Germany	7.05	96	58	32	27
Hungary	0.59	8	2	2	2
Irland	1.10	15	8	7	5
Italy	5.21	72	44	25	20
Latvia	0.29	4	2	1	1
Luxemburg	3.89	53	26	11	11
Netherlands	8.37	114	65	35	31
Norway	2.35	32	26	16	13
Poland	2.06	27	22	14	10
Romania	0.29	4	3	2	2
Russia	4.99	68	55	32	19
Slovenia	0.15	2	2	2	2
Spain	5.87	80	65	28	21
Sweden	0.95	13	11	6	6
Switzerland	3.45	45	33	17	12
Turkey	0.81	12	7	5	5
United Kingdom	30.84	423	273	148	132
		1367	**883**	**465**	**393**

Table 2 Amendment, loan, country and borrower characteristics

This table presents descriptive statistics for amendment, loan, country and borrower variables as well as their description. Amendment and loan characteristics come from Bloomberg while borrower characteristics come from Factset. Information on ratings come from Bloomberg. Country characteristics come from Djankov et al. (2007) and Cihak et al. (2012) Global Financial Development Database (World Bank). Country and Borrower characteristics are computed one year before the year of loan renegotiation. Lead banks include banks which titles include the terms: agent, arranger, book runner, manager, underwriter. Borrower balance sheet variables and ratios are from the fiscal year previous to renegotiation. For ratings variables I consider LT Local Issuer Credit or Senior Unsecured Debt ratings by S&P's or Moody's.

Variable	Description	Obs.	Mean	Std dev.
Loan amendment characteristics				
Renegotiations by borrower	Number of renegotiations by borrower	1367	1.530	0.930
Renegotiations by tranche	Number of renegotiations by tranche	1352	1.270	0.620
Number of tranches by borrower	Number of amended tranches by borrower	1352	6.230	5.160
Types of amendements by tranche	Number of different types of amendments by tranche	1352	2.350	2.100
Duration between renegotiations	Time between each renegotiation round (in months)	438	7.891	9.707
Change in facility amount	Change in facility amount (%)	229	0.072	0.475
Change in tranche amount	Change in tranche amount (%)	259	0.280	4.941
Change in amount outstanding	Change in loan amount outstanding (%)	46	-0.071	0.174
Change in loan maturity	Change in loan maturity (in years)	337	1.571	2.178
Duration until renegotiation	Time from loan origination until renegotiation (in years)	1367	2.447	1.758
Loan characteristics at origination				
Facility amount	Loan facility amount (in MLN USD)	1367	1 080.000	2 460.000
Tranche amount	Loan tranche amount (in MLN USD)	1367	360.000	904.000
Spread	Loan spread over benchmark rate (in bps)	629	212.850	190.560
Maturity	Time from loan origination until maturity (in years)	1367	5.984	2.777
Multiple tranches	=1 if loan has multiple tranches	1367	0.700	0.460
Bilateral loan	=1 if loan is a bilateral loan	1019	0.220	0.410
Syndicated or Club deal	=1 if loan is a syndicated or club deal	1019	0.780	0.640
Term loan	=1 if loan is a term loan	1367	0.390	0.490
Revolving loan	=1 if loan is a revolving loan	1367	0.380	0.480
Secured	=1 if loan is secured	1367	0.500	0.500
Covenants	=1 if loan has covenants	1367	0.400	0.490
Past loan issues	Number of past loan issues by borrower	1092	4.410	6.030
Loans amount outstanding	Total amount of loans outstanding by borrower (in MLN USD)	1092	15.500	103.000
Number of lenders	Number of lending banks by deal	1367	12.500	17.460
Lead banks	Percentage of lead banks in the banking pool by deal	1367	0.530	0.390
Country characteristics at renegotiation				
English law	=1 if borrower country's legal origin is English	1297	0.340	0.470
French law	=1 if borrower country's legal origin is French	1297	0.410	0.490
German law	=1 if borrower country's legal origin is German	1297	0.150	0.360
Creditor rights	Average creditor rights index	1297	2.380	1.450
Corporate bonds	Corporate bonds to total bonds (%)	1211	31.530	25.540
Private credit	Private credit to GDP (%)	1202	153.760	56.210
Stock market	Stock market capitalization to GDP (%)	1276	82.330	42.720
Borrower characteristics at renegotiation				
Sales	Sales (in MLN USD)	385	13 942.830	34 311.910
Debt / Assets	Total debt to total assets ratio	381	29.600	66.880
RoA	Net income to total assets	381	-25.600	244.740
Market to Book	Market value of equity to common equity	347	3.020	12.600
Always rated	=1 if borrower had a rating from S&P's or Moody's at loan origination and at renegotiation	1367	0.27	0.45
Never rated	=1 if borrower had no rating from S&P's or Moody's at loan origination and at renegotiation	1367	0.64	0.48

Table 3 Univariate analysis results

This table presents univariate results for CAR (-1,1) by type of amendments and by different renegotiation, loan, borrower and country characteristics. All variables are defined in table 2. Each time I provide the mean and median CAR as well as the t-test value for statistical significance of average CAR or statistically significant difference in average CAR. For pairwise tests, except for dummy or counting variables, I split the sample according to the median of the variable under consideration (second column). Eurozone = 1 when the renegotiation company comes for a country member of the Eurozone. Crisis = 1 if the date of loan renegotiation is after September 2008. *, **, and *** indicate a statistically significant t statistic at the 10%, 5%, and 1% confidence level.

Variable	Variable median	Obs.	mean CAR (-1,1)	t-test	median CAR (-1,1)
Borrowed Amount		12	-11.3195	-1.70	0.5197
Covenant Financial		112	14.3046	2.76***	4.2626
Covenant Non Financial		22	-15.9214	-1.25	0.9603
Definition Change		174	-7.9159	-3.26***	-0.0263
Facility Amount		230	-2.0203	-1.15	-0.0237
Loan Fee		17	-9.0353	-1.86*	-0.5816
Maturity Change		338	0.2697	0.27	0.4825
Outstanding Amount		84	0.1824	0.42	0.0960
Pricing Grid		96	-7.1246	-1.61	0.5443
Tranche Amount		260	-7.1887	-2.94***	-0.4799
Positive change in Facility or Tranche		288	-0.5911	-2.45**	0.4575
Negative change in Facility or Tranche		265	-7.3902		-0.4809
Large change in Maturity	1 year	181	-0.7194	0.85	0.4852
Small change in Maturity		156	1.4022		0.5352
Many amended tranches	4	849	-3.7079	2.04**	0.2010
Few amended tranches		508	0.0830		0.0000
Many types of amendments	2	727	-3.1598	1.07	0.0639
Few types of amendments		630	-1.2489		0.4234
Long duration between renegotations	5 months	220	-8.3448	-0.48	0.6799
Short duration between renegotiations		219	-10.1609		-1.2960
Late renegotiation	2 years	692	-4.4405	2.37**	0.0000
Early renegotiation		670	-0.0515		0.5197
One time renegotiation		904	1.0764	5.14***	0.3608
Frequent renegotiations		458	-8.9093		-0.0526
Large facility amount	200 MLN USD	690	-2.2285	-0.05	0.3502
Small facility amount		672	-2.3359		0.0000
Large tranche amount	25.400 MLN USD	682	-2.4290	0.15	0.3608
Small tranche amount		680	-2.1333		0.0000
Large spread	200 bps	324	-10.5456	3.43***	0.4324
Small spread		305	-0.1510		0.0896
Long maturity	5.5 years	683	-7.2129	5.35***	-0.0526
Short maturity		684	2.5810		0.6767
Multiple tranches		960	-2.3742	0.15	0.4825
No multiple tranches		402	-2.0600		-0.3097
Bilateral loan		225	0.0561	2.49**	0.6346
Syndicated or club loan		796	-4.2328		0.0639

Secured		676	-4.0921	1.94*	0.4825
Not secured		686	-0.4972		0.0000
Covenants		547	-1.7803	-0.44	0.5449
No covenants		815	-2.6178		0.0000
Large number of past loan issues	2	758	-1.5989	0.32	0.1936
Small number of past loan issues		338	-0.9266		-0.2624
Large loans amount outstanding	0.322 MLN USD	547	1.5410	-3.23***	0.6799
Small loans amount outstanding		549	-4.3034		0.0000
Large number of lenders	6	725	-3.8321	1.78*	0.0000
Small number of lenders		637	-0.5166		0.5437
Large percent of leaders	63.15%	684	-1.2357	-1.13	-0.3164
Small percent of leaders		678	-3.3365		0.6827
English legal origin		438	-2.5873	-1.08	0.6542
French legal origin		531	-3.6546	-3.61***	-0.0869
German legal origin		202	2.0925	1.24	1.1132
Strong creditor rights	3	657	-3.2003	0.82	0.7644
Weak creditor rights		645	-1.6123		-0.3192
Large private credit	170.81%	603	-3.9064	1.28	0.9956
Small private credit		603	-1.2575		-0.1266
Large corporate bonds	38.23%	615	-0.4523	-1.73*	0.4825
Small corporate bonds		601	-3.9517		0.0000
Large stock market cap.	76.33%	645	-4.0632	1.64	0.2010
Small stock market cap.		636	-0.8660		0.0000
Eurozone		724	-1.5426	-0.84	0.0960
No Eurozone		638	-3.1200		0.0864
Crisis		740	-2.0172	-0.31	0.0960
No crisis		622	-2.5958		0.0457
Large sales	1 102.174 MLN USD	199	-5.1315	-2.01***	-0.5816
Small sales		192	-13.5308		0.4841
Large debt / assets	17.58%	195	-1.2658	-3.87***	1.0598
Small debt / assets		192	-17.3421		-0.2030
Large RoA	2.13%	193	-2.7433	-3.10***	-0.1266
Small RoA		194	-15.7065		0.1168
Large M / B	1.7	168	-0.6148	-2.83***	0.3608
Small M / B		185	-10.2846		-0.2030
Always rated		371	-1.9003	-2.79***	0.5198
Never rated		865	-2.1685	-2.06**	0.0000

Table 4 Multivariate analysis results – loan renegotiation variables

This table presents the results of OLS regressions of the CAR (-1,1) on loan renegotiation variables. Robust standard errors clustered at the borrower level are shown in parentheses. Change in loan amount > 0 is a dummy variable equal to one if Change in Facility or Tranche amount is positive after renegotiation. Change in maturity > 1 year is a dummy variable equal to one if Change in maturity exceeds 1 year after renegotiation. Renegotiation year, borrower industrial sector, and loan currency dummies included but not reported. All variables are defined in table 2. *, **, and *** indicate a statistically significant coefficient at the 10%, 5%, and 1% confidence level.

	A.1	B.1	C.1	D.1	E.1	F.1	G.1	H.1	I.1
Change in loan amount > 0		9.1451***							
		(3.1918)							
Change in maturity > 1 year			2.1698						
			(2.4687)						
Renegotiations by borrower				-4.4498***					-3.5888***
				(1.0402)					(1.1530)
Number of tranches by borrower					-0.6035***				0.0140
					(0.2210)				(0.2515)
Types of amendments by tranche						-1.9431***			-1.2764**
						(0.6097)			(0.6318)
Duration until renegotiation							-0.0035***		-0.0030**
							(0.0013)		(0.0013)
Duration between renegotiations								-0.0189	
								(0.0820)	
Borrowed Amount	-6.7474			-8.8092	-9.0195	-10.5895	-10.2471	21.9784	-13.7516
	(8.5988)			(8.8595)	(8.1402)	(8.7224)	(8.7154)	(13.3538)	(8.7032)
Facility Amount	-0.5278			-0.4540	-1.2275	-4.1212	-2.7626	2.6062	-4.6138*
	(3.2874)			(3.7945)	(2.3816)	(2.6466)	(3.3867)	(10.0777)	(2.6585)
Outstanding Amount	-0.3668			-1.7801	-2.7764	-5.0356	-2.9824	1.8618	-6.6461**
	(3.6307)			(4.0797)	(2.7938)	(3.1704)	(3.6385)	(11.4332)	(3.0338)
Prepay Amount	38.3054			37.6440	36.5927	34.3774	35.1678		32.6182
	(26.1009)			(26.1747)	(25.7722)	(25.6338)	(25.8599)		(25.5452)
Borrowing Base Amount	1.1479			-0.1689	-1.1301	-2.9170	-1.9471		-5.0811
	(7.1612)			(7.2539)	(6.6673)	(6.8481)	(7.2205)		(6.7138)

Covenant Financial	12.1597**			12.1026**	12.7038***	11.5515***	10.0303**	3.9822	10.1094**
	(4.9179)			(5.1879)	(4.4487)	(4.4309)	(4.9226)	(13.9934)	(4.3085)
Covenant Non Financial	-16.9274*			-16.2853*	-15.7768*	-16.1390*	-18.6571*	-22.7972	-17.3217*
	(9.5874)			(9.4280)	(9.1814)	(9.1202)	(9.6331)	(14.9561)	(8.9414)
Definition Change	-6.1070*			-4.9832	-5.4235**	-7.7510***	-8.9177**	-1.8299	-8.6519***
	(3.3967)			(3.9004)	(2.5898)	(2.7558)	(3.5886)	(10.0253)	(2.8815)
Loan Fee	-10.3152*			-8.4656	-10.8989**	-8.0225*	-11.4134**	-14.9030	-8.1657*
	(5.2871)			(5.5134)	(5.0866)	(4.7041)	(5.4563)	(12.4591)	(4.9360)
Maturity Change	0.8254			1.2082	-0.1898	-1.9296	-1.1760	-2.2241	-2.2754
	(3.2535)			(3.7463)	(2.2669)	(2.4472)	(3.2918)	(9.8682)	(2.3634)
Pricing Grid	-5.5447			-4.2765	-5.5536	-6.6397	-7.9533	-11.2387	-7.3171*
	(4.7892)			(5.0363)	(4.2547)	(4.3255)	(4.8699)	(11.6147)	(4.2464)
Tranche Amount	-5.0911			-4.8031	-5.6063**	-7.9378***	-7.3129**	-1.7460	-8.5152***
	(3.3738)			(3.8604)	(2.5103)	(2.6989)	(3.6151)	(9.9091)	(2.8732)
Intercept	-58.7090***	-30.8879***	-32.1437***	-53.0201***	-55.2225***	-49.4755***	-59.5076***	-89.2679***	-48.9334***
	(13.7902)	(10.6965)	(11.5973)	(13.1258)	(12.9941)	(12.2588)	(13.7866)	(21.0986)	(12.0114)
Obs.	1367	553	339	1367	1354	1354	1367	438	1354
Adj. R²	0.1839	0.1100	0.3010	0.1953	0.1890	0.1938	0.1866	0.4058	0.2010

Table 5 Multivariate analysis results – loan renegotiation and loan characteristics at origination variables

This table presents the results of OLS regressions of the CAR (-1,1) on loan renegotiation and loan characteristics at origination variables. Robust standard errors clustered at the borrower level are shown in parentheses. Change in loan amount > 0 is a dummy variable equal to one if Change in Facility or Tranche amount is positive after renegotiation. Change in maturity > 1 year is a dummy variable equal to one if Change in maturity exceeds 1 year after renegotiation. Renegotiation year, borrower industrial sector, and loan currency dummies included but not reported. All variables are defined in table 2. *, **, and *** indicate a statistically significant coefficient at the 10%, 5%, and 1% confidence level.

	A.2	B.2	C.2	D.2	E.2	F.2	G.2	H.2	I.2
Change in loan amount > 0		11.5666**							
		(5.6545)							
Change in maturity > 1 year			1.7292						
			(4.0013)						
Renegotiations by borrower				-4.6332***					-4.7528***
				(1.2768)					(1.3848)
Number of tranches by borrower					-0.0244				1.1290***
					(0.3527)				(0.4004)
Types of amendments by tranche						-2.8164***			-2.9026***
						(0.6405)			(0.6165)
Duration until renegotiation							-0.0079***		-0.0061***
							(0.0019)		(0.0018)
Duration between renegotiations								0.0175**	
								(0.0072)	
log(Facility amount)	-0.0727	-1.4870	0.8264	0.8557	-0.0826	0.0188	-0.6251	0.4132	-0.6996
	(0.7107)	(1.7671)	(1.8365)	(0.7686)	(0.8410)	(0.7042)	(0.7425)	(1.5302)	(0.8790)
Maturity	-0.0004	-0.0031*	0.0023***	-0.0007	-0.0004	-0.0002	0.0016**	-0.0007	0.0012
	(0.0008)	(0.0017)	(0.0008)	(0.0008)	(0.0008)	(0.0008)	(0.0008)	(0.0017)	(0.0008)
Multiple tranches	6.5709***	6.0938	0.6620	6.0494***	6.5283***	7.6439***	7.1606***	5.1237	7.1569***
	(2.0485)	(5.1782)	(3.1620)	(2.0681)	(2.0825)	(2.0060)	(2.0349)	(5.7687)	(2.0025)
Syndicated or Club deal	-0.0367	-5.8364	4.2769	-1.6171	-0.2985	-4.2244	0.8675	14.6268**	-3.8221
	(3.8055)	(7.7346)	(3.5123)	(3.7717)	(3.7848)	(3.8962)	(3.7152)	(6.9564)	(3.7690)
Term loan	2.5149	2.0840	-1.7249	2.2961	2.3650	-0.1684	1.6087	-2.6402	-1.5838

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	(2.7081)	(5.2374)	(4.2492)	(2.6648)	(2.7399)	(2.6710)	(2.6974)	(4.8815)	(2.6826)
Secured	-1.1458	-1.8192	-1.0476	-1.5928	-0.9781	0.6818	-1.0227	6.6501	-0.7883
	(2.2508)	(5.2970)	(4.0804)	(2.2322)	(2.2520)	(2.1477)	(2.2243)	(6.7775)	(2.1238)
Covenants	6.2713**	17.3016***	-4.9527	7.3556**	6.4281**	9.0634***	6.8747**	-4.0079	10.0338***
	(2.8426)	(5.1189)	(3.4795)	(2.8672)	(2.8457)	(2.9487)	(2.8919)	(4.5814)	(2.9930)
Past loan issues	-0.9836***	-1.7819**	-0.8446*	-0.6856**	-0.9615***	-1.0607***	-0.9474***	-1.1858***	-1.2607***
	(0.2723)	(0.8277)	(0.4934)	(0.2894)	(0.3528)	(0.2714)	(0.2754)	(0.3841)	(0.3749)
log(Loans amount outstanding)	0.5740	1.0114	-0.6409	-0.3322	0.5845	0.4827	0.6631	0.2002	0.9579
	(0.7166)	(1.7257)	(1.8414)	(0.7642)	(0.8740)	(0.7126)	(0.7280)	(1.4672)	(0.8835)
Number of lenders	0.0631	-0.1420	-0.1053	0.0803	0.0610	0.0763	0.1490**	-0.1227	0.1361**
	(0.0650)	(0.2262)	(0.1143)	(0.0644)	(0.0646)	(0.0649)	(0.0723)	(0.1724)	(0.0693)
Lead banks	-0.3578	0.6472	-5.2389	-0.2529	-0.1589	1.0664	0.4915	-24.2615***	1.9885
	(4.6474)	(9.5993)	(4.6546)	(4.5692)	(4.7254)	(4.6037)	(4.6685)	(8.3651)	(4.6573)
Intercept	-18.7001*	16.3336	-29.5778	-17.9524	-18.6669*	-12.5794	-24.1020**	-12.9722	-4.5361
	(10.2393)	(26.7055)	(22.0324)	(11.0093)	(11.0998)	(9.4947)	(10.0357)	(25.6513)	(10.8532)
Amendment types fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	847	307	216	847	839	839	847	253	839
Adj. R²	0.1860	0.1644	0.3996	0.1984	0.1853	0.2102	0.1976	0.2615	0.2311

Table 6 Multivariate analysis results – loan renegotiation, loan characteristics at origination, and country variables

This table presents the results of OLS regressions of the CAR (-1,1) on loan renegotiation, loan characteristics at origination, and country variables. Robust standard errors clustered at the borrower level are shown in parentheses. Change in loan amount > 0 is a dummy variable equal to one if Change in Facility or Tranche amount is positive after renegotiation. Change in maturity > 1 year is a dummy variable equal to one if Change in maturity exceeds 1 year after renegotiation. Renegotiation year, borrower industrial sector, and loan currency dummies included but not reported. All variables are defined in table 2. *, **, and *** indicate a statistically significant coefficient at the 10%, 5%, and 1% confidence level.

	A.3	B.3	C.3	D.3	E.3	F.3	G.3	H.3	I.3
Change in loan amount > 0		13.3419**							
		(6.2981)							
Change in maturity > 1 year			2.9692						
			(3.8103)						
Renegotiations by borrower				-5.0783***					-5.2243***
				(1.3649)					(1.4257)
Number of tranches by borrower					0.2146				1.4066***
					(0.3665)				(0.4246)
Types of amendments by tranche						-2.9536***			-3.1646***
						(0.6647)			(0.6580)
Duration until renegotiation							-0.0095***		-0.0072***
							(0.0023)		(0.0022)
Duration between renegotiations								0.0191**	
								(0.0080)	
French law	2.3298	13.3938	-7.2959	3.5217	2.3800	5.9131*	3.9089	5.9368	8.5998**
	(3.0064)	(9.5383)	(5.2692)	(3.1035)	(3.0347)	(3.0212)	(3.2116)	(8.2498)	(3.4666)
Creditor rights	0.0176	4.2646	-1.8487	0.3500	0.2149	1.0280	0.7311	0.5756	3.5006**
	(1.4113)	(3.2632)	(2.8243)	(1.4347)	(1.5253)	(1.4034)	(1.4574)	(2.9563)	(1.7042)
Corporate bonds	0.0694	0.4597*	0.2163*	0.0855	0.0812	0.1024	0.1039	-0.3153	0.1587*
	(0.0875)	(0.2557)	(0.1098)	(0.0884)	(0.0898)	(0.0884)	(0.0919)	(0.2412)	(0.0935)
Private credit	-0.0807*	-0.2494**	-0.1459*	-0.0802	-0.0845*	-0.1026**	-0.1118**	0.0144	-0.1482***
	(0.0479)	(0.1218)	(0.0807)	(0.0494)	(0.0480)	(0.0503)	(0.0508)	(0.1164)	(0.0550)
Stock market	0.0605	0.3862**	0.0988	0.0544	0.0622	0.0530	0.0816	-0.1783	0.1056
	(0.0619)	(0.1635)	(0.1144)	(0.0633)	(0.0615)	(0.0627)	(0.0630)	(0.1512)	(0.0661)

Intercept	126.3651***	-23.7091	-13.0453	126.5664***	126.1272***	126.1391***	129.5969***	-10.4720	124.0851***
	(14.5266)	(23.3072)	(18.9136)	(15.2682)	(14.8809)	(14.0585)	(14.3205)	(26.0898)	(14.9435)
Amendment types fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Loan characteristics at origination fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	700	255	186	700	694	694	700	219	694
Adj. R²	0.1813	0.1956	0.4216	0.1947	0.1819	0.2094	0.1963	0.2924	0.2385

This table presents the results of OLS regressions of the CAR (-1,1) on loan renegotiation and borrower variables. Robust standard errors clustered at the borrower level are shown in parentheses. Renegotiation year, borrower industrial sector, and loan currency dummies included but not reported. All variables are defined in table 2. *, **, and *** indicate a statistically significant coefficient at the 10%, 5%, and 1% confidence level.

	A.4	D.4	E.4	F.4	G.4	H.4	I.4
Renegotiations by borrower		0.7929					-0.4738
		(1.6367)					(1.6882)
Number of tranches by borrower			0.8955**				1.0337**
			(0.3976)				(0.5132)
Types of amendments by tranche				0.5304			-0.1853
				(0.8708)			(1.0882)
Duration until renegotiation					-0.0043**		-0.0043**
					(0.0019)		(0.0020)
Duration between renegotiations						-0.0351	
						(0.0344)	
log(Sales)	-0.6741	-0.6105	-0.6629	-0.7093	-0.4523	2.4792	-0.4650
	(0.6020)	(0.6021)	(0.6071)	(0.6405)	(0.6018)	(1.9010)	(0.6572)
Debt / Assets	0.2512***	0.2512***	0.2706***	0.2702***	0.2327***	0.6032**	0.2494***
	(0.0556)	(0.0555)	(0.0567)	(0.0660)	(0.0532)	(0.2976)	(0.0645)
RoA	0.1822***	0.1806***	0.1951***	0.1922***	0.1622***	0.0447	0.1747***
	(0.0584)	(0.0577)	(0.0596)	(0.0666)	(0.0561)	(0.1242)	(0.0650)
Market to Book	0.1263	0.1346	0.1543*	0.1447*	0.1873**	-0.3734	0.2103**
	(0.0848)	(0.0844)	(0.0820)	(0.0854)	(0.0852)	(0.3346)	(0.0855)
Intercept	56.8077***	56.0016***	-9.8528	-9.1365	51.7326***	24.2947	1.3578
	(18.0742)	(18.1162)	(13.7356)	(14.3729)	(17.7136)	(35.4929)	(15.0184)
Amendment types fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	335	335	331	331	335	115	331
Adj. R²	0.5587	0.5574	0.5675	0.5633	0.5625	0.4430	0.5683

Table 8 Sensitivity analysis of multivariate results – different subsamples

This table presents the results of OLS regressions of the CAR (-1,1) on loan renegotiation, loan characteristics at origination, and country variables on various subsamples (Panel 1, 2, and 3). Crisis: loan renegotiations announced after September 2008. No UK: loan renegotiations by borrowers from UK excluded. Creditor rights weak: loan renegotiations for borrowers from countries where creditor rights index is below 3. Unique renegotiation: unique loan renegotiations. Early renegotiation: loan renegotiations occurring less than 2 years after loan origination. No covenants: loan renegotiations without covenants in the initial loan agreement. Syndication or club loan: loan renegotiations of syndicated loans or club deals only. Robust standard errors clustered at the borrower level are shown in parentheses. Change in loan amount > 0 is a dummy variable equal to one if Change in Facility or Tranche amount is positive after renegotiation. Change in maturity > 1 year is a dummy variable equal to one if Change in maturity exceeds 1 year after renegotiation. Renegotiation year, borrower industrial sector, and loan currency dummies included but not reported. All variables are defined in table 2. *, **, and *** indicate a statistically significant coefficient at the 10%, 5%, and 1% confidence level.

Panel 1	Crisis		no UK		Creditor rights weak	
	I.4	B.4	C.4	I.4	B.4	I.4
Change in loan amount > 0		4.3488			8.0690	
		(4.7748)			(6.0100)	
Change in maturity > 1 year			-4.7761			
			(4.7521)			
Renegotiations by borrower	-8.2253**			-2.2857*		-2.3479
	(3.6206)			(1.1667)		(2.0346)
Number of tranches by borrower	2.7209***			0.8089**		0.8228
	(0.7032)			(0.3298)		(0.5422)
Types of amendments by tranche	-1.9605			-3.7248***		-3.8192***
	(1.4081)			(0.4739)		(1.0908)
Duration until renegotiation	-0.0133*			-0.0025		-0.0064**
	(0.0076)			(0.0020)		(0.0027)
Amendment types fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Loan characteristics at origination fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Country characteristics fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	241	161	110	470	114	330
Adj. R²	0.3677	0.2215	0.0976	0.2752	0.3380	0.2752

Table 8 continued

Panel 2	Unique renegotiation			Early renegotiation	
	B.4	C.4	I.4	B.4	I.4
Change in loan amount > 0	24.0989**			27.5365**	
	(9.7460)			(12.1657)	
Change in maturity > 1 year		-5.7842**			
		(2.4757)			
Renegotiations by borrower					-5.0074**
					(2.0271)
Number of tranches by borrower			1.2046**		1.7872**
			(0.5767)		(0.7981)
Types of amendments by tranche			-3.1834***		-1.6217
			(1.2103)		(1.0684)
Duration until renegotiation			-0.0101***		-0.0240***
			(0.0033)		(0.0091)
Amendment types fixed effects	Yes	Yes	Yes	Yes	Yes
Loan characteristics at origination fixed effects	Yes	Yes	Yes	Yes	Yes
Country characteristics fixed effects	Yes	Yes	Yes	Yes	Yes
Obs.	162	137	474	132	338
Adj. R²	0.2853	0.6408	0.2765	0.2836	0.3215

Table 8 continued

Panel 3	No covenants			Syndication or club loan		
	B.4	C.4	I.4	B.4	C.4	I.4
Change in loan amount > 0	14.2093*			16.8820**		
	(7.6850)			(7.5539)		
Change in maturity > 1 year		-8.8743***			4.3447	
		(2.1308)			(4.4952)	
Renegotiations by borrower			1.7770			-4.6047**
			(1.9568)			(1.7812)
Number of tranches by borrower			-0.0939			1.2152**
			(0.4616)			(0.5062)
Types of amendments by tranche			3.2888**			-2.1849*
			(1.4903)			(1.1129)
Duration until renegotiation			-0.0033			-0.0092***
			(0.0044)			(0.0033)
Amendment types fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Loan characteristics at origination fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Country characteristics fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	133	110	329	199	139	549
Adj. R²	0.5002	0.8703	0.4915	0.2723	-0.0169	0.2213

Working Papers

Laboratoire de Recherche en Gestion & Economie

http://ifs.u-strasbg.fr/large/publications/publications.htm

Université de Strasbourg
Pôle Européen de Gestion et d'Economie
61 avenue de la Forêt Noire
67085 Strasbourg Cedex

http://ifs.unistra.fr/large