

Uncertainty Resolution for Public and Private Firms: Empirical Evidence from the UK Syndicated Loan Market

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Abstract

We examine the impact of uncertainty on loan contract terms for UK public and private firms, using the 2016 Brexit referendum as an exogenous shock to uncertainty. We find that uncertainty leads to a higher cost of borrowing in the syndicated loan market for private firms relative to public firms. However, firm-level foreign exposure, i.e., foreign sales and foreign subsidiaries, mitigates the positive impact of uncertainty on bank loan price regardless of firms' public status. Moreover, for public firms, whose accounting information is likely to be more contractible than that for private firms, loan contracts include more performance-based financial covenants following the referendum. Thus, lenders seem to use different types of non-pricing terms to manage their exposure to uncertainty depending on firms' public status. Overall, our findings provide novel evidence on how borrowers' public status and foreign exposure shape loan contracts under uncertainty.

JEL Classification: G15, G21, G30

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1. Introduction

On June 23, 2016, voters in the United Kingdom unexpectedly voted to leave the European Union in a referendum. The Brexit vote created considerable uncertainty surrounding the terms of the country's impending exit from the EU (e.g., Campello et al., 2020; Hassan et al. 2020). Financial analysts predicted that the UK's vote to leave the EU would hit economic growth, cause bad loans to rise, push up funding costs.¹ The high yield bond market and the sterling loan underwrite markets were closed in the immediate weeks following the referendum.² UK banks were also hit hard, with Royal Bank of Scotland, Barclays and Lloyds Banking Group experiencing double-digit declines in their share prices. In this study, we analyse how borrowers and creditors in the UK syndicated loan market respond to the political uncertainty triggered by the 2016 Brexit vote.

More specifically, we attempt to answer the following questions: Does 'Brexit' as an uncertainty shock affect the design of syndicated loan contracts for UK firms? Do certain firm-level characteristics, i.e., firms' public status and foreign exposure, mitigate or exacerbate the impact of the uncertainty shock on loan contracts? Loan contract terms reflect lenders' assessment about a borrower's risk, which might arise from information asymmetry problems and potential agency conflicts as well as incomplete information at the initiation of loans

¹ For instance, see '*Three Years of Uncertainty: Charting How Brexit Has Shaped U.K. Financial Markets*' <https://www.wsj.com/articles/three-years-of-uncertainty-charting-how-brexit-has-shaped-u-k-financial-markets-11571917532>. Also, '*UK banks suffer big share drops after EU referendum result*' at <https://www.ft.com/content/8750bc92-3a02-11e6-9a05-82a9b15a8ee7>

² Lender outlook - implications of the Brexit result (PwC) at <https://www.pwc.co.uk/services/business-restructuring/insights/restructuring-trends/lender-outlook-implications-of-the-brexit-result.html>
How global markets are reacting to UK's Brexit vote at <https://www.ft.com/content/50436fde-39bb-11e6-9a05-82a9b15a8ee7>

(Demerjian, 2017; Christensen and Nikolaev, 2012; Smith and Warner, 1979). Thus, examining the design of loan contracts can provide insights about how lenders and borrowers jointly attempt to resolve the uncertainty following the 2016 Brexit referendum. Our analysis reveals that lenders design loan contracts differently to manage their exposure to uncertainty, depending on whether the borrowing firm is private or public.

Prior studies (e.g., Berg et al., 2019; Bloom et al., 2019; Julio and Yook, 2012; Bloom, 2009) show that uncertainty shock can lead to a reduction in the volume of loans as well as a decline in investment and hiring as the real option value of waiting increases due to the less predictable future in the economy. Further, uncertainty can cause a decline in the overall productivity and lead to a higher dispersion in the firms' productivity before uncertainty is resolved (Bloom, 2009). Such a change in the distribution of productivity suggests that more firms might fall into the left-tail of the distribution, indicating an increase of overall default risk (Bloom, 2014; Brand et al., 2019). We therefore predict that lenders demand higher loan prices due to the surge in potential default risk under uncertainty triggered by the Brexit vote.

Besides the loan price, lenders may as well manage their exposure to the uncertainty through non-pricing terms. Prior studies document that static contract terms like loan price may not be adequately efficient because they might not incorporate new information that arrives after a loan contract is designed. This problem is particularly severe when the future outcomes are less predictable. Demerjian (2017) provides a theoretical model illustrating how financial covenants address uncertainty. He considers a set-up where uncertainty exogenously increases without a clear corresponding increase in agency conflicts. Lenders include contingent contract

terms, i.e., financial covenants, that can provide opportunities to renegotiate the contract terms as new information signal is revealed after loan initiation but prior to maturity.

Specifically, financial covenants are the agreements that require the borrowers to maintain their financial figures above or below certain thresholds. A trespass to the thresholds triggers a violation, which results in a technical default. Lenders therefore reclaim the control rights and can initiate renegotiations to strengthen the contract or waive the violation at discretion. Such contingent contract terms can strengthen contractual efficiency especially under uncertainty. Demerjian (2017) highlights the importance of performance-based financial covenants under uncertainty. These covenants are based on the measurements of profitability and cash flow, which facilitate ex-post allocation of control and renegotiations. We therefore predict that lenders demand more performance-based provisions in loan contracts as they face uncertainty following the Brexit referendum.

However, the use of such provisions depends on the contractibility of the borrower's accounting information, namely, whether the borrower's accounting information can accurately signal its credit risk. If the answer is negative, the performance-based provisions will cause inefficient control allocations and lenders may instead rely more on the capital-based provisions or the static contract terms. Given that there are differences between public and private firms in terms of contractibility of their accounting information (e.g., Ball and Shivakumar, 2005), we expect differences in the use of performance-based covenants between public firms and private firms under uncertainty.

In our analysis of how uncertainty influences loan contracts, it is important to consider potential heterogeneities across borrowers, which can help us clarify the mechanisms through uncertainty affects contractual outcomes. Prior studies argue that firm-level heterogeneities can play an important role in determining how firms respond to uncertainty. For instance, Boutchkova et al. (2012) find that more foreign trade-dependent industries exhibit higher return volatility when they face political uncertainty because the mutual trade agreements and regulations might be subject to unexpected changes. In a similar vein, Bloom et al. (2019), using the survey data, find that firms with more connections to EU (sales, inputs, workforce) are more likely to rank Brexit as top source of uncertainty. As the Brexit act as a “reversed trade reform”, one may expect both a decline in the level and an increase in the volatility of the perceived cash flows for more foreign-exposed firms. Accordingly, we predict that borrowers’ foreign exposure, i.e., the level of foreign sales and the presence of foreign subsidiaries, can have a negative impact on loan contract terms under uncertainty.

However, foreign exposure may also improve firms’ access to foreign capital markets, which can increase borrowers’ bargaining power in loan contract design. For instance, foreign subsidiaries can enhance information links between firms and foreign investors (Moshirian et al., 2021). Notably, Jang (2017) shows that firms with foreign subsidiaries had wider access to foreign funding sources which helped them to mitigate the impact of the financial crisis. Further, Houston et al. (2017) finds that borrowers’ foreign assets lower the cost of information acquisition for foreign lenders, which increase the likelihood of including a foreign lead lender in a syndicate and result in better loan price. In our sample, we observe that 80% of loan facilities offered to UK borrowers include non-UK lead arrangers. Therefore, we expect that

foreign exposure can mitigate the impact of Brexit on the loan terms through reduced information asymmetry faced by foreign lenders. Based on this discussion, the overall effect of foreign exposure, whether it can mitigate or exacerbate the impact of the uncertainty shock, can be an empirical question, depending on which of the above arguments dominates.

As mentioned above, we also consider firms' public status as a potential source of heterogeneity through which uncertainty can influence loan contracts. In our sample analysis, we observe that 42% of the loan facilities are issued to private firms. The substantial share of private firms in the UK syndicated loan market might not be surprising considering the recent trend of decline in the number of public firms in the UK and US (Stulz, 2018).³ Notably, in our sample analysis, we observe that both public and private borrowing firms in UK syndicated loan markets have substantial amount of foreign exposure. This is consistent with the anecdotal stories highlighting that UK firms have a vast stock of foreign assets.⁴

Further, we observe considerable differences in foreign exposure between public and private firms in our sample of UK firms. For instance, public firms are more likely to have foreign sales than private firms (86.8% vs. 53.3%), and more likely to have foreign subsidiaries (86.3% vs. 52.5%). Given these differences, it is important to investigate whether public and private firms' access to syndicated loan market could differ depending on their foreign

³ See, 'New research shows UK public markets in decline', at <https://www.institutionalassetmanager.co.uk/2020/01/27/282336/new-research-shows-uk-public-markets-decline>

⁴ See, 'Brexit threat exposes frailties in UK debt markets' at <https://www.ft.com/content/18f17460-140e-11e9-a581-4ff78404524e>

exposure under uncertainty. Saunders and Steffen (2011) report that UK private firms experience higher cost of borrowing than public firms in the UK syndicated loan markets. However, there is no evidence on how loan contract terms evolve for firms depending on their public status under uncertainty. They also do not incorporate firms' foreign exposure, which seems to be an important aspect of UK public and private firms, in their analysis.

For our empirical analysis, we collect information on loan contracts from the Loan Pricing Corporation (LPC) Dealscan database, while firm-level information comes from the FAME database. We manually merge the two datasets based on borrowers' names, industries, and addresses. Our final sample contains 1,014 loan facilities issued to 405 UK borrowers during the period 2014 to 2018 with non-missing financial information on borrowers. The key dummy variable, *Post Brexit*, represents the period after the referendum on June 23, 2016. We construct two proxies for the foreign exposure. The first proxy is an indicator that a firm had positive foreign sales over the total sales in any year of 2013, 2014 and 2015. The second proxy is an indicator of the presence of foreign subsidiaries. We interact these indicators separately with the *Post Brexit* indicator in the sub-samples of public and private firms.

Our results show that both public and private firms' cost of borrowing increases following the 2016 Brexit referendum. However, the increase in cost of borrowing under uncertainty is higher for private firms than public firms. As discussed above, the impact of uncertainty on the cost of borrowing varies depending on firms' foreign exposure. For the firms without foreign exposure, the cost of loans on average increases following the Brexit referendum, but the effect is mitigated if a firm has foreign exposure measured by either the foreign sales or the foreign subsidiaries. Our results provide evidence that lenders may perceive borrowers' foreign

exposure as a mitigating factor under uncertainty. This result is consistent with Jang (2017)'s findings showing that foreign exposure grants borrowers with higher bargaining power. The potential benefits of international diversification in terms of the reduction in cross-border information asymmetry and increased bargaining power seem to dominate the effect from the potential challenges related to the international trade disagreements and regulations on foreign operations when firms face uncertainty.

Next, we investigate the design of non-pricing terms.⁵ We find that public firms with foreign exposure have more performance-based financial covenants in their loan contracts after the referendum, relative to those without foreign exposure. This result indicates a potential trade-off that public firms can obtain better loan prices but in exchange they seem to accept more financial covenants as additional protection for lenders. Different from public firms, we do not find evidence that lenders include more financial covenants in the contracts for private firms after the Brexit shock. This finding provides support for the view that accounting information of private firms is less informative about their credit worthiness and therefore makes the financial covenants less effective under uncertainty.

We conduct additional tests to alleviate concerns that our results might be driven by some omitted firm-specific characteristics which could differ between public firms and private firms. In these tests we consider, whether a firm has access to bond market, whether a public firm is listed in FTSE100/250 indexes, whether a private firm has institutional investors as

⁵ In addition, we consider loan maturity and size. Our results show that public firms with foreign sales obtain shorter loans after Brexit referendum, but we do not find any significant results for loan size. For brevity, we do not tabulate these results.

shareholders and the ownership structure in term of the number of reported shareholders. As Saunders and Steffen (2011) argue, these factors might be related to both the information asymmetry and the agency conflicts within a firm. Therefore, they could influence the relation between uncertainty and loan contract design depending on firms' public listing. Once we incorporate those characteristics in our regression, we find that our findings remain robust.

We conduct further robustness checks controlling for firm size and age since larger and older firms are more likely to have foreign exposure. Our results remain robust once we control for these factors. There might be also omitted variable bias due to relationship lending and different loan types. We define relationship lending as borrowing from the same lead arranger during the past five years as in the current loan. We find that our results remain robust.

We also conduct a placebo test, which addresses the concern that our findings reflect a time trend started before the referendum. Our results show that the trend did not start before the referendum for loan price, but it did for financial covenants. In a further analysis, we find evidence that the uncertainty shock changed the trend that the increase in the use of financial covenants was pervasive before the referendum, but it was driven by firms with more informational transparency, namely those firms with foreign exposure or listed in FTSE100/250 indexes, after the referendum.

Our study makes four major contributions to the literature. First, our study extends the literature on the impact of Brexit (Bloom et al., 2018; Bloom et al., 2019; Campello et al., 2020), and more broadly the literature on political and economic uncertainty. Prior studies document the adverse real effects of uncertainty on the economic outcomes, i.e., investment,

hiring, and productivity, as the option value to wait and cost of borrowing increase under uncertainty (Bernanke 1983; Bloom 2009; Julio and Yook, 2012; Christiano et al., 2014; Baker et al., 2016; Brand et al., 2019).⁶ Different from these studies, we focus on both public and private firms. Notably, we provide evidence that both public and private firms experience an increase in their cost of debt in the syndicated loan market as they face uncertainty.⁷ More importantly, we find that firms' foreign exposure can lower their cost of borrowing regardless of their public status under uncertainty. These results complement the findings of Berg et al. (2020), who show that following the Brexit referendum, the syndicated loan issuance for public firms dropped pervasively due to a decline in both the supply and demand.

Second, our study extends the literature on international diversification. Foreign trade, i.e., foreign exposure, can expose firms to potential fluctuations as cross-border regulations and policies might change for various reasons (Boutchkova et al., 2012). However, foreign exposure can also facilitate international information flow and improve firms' access to foreign capital markets (Jang, 2017; Houston et al., 2017). Our results suggest that having foreign exposure, e.g., a subsidiary in a foreign market, grants both public and private firms financial flexibility in their access to funding sources when they face uncertainty.

⁶ On the financial side, there is evidence that equity price commands a risk premium for political uncertainty (Pástor and Veronesi, 2013). Further, uncertainty depresses asset prices by raising the discount rates (Liu et al., 2017; Brogaard et al., 2020).

⁷ Prior studies also find that uncertainty can raise the cost of debt (Francis et al., 2014; Ashraf and Shen, 2019). However, these studies either use only the information on public firms or the aggregated data on the bank level, while we exploit the individual level firm information for both public and private firms.

Third, we contribute to the literature on the role of contingent terms in the syndicated loan contracts. Demerjian (2017) find that covenant intensity increases with the level of uncertainty. Christensen and Nikolaev (2012) show that performance-based covenants and capital-based covenants control the conflicts of interest between lenders and borrowers through different mechanisms. To our knowledge, we are the first to show that there are differences between public and private firms in terms of how performance-based covenants are used in loan contracts under uncertainty. In contrast to private firms, public firms can obtain better loan prices, but in exchange they accept more performance-based financial covenants, which provide additional protection for lenders, with the presumption that their accounting information can accurately signal their credit worthiness.

Fourth, our study extends the literature on the differences between public and private firms. Prior literature documents that public and private firms differ along several dimensions, including their access to external capital markets, dividend pay-out (Michaely and Roberts, 2012), investment (Mortal and Reisel, 2013), innovation (Acharya and Xu, 2017), cash holding (Mortal et al., 2020), environmental policy (Shive and Forster, 2020), and cost of syndicated loans (Saunders and Steffen, 2011). Our study highlights another dimension where public and private firms differ, i.e., design of loan contracts under uncertainty.

The remainder of the paper is organised as follows. Section 2 describes the construction of sample and variables. Empirical model and results are presented in Section 3. Section 4 present our conclusion.

2. Data and Sample

2.1 Sample construction

To conduct our analysis, we build our sample based on several sources of data. Our data on loan contracts comes from the LPC DealScan database, which covers a comprehensive set of loan characteristics including loan price, loan amount, maturity, financial covenants, loan type, and syndicate structure. We extract data for borrowing firm characteristics from the FAME database, which provides the accounting and financial information for both public and private firms that are registered in the UK market. For part of our analysis, we rely on Refinitiv Deals database for information on bond issuances. DealScan and FAME do not share a common identifier; therefore, we manually merge the two sources of data. Specifically, we begin with all loan facilities whose country of syndication is in the UK during the period of 2014 to 2018, which are 3,659 loan facilities to 1,471 borrowers, among which 1,273 firms are UK firms. We manually search each UK firm's name in the FAME database and record a link whenever we are confident about its identity based on its name, industry classification, and address. We drop the firms whose information is too ambiguous to prove the identity.

After matching, we identify 1,135 UK firms which have data both in DealScan and FAME databases. Some firms underwent changes in their names through the sample period, but FAME automatically traces those changes for consistency of firm-specific variables. We then extract the financial information for the 1,135 UK firms from FAME, and we further exclude facilities issued to the financial service firms with SIC codes from 6000 to 6999. We also require the loan facilities to be either term loans or credit lines. At last, we have 405 firms in the sample that have non-missing financial information required in the analysis, corresponding to 1,014 loan facilities.

We further classify our sample into the sub-samples of public firms and private firms. We define a firm to be a public firm if its DealScan variable “PublicPrivate” has a value of “Public”, and similarly for the private firms. However, this variable is static at the time when the data is collected, therefore, it does not account for the changes in the legal form through the time. To address this issue, we check the changes in names and the listing status during 2014 to 2018. For instance, Alent Plc was delisted and re-registered as a private firm in December 2015, with the new name Alent Limited. Therefore, it is labelled as a public firm before the date, and a private firm after the date. We denote a change from public firm to private firm if the name underwent a change from “PLC” and “Public Limited Company” to “Limited”, “Ltd”, and “LLP”, with the firm underwent delisting during the same time. The firm is therefore re-classified as a public firm if the period is before the date of change. We further re-classify firms to be public firms if the firms were delisted and the period is before the delisting date. We denote a change from private firm to public firm if the name underwent a change from “Limited”, “Ltd”, and “LLP” to “PLC” and “Public Limited Company”, and the firm is currently listed. We re-classify firms to be private firms if the period is before the date of change.

2.2 Variable construction

2.2.1 Dependent variables

Our first dependent variable is the all-in-drawn spread, which measures the cost of loans. It is defined as the basis points over the certain base rate. We consider the loans whose base rate is LIBOR. Next, we investigate the use of contingent contract terms by the total number of financial covenants in a loan contract. Following the prior studies, we also classify the

financial covenants into performance-based covenants and capital-based covenants as they potentially serve different purposes in loan contracts (Christensen and Nikolaev, 2012).

2.2.2 Variables for foreign exposure

We construct two proxies for firms' foreign exposure. The first proxy is based on a firm's foreign sales following the prior studies (Boutchkova et al., 2012; Bloom et al., 2019). For each year, we calculate the fraction of a firm's foreign sales over the total sales. We define a firm-year to have positive foreign sales if the fraction is greater than 1%. However, a firm's foreign sales can be affected by the Brexit referendum; to address this issue, we rely on the information before the referendum to construct the variable. We define a dummy variable *Foreign Sales* that equals one if a firm had positive foreign sales in any year of 2013, 2014, and 2015.

Our second proxy is based on a firm's foreign subsidiaries. Prior studies show that the presence of assets in a foreign market can affect a firm's exposure to the Brexit referendum (Hill et al., 2019) and the interaction with foreign lenders (Houston et al., 2017). We extract the information on the firms' subsidiaries from the FAME database and construct a dummy variable *Foreign Subsidiary* that equals one if a UK firm has any subsidiary that is registered outside UK around the world.

2.2.3 Control variables

Following the prior literature, we include a series of control variables in our analysis. The control variables for borrower characteristics include firm size, which is the logarithm of

the total assets; leverage ratio, which is the sum of long-term debt and short-term liability over the total assets; the ratio of EBITDA to sales, which is a measurement of profitability; the ratio of bank deposit to total assets, which is a proxy for the corporate cash holding; tangibility, which is the ratio of net tangible assets over total assets; capital investment, which is the ratio of the change in the fixed assets between current year and previous year, over the total assets; sales growth, which is the ratio of current year's sales over the previous year's sales; the logarithm of interest coverage ratio, which is a proxy for riskiness; the logarithm of firm age in years, and the capital investments proxied by yearly change in fixed assets.

For our analysis on loan facilities, the control variables of facility features include the logarithm of the loan maturity in months, the logarithm of the facility amount in million dollars, the total number of financial covenants, the total number of general covenants, a dummy variable that equals one if the facility contains collateral, a dummy variable if a loan is a refinance loan, a dummy variable if the facility is a term loan, a dummy variable if the loan is investment grade, and a dummy variable if the loan is not rated. For the analysis on the loan deal features, the control variables include the logarithm of the minimum loan maturity in the deal, the logarithm of the deal amount in million dollars, a dummy variable that equals one if any loan facility in the deal contains collateral, a dummy variable that equals one if any facility in the deal is a refinance loan, the total number of general covenants, a dummy variable that equals one if any loan facility in the deal is investment grade, and a dummy variable that equals one if every loan facility in the deal is not rated.

2.2.4 Summary statistics

We present the summary statistics in both the sub-samples of the loans issued by public firms and private firms in Table 1. In Panel A, we present the summary statistics on the loan contract terms at the facility level. We find that facilities issued by private firms on average are more expensive in spreads, more likely to be term loans, smaller in size, and more likely to demand collaterals compared to those issued by public firms. We also find that loans issued by private firms use fewer financial covenants in the contracts, and within both the sub-samples of the public and private firms, most of the financial covenants are performance-based, which indicates that lenders rely more on the ex-post transfer of control right through accounting information, relative to the ex-ante alignment of interest by putting restrictions on capital structure.

[Insert Table 1 here]

Next, we compare the firm characteristics across public and private borrowers in Panel B. Overall, we find that private firms in our sample on average are smaller in size, riskier in terms of leverage ratio and interest coverage ratio, have less cash holding measured by the bank deposits, but are more profitable, have greater sales growth and tangibility ratio. In addition, we find that public firms overall have more reported shareholders, and more likely to have institutional shareholders, more likely to issue bonds, than private firms. We leave detailed discussions on these in a further section. Notably, we find that public firms and private firms are different among the two proxies for the foreign exposure. For instance, 86.8% of public firms in the sample have positive foreign sales before the Brexit referendum, while it is 53.3% for private firms. Similarly, we find that public firms are more likely to have foreign

subsidiaries (86.3%) relative to the private firms (52.5%). Therefore, our summary statistics provide evidence that the level of foreign engagement is another dimension among which public and private firms are different. In the following multivariate analysis, we will investigate whether such heterogeneity can affect how the loan terms reacted to the Brexit uncertainty shock.

3. Empirical Results

3.1 Regression Model

In our analysis, we apply the Brexit referendum as an exogenous shock of uncertainty to the UK syndicated loan market. In the first step, we investigate whether the uncertainty shock has differential impact on the loan terms for public and private firms. Specifically, we estimate the following regression model:

$$Y = \beta_1 \text{Post Brexit} + \beta_2 \text{Public}_i * \text{Post Brexit} + \beta_3 \text{Public}_i + \gamma X_{it} + \pi Z + \alpha + \epsilon \quad (1)$$

In the regression model (1), Y is the dependent variable, which can be the loan spread and the number of financial covenants. *Post Brexit* is a dummy variable that equals one if the loan is originated after June 23, 2016, and zero otherwise. *Public* is the indicator for a firm to be a public firm at the time when the loan was originated, and it equals zero for the private firms. X_{it} is the vector of control variables for the firm-level characteristics; we use the firms' accounting information that is nearest before the date of loan origination. Z is the vector of control variables on the facility level or deal level depending on the dependent variable Y . α is the vector of fixed effects.

On the facility level, we use the facility purpose fixed effects and the Fama-French 12 industries fixed effects; on the deal level, we use the deal purpose fixed effects and the industry fixed effects. We estimate equation (1) by the OLS estimation, and the standard errors are clustered on the firm level.

As the next step, we divide our sample into the sub-samples of public and private firms, and we investigate whether the different level of foreign exposure can affect how the uncertainty shock impacted the loan terms in each sub-sample. We estimate the following equation:

$$Y = \beta_1 Post\ Brexit + \beta_2 Foreign\ Exposure_i * Post\ Brexit + \beta_3 Foreign\ Exposure_i + \gamma X_{it} + \pi Z + \alpha + \epsilon \quad (2)$$

In the equation (2), the proxy of *Foreign Exposure* can be either the *Foreign Sales* or the *Foreign Subsidiary* as we define in Section 2.2.2. Other control variables and fixed effects remain same as in equation (1).

3.2 Regression Results

3.2.1 Brexit and the cost of loans

In this section, we investigate the impact of the uncertainty shock on the loan spread, and whether this impact differs between public and private firms. In the Table 2, the dependent variable is the all-in-drawn spread measured in basis points divided by 100. In the Panel A, column (1), we estimate the equation (1) with *Post Brexit* only. We find that *Post Brexit* has a positive coefficient, and it is statistically significant at 5% level. This result indicates that loan spreads on average increase after the uncertainty shock, which is consistent with the notion

that, uncertainty triggers an increase in the default risk of borrowers, and makes the assessment of borrowers' creditworthiness more difficult, which causes the lenders to demand higher compensation.

In column (2), we include *Public* and its interaction with *Post Brexit*. By the construction, the dummy variable *Post Brexit* captures the average change in loan spread for the private firms after the referendum, and we find that it has a positive coefficient with statistical significance at 1% level. The interaction variable *Public*Post Brexit* has a negative coefficient which is statistically significant at 1%. The Wald test $Post\ Brexit = |Public * Post\ Brexit|$ shows that we cannot reject the hypothesis that the coefficients of *Post Brexit* and *Public*Post Brexit* have the same magnitude at the conventional significance level, which indicates that the net effect of Brexit on the cost of loans for public firms is close to zero. Therefore, the increase in the cost of loans in column (1) is largely attributed to private firms. Given that the summary statistics shows that the average loan spread for private firms is 350, the 67.8-bps increase in the loan spread accounts for an increase of 19.3% for private firms, translating to US\$1.93 million increase in the cost of loans, based on the average facility size. Therefore, we find evidence that a firm's public status can mitigate the impact on the cost of loans by the uncertainty shock.

[Insert Table 2 here]

We then investigate the role of foreign exposure during the period of the uncertainty shock, by including the proxies of foreign exposure. In column (3), we include *Foreign Sales*, together with its interaction with *Post Brexit*. We find the coefficient for the interaction terms

is negative and statistically significant indicating that foreign sales mitigate the impact of the uncertainty shock on the cost of loans. This result is consistent with the view that international diversification can help firms reduce their default risk and therefore they can access to debt markets at a lower cost relative to those firms without international diversification under uncertainty (e.g., Hill et al., 2019).

In column (4), we conduct the same regression with *Foreign Subsidiary*. We find qualitatively same result, that is, the coefficient for the interaction term is negative and statistically significant. Thus, firms with presence in a foreign market can borrow at a lower cost relative to those with no foreign subsidiaries when they face uncertainty. This finding provides support for the view that foreign subsidiaries can facilitate information flow between domestic borrowers and foreign lenders (Houston et al., 2017; Moshirian et al., 2021).⁸ Hence, these firms can access to foreign capital markets, which grants them higher bargaining power in the loan negotiations. In the context of Brexit uncertainty, lenders' concern about potential changes in the mutual agreements and regulations regarding firms' international operations do not seem to play a significant role leading to a higher cost of borrowing for firms with foreign exposure.

The summary statistics shows that public firms are more likely to have foreign exposure than private firms, therefore, our previous results on foreign exposure might reflect the effect of public status itself. We then investigate the role of foreign exposure within each sub-sample by estimating the equation (2). In column (1), (2) and (3) of Panel B, we conduct our analysis

⁸ As in our sample, 80% of loan facilities contain non-UK lead arrangers.

in the sub-sample of public firms. In column (1), the coefficient for *Post Brexit* is statistically insignificant, which confirms the previous result that public firms' cost of borrowing is less by the uncertainty shock. In column (2), the proxy of foreign exposure is *Foreign Sales*. The stand-alone *Post Brexit* captures the average change in the loan spread for the public firms that did not have positive foreign sales before the referendum. The coefficient is positive and statistically significant at 10%, which indicates that loan spreads overall increase for public firms with foreign sales. The coefficient for *Foreign Sales*Post Brexit* is negative and statistically significant. The Wald test $Post\ Brexit = |Foreign\ Sales * Post\ Brexit|$ cannot reject the hypothesis that the coefficients of *Post Brexit* and *Foreign Sales*Post Brexit* have the same magnitude at the conventional significance level, which indicates that the net effect on the loan spreads for public firms that had positive foreign sales before the referendum is close to zero.

In column (3), the proxy of foreign exposure is *Foreign Subsidiary*. Consistent with our result in column (2), the coefficient for *Post Brexit* is positive and statistically significant. The coefficient for the interaction term is negative and statistically significant. Our results indicate that the impact of uncertainty on the cost of borrowing varies depending on firms' foreign exposure for our sub-sample of public firms.

In column (4), (5) and (6), we present the results for the sub-sample of private firms. Consistent with our results for public firms, we find that the coefficient for *Post Brexit* is positive and statistically significant in all regressions. In addition, the coefficient for the interaction of each proxy for foreign exposure and the *Post Brexit* is negative and is statistically

significant. These results indicate that foreign exposure mitigates the impact of the uncertainty shock on the cost of borrowing for our sub-sample of private firms.

3.2.2 *Brexit and the financial covenants*

In this section, we investigate the use of financial covenants as a type of contingent contract term under uncertainty. Financial covenants can specify the actions required by the lenders when additional information arrives after the contract has been determined, therefore, they can enhance contractual efficiency especially during the period when borrowers' future outcomes are less predictable (Demerjian, 2017). Financial covenants can transfer the control right to the lenders and initiate renegotiations following a borrower's violation and therefore lenders' claims are better protected during the uncertain period.

Table 3 presents the regression results for the number of financial covenants in a loan contract. In column (1) and column (2) of Panel A, the coefficient for *Post Brexit* and the coefficient for *Public*Post Brexit* are all statistically insignificant showing that uncertainty does not influence the number of financial covenants in loan contracts. In column (3) we investigate whether the impact of uncertainty on financial covenants vary depending on firms' foreign exposure. Thus, we include *Foreign Sales* and its interaction with *Post Brexit*. We find that the coefficient for the interaction term is positive and statistically significant at 5% level. In column (4), we conduct the same analysis with *Foreign Subsidiary* as the proxy, and we find qualitatively the same result. These results suggest that firms with foreign exposure have more financial covenants in their loan contracts relative to those without any foreign exposure under uncertainty.

[Insert Table 3 here]

We next investigate the role of foreign exposure in each sub-sample of public and private firms. In Panel B, column (1), (2) and (3), we estimate the equation (2) for the sub-sample of public firms. In column (1), the *Post Brexit* indicator has a positive coefficient but is not statistically significant, while in column (2), the coefficient for *Foreign Sales*Post Brexit* is positive and is statistically significant at 5% level. In column (3), we have qualitatively same result with *Foreign Subsidiary* as the proxy. These results indicate that the use of financial covenants after Brexit referendum concentrates in the public firms who have foreign exposure. These results are contrary to our previous results on the loan price, where we find that the impact by the Brexit referendum on the cost of loans can be mitigated by foreign exposure for public firms. Our results therefore point to a narrative that public firms are not totally immune to the uncertainty shock triggered by the Brexit referendum, but rather their contract design is affected differently. Hence, our findings suggest a trade-off in the contract design, such that public firms with foreign exposure receive favourable loan prices but in exchange they accept more financial covenants in their contracts relative to those without foreign exposure during the time when uncertainty increases.

In column (4), (5) and (6), we present our results in the sub-sample of private firms. Contrary to the results in the sub-sample of public firms, we do not observe any significant impact of foreign exposure on the covenants under uncertainty. Combined with our previous results on loan price, our findings indicate that lenders design loan contracts differently with private firms. Private firms with foreign exposure can obtain better loan price, but lenders do

not seem to manage their exposure to the uncertainty by including more financial covenants. One potential explanation for this could be about the contractibility of the accounting information. As we observe from the summary statistics, most of the financial covenants in our sample are performance-based and are related to the measures of profitability and cash flow.

Christensen and Nikolaev (2012) argue that performance-based covenants rely on the presumption that the borrowers' accounting information can accurately signal the credit risk. If the contractibility of accounting information is low, it will deter the use of the performance-based covenants because the covenants can trigger inefficient transfer of control to the lenders. Given that private firms are likely to have limited contractibility on their accounting information compared to the public firms, we would expect that performance-based financial covenants would be less useful for these firms. In contrast, public firms are likely to have more transparency, which could facilitate the use of covenants. In Table 4, we repeat our analysis specifically with the number of performance-based financial covenants. Overall, we obtain qualitatively similar findings.⁹

[Insert Table 4 here]

3.3 Other differences between public and private firms

In this section, we investigate other aspects where public firms and private firms could

⁹ The increase in the number of performance-based financial covenants may be driven by changes in agency conflicts rather than uncertainty. Demerjian (2017) argues that dividend restrictions and collateral directly address agency conflicts, and he finds that following 9/11, there is no significant change in the use of dividend restrictions or collateral. In our sample, dividend restrictions are never used, and we do not find changes in the tendency to include collateral after Brexit. Therefore, our results on covenants are likely to be driven by uncertainty.

differ, and whether those differences might confound our findings. Previous literature documents that public firms and private firms have notable differences in informational transparency, ownership characteristics, and access to external capital markets (e.g., Brav, 2009; Michaely and Roberts, 2012; Mortal et al., 2020). These characteristics may as well influence how a firm could be affected by the uncertainty, and our findings on the foreign exposure may be confounded by these characteristics. In the following analysis, we try to address this issue by controlling for whether a firm has access to bond market, whether a public firm is listed in FTSE100/250 indexes, whether a private firm has institutional investors as shareholders, and the ownership structure in term of the number of reported shareholders.

3.3.1 Bond Market Access

Our summary statistics show that public firms are more likely to have access to bond market compared with private firms.¹⁰ Access to bond market can facilitate information flow and grant borrower with higher bargaining power with bank lenders, and these can lower the cost of loans (Hale and Santos, 2009).

In Table 5, we repeat our analysis, further controlling for *Bond*, which is a dummy variable indicating whether a firm has access to bond market, and *Bond*Post Brexit*. In Panel A, the dependent variable is the cost of borrowing. For the sub-sample of public firms, we do not find any evidence that access to bond market affects the cost of loans, neither do we find any evidence that it affects the impact of the uncertainty shock. However, in the sub-sample of private firms, the coefficient for *Bond* dummy is negative and statistically significant in column

¹⁰ We manually check each firm in our sample in the Refinitiv Deals database for information on bond issuances.

(4) and (6). This result is consistent with the prediction that access to bond market can lower the cost of loans. However, such advantage on loan costs is muted under uncertainty, as the interaction terms are positive and statistically significant in column (4) and (6). After controlling for access to bond market, our results on foreign exposure remain qualitatively same.

[Insert Table 5 here]

In Panel B, we do not find evidence that the access to bond market is related to the change in the number of financial covenants after the referendum, and our results on foreign exposure remain robust.

3.3.2 FTSE 100/250 listing

Saunders and Steffen (2011) document that public firms who are listed in the indexes FTSE100 and FTSE250 are arguably most informationally transparent and have lower cost of borrowing. The level of informational transparency may also affect how uncertainty affects loan contract terms. Table 6 presents regression results controlling for a dummy variable indicating whether a firm is listed in FTSE100/250, and its interaction with *Post Brexit* indicator. In Panel A, the dependent variable is the cost of loans. We find statistically significant evidence that FTSE100/250 firms pay lower loan prices, but we do not find evidence that Brexit has a differential impact on the cost of loans for these firms. In column (2) and (3), we include proxies for foreign exposure, i.e., foreign sales and foreign subsidiaries, and their interactions with *Post Brexit*. We find that our result with foreign sales becomes weaker in statistical significance, while our result with foreign subsidiaries remains robust.

[Insert Table 6 here]

In Panel B, the dependent variable is the number of financial covenants in a loan contract. In column (1), we find that the coefficient for *FTSE100/250*Post Brexit* is positive and statistically significant showing that the increase in the use of financial covenants under uncertainty is driven by firms who are most informationally transparent. In column (2) and (3), we control for foreign exposure and its interaction with *Post Brexit*. In column (2), we find that *Foreign Sales*Post Brexit* is still statistically significant after controlling for FTSE100/250 listing, while in column (3), the coefficient for *Foreign Subsidiary*Post Brexit* is positive but statistically insignificant. Overall, we find evidence that FTSE100/250 listing may capture the information channel to explain the use of covenants under uncertainty, while the effect of foreign exposure partly remains robust after controlling for FTSE100/250 listing.

3.3.3 Institutional Ownership

Institutional ownership is another aspect that public firms and private firms could be different. We construct a dummy variable which is equal to one if a firm has institutional investors as shareholders.¹¹ Our summary statistics show that 97.2% of public firms have institutional investors as shareholders, while it is 37.7% for private firms.

The presence of institutional investors can be related to the agency problems within a firm. On the one hand, institutional investors can provide strong monitoring and governance, which can reduce managerial risk-taking and the likelihood of financial distress (e.g., Mc

¹¹ In our analysis, we consider both direct and indirect share ownership reported in FAME database.

Cahery et al., 2016; Ward et al., 2018). On the other hand, institutional investors with limited investment horizon may pressure the management to engage in myopic activities, which may exacerbate the agency conflicts between shareholders and creditors (Kim et al., 2019). If agency conflicts are more pronounced during the time of uncertainty, institutional ownership may affect how the uncertainty shock impact the design of loan contracts.

In Table 7, we test the effect of presence of institutional investors by including a dummy variable, *Institutional Ownership*, and its interaction with *Post Brexit*, for our sub-sample of private firms. Panel A presents regression results for loan price. In column (1), we find that presence of institutional investors is related to lower cost of loans. This result is consistent with the view that institutional investors can provide monitoring and governance which can reduce firm risks. Similar result can be seen in column (3) where we include *Foreign Subsidiary* as a proxy for foreign exposure. The coefficient for *Institutional Ownership*Post Brexit* is statistically insignificant in all regressions. In both column (2) and (3), our results for foreign exposure remain robust after controlling for institutional ownership. Panel B presents the regression results for financial covenants. We do not find any evidence that Brexit has differential impact on the private firms who have institutional investors. Further, the results on foreign exposure remain the same.

[Insert Table 7 here]

3.3.4 Ownership Structure

Ownership structure is another characteristic that public firms and private firms are different, as public firms generally have more diffused shareholder bases. We construct a

variable *Log (1+number of shareholders)*, which is the logarithm of one plus the number of reported shareholders at the time of December 2015, including both direct and indirect shareholders.¹² Our summary statistics show that public firms on average have significantly higher number of shareholders than private firms. According to prior literature, ownership concentration is related to higher agency conflict between shareholders and creditors (Aslan and Kumar, 2012), therefore, ownership structure may as well affect the impact of uncertainty on the loan contract design.

In Table 8, we include *Log (1+number of shareholders)* and its interaction with *Post Brexit* indicator in the regressions, for our sub-sample of public and private firms. Panel A presents the regression results for the loan price. We do not find consistent evidence through regressions that ownership concentration can affect the cost of loans and the impact by the uncertainty shock, while our results on foreign exposure remain robust after controlling this.

[Insert Table 8 here]

Panel B reports the regression results for financial covenants. We find that in the sub-sample of public firms, firms with more diffused ownership structure include more financial covenants in the contracts following the Brexit shock, and this result is statistically significant in all three regressions. One potential explanation for this is that firms with more shareholders are likely to have more informational transparency, which facilitates the use of financial covenants. Controlling for ownership structure takes away some statistical significance of the

¹² This variable does not take unnamed minority shareholders into account. These shareholders are combined and labelled as “More than 100 shareholders”. Most of this kind of shareholders are within public firms.

interaction terms by each proxy of foreign exposure and *Post Brexit*.

3.4 Robustness check

3.4.1 Firm Size and Age

Given our results, one concern might be that larger and older firms are more likely to have diversification, i.e., foreign exposure, and such firms can be more resilient in the face of uncertainty (e.g., Bakke and Gu, 2017; Hann et al., 2013). In Table 9, we further control for firm size and age, and their interaction with the *Post Brexit* indicator. We find that our results for both loan costs and financial covenants remain robust.

[Insert Table 9 here]

3.4.2 Credit Lines

Credit lines are different from term loans that they specify a pre-set limit on the loan commitment, and borrowers can draw down the lines of credit as they need. Ivashina and Scharfstein (2010), Campello et al., (2010) find that during the financial crisis, firms drew down their lines of credit, which posed significant stress on bank liquidity. Therefore, one may expect that the uncertainty shock had differential impact on credit lines and term loans.

In the Table 10, we include a dummy variable that if a loan facility is a credit line, together with its interaction with *Post Brexit* in the regressions. Overall, we find consistent evidence that credit lines have lower costs than term loans as in Saunders and Steffen (2011). The results on foreign exposure remain robust after controlling for being credit lines.

[Insert Table 10 here]

3.4.3 Relationship Lending

Relationship lending is an important aspect of private loans. On one hand, lenders may acquire valuable information about borrowers' quality through repeated lending, which can reduce the information asymmetry (Berger and Udell, 1995; Bharath et al., 2011; Bolton et al., 2016). On the other hand, the information acquired from the lending relationship may as well grants lenders with higher bargaining power over the borrowers, resulting in a hold-up problem (Rajan, 1992). In either way, relationship loans might react differently to the uncertainty shock.

We construct a dummy variable if a loan facility is a relationship loan, defined as whether the borrower ever borrowed from a same lead arranger in the current loan during the past five years (Bharath et al., 2011). In Table 11, we include this variable and its interaction with *Post Brexit* in the regressions. We do not find evidence that the uncertainty shock has differential impact on relationship loans for both loan price and financial covenants. The results on foreign exposure remain robust after controlling for being relationship loans.

[Insert Table 11 here]

3.4.4 Placebo Tests

In the previous analysis, we find that loan terms on average changed after the Brexit referendum, while it remains possible that the time trend of changes might have started before the referendum. If this were true, the observed changes in the loan contract design may not be related to the uncertainty shock. To address this concern, we conduct several placebo tests.

Specifically, we restrict the sample period from January 2014 to June 2016, which covers the period before the referendum. We define the placebo “Brexit” period as after June 23rd, 2015, which is represented by the dummy variable *Post Brexit II*. In Table 12, we repeat previous analysis with this new sample and the placebo Brexit shock.

Panel A reports the regression results for the loan price. In column (1), we do not find that loan prices changed after the middle of 2015, neither do we find a differential trend for public firms in column (2). In column (3) and (4) for public firms, (5) and (6) for private firms, we do not find statistically significant evidence that firms have differential trends in loan prices depending on their foreign exposure.

[Insert Table 12 here]

Panel B presents the estimation results for the number of financial covenants. In column (1), we find that the coefficient for *Post Brexit II* is positive and statistically significant. In column (2), we find that this positive effect is likely to be driven by the public firms, though the interaction term is not statistically significant. These results suggest that the increase in the use of financial covenants for public firms started as early as in 2015, which may indicate that our previous findings on covenants may not be related to the Brexit shock. However, one observable difference between column (3) and (4) compared with previous results is that the trend is not differential among firms with or without foreign exposure.

In addition, we repeat our analysis with FTSE100/250 listing in Panel C, and we find that the increase in the use of covenants is universal among public firms, regardless of whether a firm is listed in FTSE100/250 or not. In summary, the increasing trend in the use of financial

covenants seems present among public firms before the uncertainty shock, but after the shock, it is driven by the firms who are arguably more informationally transparent. Therefore, the uncertainty may have changed the trend in the use of financial covenants.

4. Conclusion

This study investigates how the uncertainty shock of the Brexit referendum influences the design of syndicated loan contracts considering firms' public status and foreign exposure. Uncertainty makes it harder for private firms to access to syndicated loan markets as they experience larger increase in their cost of borrowing than public firms. However, borrowers' foreign exposure, proxied by the foreign sales or the presence of foreign subsidiaries, mitigates the impact of the uncertainty shock for both public and private firms. This finding offers another rationale for firms' engagement in international operations as it allows them to access to debt markets at a lower cost under uncertainty.

Besides the loan price, lenders also manage their exposure to the increasing uncertainty through non-pricing terms, e.g., financial covenants, under uncertainty. For public firms, whose accounting information is likely to be more informative than private firms, lenders demand more performance-based financial covenants in the loan contracts as additional protection. Even though public firms' cost of borrowing does not increase as much as private firms' cost of borrowing when they face uncertainty, public firms are not totally immune to the uncertainty shock, as they need to accept more financial covenants in exchange for lower costs of loans. Private firms do not face similar demands from lenders in terms of performance-based financial covenants in their loan contracts under uncertainty. Overall, our findings provide novel

evidence on how borrowers' public status and foreign exposure shape loan contracts under uncertainty.

References

Acharya, V., & Xu, Z. (2017). Financial dependence and innovation: The case of public versus private firms. *Journal of Financial Economics*, 124(2), 223-243.

Ashraf, B. N., & Shen, Y. (2019). Economic policy uncertainty and banks' loan pricing. *Journal of Financial Stability*, 44, 100695.

Aslan, H., & Kumar, P. (2012). Strategic ownership structure and the cost of debt. *Review of Financial Studies*, 25(7), 2257-2299.

Baker, S. R., Bloom, N., & Davis, S. J. (2016). Measuring economic policy uncertainty. *The Quarterly Journal of Economics*, 131(4), 1593-1636.

Bakke, T. E., & Gu, T. (2017). Diversification and cash dynamics. *Journal of Financial Economics*, 123(3), 580-601.

Ball, R., & Shivakumar, L. (2005). Earnings quality in UK private firms: comparative loss recognition timeliness. *Journal of Accounting and Economics*, 39(1), 83-128.

Bernanke, B. S. (1983). Irreversibility, uncertainty, and cyclical investment. *The Quarterly Journal of Economics*, 98(1), 85-106.

Berg, T., Saunders, A., Schäfer, L., & Steffen, S. (2019). 'Brexit' and the Contraction of Syndicated Lending. *Available at SSRN 2874724*.

Berger, A. N., & Udell, G. F. (1995). Relationship lending and lines of credit in small firm finance. *Journal of Business*, 351-381.

Bharath, S. T., Dahiya, S., Saunders, A., & Srinivasan, A. (2011). Lending relationships and loan contract terms. *Review of Financial Studies*, 24(4), 1141-1203.

- Bloom, N. (2009). The impact of uncertainty shocks. *Econometrica*, 77(3), 623-685.
- Bloom, N. (2014). Fluctuations in uncertainty. *Journal of Economic Perspectives*, 28(2), 153-76.
- Bloom, N., Bunn, P., Chen, S., Mizen, P., Smietanka, P., Thwaites, G., & Young, G. (2018). Brexit and uncertainty: insights from the Decision Maker Panel. *Fiscal Studies*, 39(4), 555-580.
- Bloom, N., Bunn, P., Chen, S., Mizen, P., Smietanka, P., & Thwaites, G. (2019). The impact of Brexit on UK firms (No. w26218). National Bureau of Economic Research.
- Boutchkova, M., Doshi, H., Durnev, A., & Molchanov, A. (2012). Precarious politics and return volatility. *Review of Financial Studies*, 25(4), 1111-1154.
- [Bolton](#), P., [Freixas](#), X., [Gambacorta](#), L., [Mistrulli](#), P.E. (2016). Relationship and transaction lending in a crisis. *Review of Financial Studies*, 29 (10), 2643–2676.
- Brand, T., Isoré, M., & Tripier, F. (2019). Uncertainty shocks and firm creation: Search and monitoring in the credit market. *Journal of Economic Dynamics and Control*, 99, 19-53.
- Brav, O. (2009). Access to capital, capital structure, and the funding of the firm. *Journal of Finance*, 64(1), 263-308.
- Breinlich, H., Leromain, E., Novy, D., & Sampson, T. (2020). Voting with their money: Brexit and outward investment by UK firms. *European Economic Review*, 124, 103400.
- Brogaard, J., Dai, L., Ngo, P. T., & Zhang, B. (2020). Global political uncertainty and asset prices. *Review of Financial Studies*, 33(4), 1737-1780.
- Campello, M., Cortes, G. S., d'Almeida, F., & Kankanhalli, G. (2020). Exporting uncertainty: The impact of Brexit on corporate America (No. w26714). *National Bureau of Economic Research*.
- Campello, M., Graham, J. R., & Harvey, C. R. (2010). The real effects of financial

constraints: Evidence from a financial crisis. *Journal of Financial Economics*, 97(3), 470-487.

Christiano, L. J., Motto, R., & Rostagno, M. (2014). Risk shocks. *American Economic Review*, 104(1), 27-65.

Christensen, H. B., & Nikolaev, V. V. (2012). Capital versus performance covenants in debt contracts. *Journal of Accounting Research*, 50(1), 75-116.

Demerjian, P. R. (2017). Uncertainty and debt covenants. *Review of Accounting Studies*, 22(3), 1156-1197.

Francis, B. B., Hasan, I., & Zhu, Y. (2014). Political uncertainty and bank loan contracting. *Journal of Empirical Finance*, 29, 281-286.

Hale, G., & Santos, J. A. (2009). Do banks price their informational monopoly?. *Journal of Financial Economics*, 93(2), 185-206.

Hann, R. N., Ogneva, M., & Ozbas, O. (2013). Corporate diversification and the cost of capital. *Journal of Finance*, 68(5), 1961-1999.

Hill, P., Korczak, A., & Korczak, P. (2019). Political uncertainty exposure of individual companies: The case of the Brexit referendum. *Journal of Banking & Finance*, 100, 58-76.

Houston, J. F., Itzkowitz, J., & Naranjo, A. (2017). Borrowing beyond borders: Foreign assets, lender choice, and loan pricing in the syndicated bank loan market. *Journal of Corporate Finance*, 42, 315-334.

Ivashina, V., & Scharfstein, D. (2010). Bank lending during the financial crisis of 2008. *Journal of Financial Economics*, 97(3), 319-338.

Jang, Y. (2017). International corporate diversification and financial flexibility. *Review of Financial Studies*, 30(12), 4133-4178.

Julio, B., & Yook, Y. (2012). Political uncertainty and corporate investment cycles. *Journal*

of Finance, 67(1), 45-83.

Kim, H. D., Kim, Y., & Mantecon, T. (2019). Short-term institutional investors and agency costs of debt. *Journal of Business Research*, 95, 195-210.

Liu, L. X., Shu, H., & Wei, K. J. (2017). The impacts of political uncertainty on asset prices: Evidence from the Bo scandal in China. *Journal of Financial Economics*, 125(2), 286-310.

McCahery, J. A., Sautner, Z., & Starks, L. T. (2016). Behind the scenes: The corporate governance preferences of institutional investors. *Journal of Finance*, 71(6), 2905-2932.

Michaely, R., & Roberts, M. R. (2012). Corporate dividend policies: Lessons from private firms. *Review of Financial Studies*, 25(3), 711-746.

Moshirian, F., Pham, P., Tian, S., and Wu, E. (2021). [Foreign ties that bind: Cross-border firm expansions and fund portfolio allocation around the world](#). *Journal of Financial and Quantitative Analysis*, forthcoming. Mortal, S., & Reisel, N. (2013). Capital allocation by public and private firms. *Journal of Financial and Quantitative Analysis*, 77-103.

Mortal, S., Nanda, V., & Reisel, N. (2020). Why do private firms hold less cash than public firms? International evidence on cash holdings and borrowing costs. *Journal of Banking & Finance*, 113, 105722.

Pástor, L., & Veronesi, P. (2013). Political uncertainty and risk premia. *Journal of Financial Economics*, 110(3), 520-545.

Rajan, R. G. (1992). Insiders and outsiders: The choice between informed and arm's-length debt. *Journal of Finance*, 47(4), 1367-1400.

Saunders, A., & Steffen, S. (2011). The costs of being private: Evidence from the loan market. *Review of Financial Studies*, 24(12), 4091-4122.

Shive, S. A., & Forster, M. M. (2020). Corporate governance and pollution externalities of public and private firms. *Review of Financial Studies*, 33(3), 1296-1330.

Stulz, R. M. (2018). The shrinking universe of public firms: Facts, causes, and consequences. *NBER Reporter*, (2), 12-15.

Ward, C., Yin, C., & Zeng, Y. (2018). Institutional investor monitoring motivation and the marginal value of cash. *Journal of Corporate Finance*, 48, 49-75.

Appendix. Variable Definition

Contract Terms

All-In-Drawn: “The amount the borrower pays in basis points over LIBOR for each dollar drawn down. It adds the spread of the loan with any annual (or facility) fee paid to the bank group.” (According to DealScan). We scale the variable to the percentage term. *Source: DealScan*

Term Loan: A dummy variable that is equal to one if the facility is a term loan, and zero otherwise. *Source: DealScan*

Credit Line: A dummy variable that is equal to one if the facility is a credit line, and zero otherwise. *Source: DealScan*

Log (1+Maturity): The logarithm of one plus loan maturity in months. *Source: DealScan*

Log (Loan Size): The logarithm of one plus loan amount in million dollars. *Source: DealScan*

P-based Covenants: The number of performance-based financial covenants. *Source: DealScan*

Financial Covenants: The number of financial covenants. *Source: DealScan*

General Covenants: The number of general covenants, which include equity issuance sweep, excess cash flow sweep, asset sales sweep, debt issuance sweep, insurance proceeds sweep, dividend restrictions, and a clause which requires lenders to hold certain amount of commitments to approve any modifications to the deal. *Source: DealScan*

Secured: A dummy variable that is equal to one if the facility contains collaterals, and zero otherwise. *Source: DealScan*

Refinance: A dummy variable that is equal to one if the facility is a refinance loan, and zero otherwise. *Source: DealScan*

Investment Grade: A dummy variable that is equal to one if the facility is investment grade, and zero otherwise. *Source: DealScan*

Not Rated: A dummy variable that is equal to one if the facility is not rated, and zero otherwise. *Source: DealScan*

Relation: A dummy variable that is equal to one if the borrower ever borrowed from a same lead arranger during the past five years as in the current facility, and zero otherwise. *Source:*

DealScan

Log (Min.Maturity): The logarithm of one plus the minimum of loan facility in months in the deal. *Source: DealScan*

Log (Deal Size): The logarithm of one plus the deal amount in million dollars. *Source: DealScan*

Max.Secured: A dummy variable that is equal to one if any facility in the deal includes collateral, and zero otherwise. *Source: DealScan*

Max.Refinance: A dummy variable that is equal to one if any facility in the deal is a refinance loan, and zero otherwise. *Source: DealScan*

Max.Investment Grade: A dummy variable that is equal to one if any facility in the deal is investment grade, and zero otherwise. *Source: DealScan*

Min.Not rated: A dummy variable that is equal to one if all facilities in the deal is unrated, and zero otherwise. *Source: DealScan*

Firm Characteristics

EBITDA: The ratio of EBITDA over total sales. *Source: FAME*

Sales Growth: The ratio of current year's sales over previous year's sales. *Source: FAME*

Leverage: The ratio of long-term debt plus short-term debt over total assets. *Source: FAME*

Cash: The ratio of bank deposits to total assets. *Source: FAME*

Size: The logarithm of total assets. *Source: FAME*

Tangibility: The ratio of tangible assets to total assets. *Source: FAME*

Log (Age): The logarithm of firm age in years. *Source: FAME*

Log (Interest Coverage): The logarithm of one plus the interest coverage ratio. *Source: FAME*

Capital Investment: The difference between current year's fixed assets and previous year's fixed assets. *Source: FAME*

Foreign Sales: A dummy variable that is equal to one if a firm ever have positive foreign sales during the years of 2013, 2014, and 2015. *Source: FAME*

Foreign Subsidiary: A dummy variable that is equal to one if a firm has any foreign subsidiary that is registered outside UK. *Source: FAME*

FTSE100/250: A dummy variable that is equal to one if a firm is listed in FTSE 100/250 indexes. *Source: FAME*

Institutional Ownership: A dummy variable that is equal to one if a firm has institutional investors as shareholders. *Source: FAME*

Log (1+number of shareholders): The logarithm of one plus the number of reported shareholders. This does not account for unnamed individual shareholders. *Source: FAME*

Bond: A dummy variable that is equal to one if a firm ever issued bonds since the year of 2009. *Source: Refinitiv*

Table 1: Summary statistics

This table reports the summary statistics of key variables in the sub-samples of public firms and private firms. We winsorize firm level data at the 1st and 99th percentiles. We perform two-sample t-test for the difference in means, and Wilcoxon rank-sum test for the difference in medians. *, ** and *** denote statistical significance at the level of 10%, 5% and 1%, respectively.

Panel A. Contract terms

<i>Variable:</i>	Public firm sub-sample			Private firm sub-sample			Private - Public	
	(1) N	(2) Mean	(3) Median	(4) N	(5) Mean	(6) Median	(5) - (2) t-statistics	(6) - (3) Wilcoxon Z-statistics
<i>All-In-Drawn</i>	282	2.113	2	193	3.500	4	9.43***	9.97***
<i>Term Loan</i>	588	0.245	0	426	0.498	0	8.41***	8.32***
<i>Credit Line</i>	588	0.755	1	426	0.502	1	-8.41***	-8.32***
<i>Log (1+Maturity)</i>	588	3.956	4	426	4.145	4	6.79***	9.75***
<i>Log (Loan Size)</i>	588	5.544	6	426	5.038	5	-6.25***	-5.75***
<i>P-based Covenants</i>	588	0.207	0	426	0.070	0	-5.18***	-3.54***
<i>Financial Covenants</i>	588	0.228	0	426	0.099	0	-4.17***	-3.23***
<i>General Covenants</i>	588	0.024	0	426	0.033	0	0.49	-1.19
<i>Secured</i>	588	0.153	0	426	0.599	1	15.89***	14.77***
<i>Refinance</i>	588	0.707	1	426	0.669	1	-1.30	-1.31
<i>Investment Grade</i>	588	0.793	1	426	0.394	0	-13.72***	-12.92***
<i>Not Rated</i>	588	0.175	0	426	0.566	1	13.60***	12.96***
<i>Relation</i>	588	0.740	1	426	0.566	1	-5.78***	-5.80***

Panel B. Firm characteristics

<i>Variable:</i>	Public firms			Private firms			Private - Public	
	(1) N	(2) Mean	(3) Median	(4) N	(5) Mean	(6) Median	(5) - (2) t-statistics	(6) - (3) Wilcoxon Z-statistics
<i>EBITDA</i>	2091	0.162	0	1469	0.191	0	2.18**	4.35***
<i>Sales Growth</i>	1870	1.082	1	1299	1.141	1	4.37***	3.49***
<i>Leverage</i>	2134	0.239	0	1525	0.406	0	18.52***	15.60***
<i>Cash</i>	2108	0.082	0	1484	0.075	0	-2.24**	-6.43***
<i>Size</i>	2134	6.745	7	1525	6.382	6	-6.55***	-6.25***
<i>Tangibility</i>	2095	0.246	0	1473	0.304	0	6.16***	1.72*
<i>Log (Age)</i>	2287	3.267	3	1706	2.872	3	-13.31***	-12.31***
<i>Log (Interest Coverage)</i>	1943	2.117	2	1307	1.884	2	-5.07***	-8.14***
<i>Capital Investment</i>	1911	0.034	0	1355	0.035	0	0.32	0.93
<i>Foreign Sales</i>	1914	0.868	1	990	0.533	1	-18.95***	-19.83***
<i>Foreign Subsidiary</i>	2332	0.863	1	1782	0.525	1	-24.51***	-23.87***
<i>FTSE100/250</i>	2332	0.415	0					
<i>Institutional Ownership</i>	2332	0.972	1	1782	0.377	0	-49.66***	-41.85***
<i>Log (1+number of shareholders)</i>	2321	4.266	4	1716	1.614	1	-74.57***	-44.79***
<i>Bond</i>	2332	0.387	0	1782	0.167	0	-16.42***	-15.39***

Table 2 Brexit and Loan Spread

This table presents the results for loan spread around the Brexit referendum. The dependent variable is the all-in-drawn spread divided by 100. *Post Brexit* is a dummy variable, which is equal to one if a facility is issued after the referendum date on June 23, 2016, and zero otherwise. *Public* is a dummy variable, which is equal to one if the borrower is a public firm at the time of loan issuance, and zero otherwise. *Foreign Sales* is a dummy variable, which is equal to one if the borrower had positive foreign sales in any year of 2013, 2014 and 2015, and zero otherwise. *Foreign Subsidiary* is a dummy variable, which is equal to one if the borrower has subsidiaries that are registered outside the United Kingdom, and zero otherwise. Loan type fixed effects, loan purpose fixed effects, and Fama-French 12 industries fixed effects are included in the regressions. *t-statistics* are based on robust standard errors clustered at the firm level. *, ** and *** denote statistical significance at the level of 10%, 5% and 1% respectively.

Panel A

	(1)	(2)	(3)	(4)
<i>(1) Post Brexit</i>	0.230** (2.10)	0.678*** (2.96)	0.926*** (3.28)	0.962*** (3.72)
<i>(2) Public*Post Brexit</i>		-0.687*** (-2.77)	-0.288 (-1.08)	-0.444* (-1.83)
<i>Public</i>		-0.088 (-0.44)	-0.366 (-1.48)	-0.173 (-0.89)
<i>(3) Foreign Sales*Post Brexit</i>			-0.907*** (-3.88)	
<i>Foreign Sales</i>			0.323* (1.73)	
<i>(4) Foreign Subsidiary*Post Brexit</i>				-0.616** (-2.54)
<i>Foreign Subsidiary</i>				0.176 (1.03)
<i>Profitability</i>	-0.831*** (-3.70)	-0.757*** (-3.49)	-0.712*** (-3.87)	-0.753*** (-3.67)
<i>Sales Growth</i>	-0.064 (-0.79)	-0.126 (-1.57)	0.013 (0.10)	-0.087 (-1.13)
<i>Leverage</i>	0.074 (0.21)	-0.031 (-0.09)	-0.365 (-0.89)	-0.050 (-0.15)
<i>Cash</i>	0.610 (0.84)	0.818 (1.14)	0.732 (0.84)	0.704 (1.00)
<i>Size</i>	-0.172*** (-3.26)	-0.172*** (-3.37)	-0.133** (-2.57)	-0.173*** (-3.54)
<i>Tangibility</i>	-0.034 (-0.12)	-0.121 (-0.45)	-0.298 (-0.93)	-0.123 (-0.47)
<i>Log (Age)</i>	0.016 (0.23)	0.023 (0.39)	0.056 (0.73)	0.005 (0.08)
<i>Log (Interest Coverage)</i>	-0.099* (-1.94)	-0.115** (-2.42)	-0.188*** (-3.06)	-0.123*** (-2.76)
<i>Capital Investments</i>	-0.196 (-0.44)	-0.187 (-0.47)	-0.072 (-0.15)	-0.143 (-0.36)
<i>Log (1+Maturity)</i>	0.184 (1.58)	0.168 (1.54)	0.044 (0.33)	0.151 (1.41)
<i>Log (Loan Size)</i>	0.013	0.027	-0.000	0.027

	(0.25)	(0.54)	(-0.01)	(0.54)
<i>Financial Covenants</i>	0.082	0.114	0.125	0.134*
	(1.11)	(1.57)	(1.34)	(1.82)
<i>General Covenants</i>	0.402	0.367	0.209	0.433
	(1.42)	(1.30)	(0.96)	(1.50)
<i>Refinance</i>	-0.127	-0.163	-0.267**	-0.155
	(-0.84)	(-1.33)	(-2.01)	(-1.25)
<i>Term Loan</i>	0.547***	0.499***	0.476***	0.500***
	(4.98)	(4.78)	(4.17)	(4.96)
<i>Secured</i>	0.325*	0.232	0.309	0.229
	(1.91)	(1.32)	(1.35)	(1.30)
<i>Investment Grade</i>	-1.345***	-1.316***	-1.510***	-1.347***
	(-4.90)	(-5.43)	(-4.90)	(-5.38)
<i>Not rated</i>	0.030	0.030	-0.209	-0.008
	(0.11)	(0.13)	(-0.70)	(-0.03)
<i>Constant</i>	3.469***	3.670***	4.415***	3.801***
	(5.23)	(5.89)	(5.04)	(6.13)
Wald Test: (1)= (2) [p-value]		0.933	0.004	0.024
Wald Test: (1)= (3) [p-value]			0.943	
Wald Test: (1)= (4) [p-value]				0.150
Loan purpose fixed effects	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes
Observations	402	402	283	402
R-squared	0.78	0.80	0.80	0.80

Panel B

	Public firms			Private firms		
	(1)	(2)	(3)	(4)	(5)	(6)
<i>(1) Post Brexit</i>	0.060 (0.64)	0.310* (1.82)	0.558** (2.12)	0.475* (1.68)	1.070*** (3.73)	0.906** (2.50)
<i>(2) Foreign Sales*Post Brexit</i>		-0.400* (-1.91)			-1.279** (-2.17)	
<i>Foreign Sales</i>		-0.107 (-0.58)			1.368*** (3.26)	
<i>(3) Foreign Subsidiary*Post Brexit</i>			-0.555* (-1.95)			-0.791** (-2.22)
<i>Foreign Subsidiary</i>			-0.063 (-0.33)			0.553** (2.50)
Wald Test: (1)=(2) [p-value]		0.447			0.673	
Wald Test: (1)=(3) [p-value]			0.981			0.679
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Loan purpose fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	256	205	256	146	78	146
R-squared	0.79	0.79	0.80	0.82	0.89	0.83

Table 3 Brexit and Financial Covenants

This table presents the results for the use of financial covenants around the Brexit referendum. The dependent variable is the number of financial covenants in each loan deal. *Post Brexit* is a dummy variable, which is equal to one if a facility is issued after the referendum date on June 23, 2016, and zero otherwise. *Public* is a dummy variable, which is equal to one if the borrower is a public firm at the time of loan issuance, and zero otherwise. *Foreign Sales* is a dummy variable, which is equal to one if the borrower had positive foreign sales in any year of 2013, 2014 and 2015, and zero otherwise. *Foreign Subsidiary* is a dummy variable, which is equal to one if the borrower has subsidiaries that are registered outside the United Kingdom, and zero otherwise. Deal purpose fixed effects and Fama-French 12 industries fixed effects are included in the regressions. *t-Statistics* are based on robust standard errors clustered at the firm level. *, ** and *** denote statistical significance at the level of 10%, 5% and 1% respectively.

Panel A

	(1)	(2)	(3)	(4)
<i>(1) Post Brexit</i>	0.027 (0.68)	-0.041 (-0.78)	-0.064 (-0.82)	-0.116* (-1.71)
<i>(2) Public*Post Brexit</i>		0.100 (1.33)	-0.052 (-0.60)	0.027 (0.38)
<i>Public</i>		0.149* (1.94)	0.244*** (2.76)	0.162** (2.14)
<i>(3) Foreign Sales*Post Brexit</i>			0.195** (2.01)	
<i>Foreign Sales</i>			-0.009 (-0.09)	
<i>(4) Foreign Subsidiary*Post Brexit</i>				0.175** (2.38)
<i>Foreign Subsidiary</i>				0.008 (0.10)
<i>Profitability</i>	-0.024 (-0.50)	-0.021 (-0.44)	-0.004 (-0.07)	-0.006 (-0.11)
<i>Sales Growth</i>	-0.020 (-0.47)	-0.019 (-0.48)	-0.030 (-0.34)	-0.023 (-0.57)
<i>Leverage</i>	-0.254* (-1.87)	-0.142 (-1.12)	-0.045 (-0.28)	-0.128 (-1.01)
<i>Cash</i>	-0.343 (-1.21)	-0.406 (-1.43)	-0.292 (-0.87)	-0.425 (-1.48)
<i>Size</i>	-0.036 (-1.34)	-0.051* (-1.79)	-0.056* (-1.79)	-0.056* (-1.92)
<i>Tangibility</i>	-0.043 (-0.50)	-0.024 (-0.27)	0.046 (0.42)	0.014 (0.15)
<i>Log (Age)</i>	-0.045 (-1.28)	-0.045 (-1.30)	-0.033 (-0.76)	-0.045 (-1.30)
<i>Log (Interest Coverage)</i>	-0.025 (-0.73)	-0.016 (-0.48)	-0.056 (-1.17)	-0.015 (-0.46)
<i>Capital Investments</i>	0.049 (0.24)	0.013 (0.06)	0.142 (0.53)	0.011 (0.05)
<i>Log (Min.Maturity)</i>	-0.026 (-0.48)	-0.013 (-0.24)	0.009 (0.14)	-0.008 (-0.15)

<i>Log (Deal Size)</i>	-0.001 (-0.02)	0.011 (0.27)	0.006 (0.13)	0.010 (0.24)
<i>Max.Secured</i>	0.032 (0.31)	0.081 (0.75)	0.044 (0.37)	0.082 (0.76)
<i>General Covenants</i>	-0.047 (-0.67)	-0.049 (-0.62)	-0.129 (-1.38)	-0.068 (-0.89)
<i>Max.Refinance</i>	0.117 (1.59)	0.102 (1.37)	0.142* (1.82)	0.096 (1.30)
<i>Max.Investment Grade</i>	0.088 (0.55)	0.098 (0.60)	0.044 (0.15)	0.111 (0.67)
<i>Min.Not rated</i>	0.189 (1.35)	0.206 (1.43)	0.094 (0.38)	0.223 (1.49)
<i>Constant</i>	0.756* (1.90)	0.567 (1.53)	0.567 (1.04)	0.544 (1.47)
Wald Test: (1)= (2) [p-value]		0.256	0.193	0.224
Wald Test: (1)= (3) [p-value]			0.099	
Wald Test: (1)= (4) [p-value]				0.313
Deal purpose fixed effects	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes
Observations	653	653	460	653
R-squared	0.10	0.12	0.14	0.13

Panel B

	Public firms			Private firms		
	(1)	(2)	(3)	(4)	(5)	(6)
<i>(1) Post Brexit</i>	0.054 (0.94)	-0.173 (-1.62)	-0.124 (-1.35)	-0.064 (-1.21)	0.009 (0.11)	-0.089 (-1.18)
<i>(2) Foreign Sales*Post Brexit</i>		0.264** (2.00)			-0.091 (-1.06)	
<i>Foreign Sales</i>		-0.017 (-0.11)			0.001 (0.01)	
<i>(3) Foreign Subsidiary*Post Brexit</i>			0.207* (1.88)			0.068 (0.95)
<i>Foreign Subsidiary</i>			0.198 (1.55)			-0.126 (-1.38)
Wald Test: (1)= (2) [p-value]		0.249			0.135	
Wald Test: (1)= (3) [p-value]			0.202			0.622
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Deal purpose fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	419	334	419	234	126	234
R-squared	0.13	0.18	0.15	0.23	0.37	0.24

Table 4 Brexit and Performance-based Financial Covenants

This table presents the results for the use of the performance-based financial covenants around the Brexit referendum. The dependent variable is the number of the performance-based financial covenants in each loan deal. *Post Brexit* is a dummy variable, which is equal to one if a facility is issued after the referendum date on June 23, 2016, and zero otherwise. *Public* is a dummy variable, which is equal to one if the borrower is a public firm at the time of loan issuance, and zero otherwise. *Foreign Sales* is a dummy variable, which is equal to one if the borrower had positive foreign sales in any year of 2013, 2014 and 2015, and zero otherwise. *Foreign Subsidiary* is a dummy variable, which is equal to one if the borrower has subsidiaries that are registered outside the United Kingdom, and zero otherwise. Deal purpose fixed effects and Fama-French 12 industries fixed effects are included in the regressions. *t-Statistics* are based on robust standard errors clustered at the firm level. *, ** and *** denote statistical significance at the level of 10%, 5% and 1% respectively.

Panel A

	(1)	(2)	(3)	(4)
<i>Post Brexit</i>	0.037 (1.12)	0.001 (0.03)	-0.074 (-0.99)	-0.061 (-1.23)
<i>Public*Post Brexit</i>		0.053 (0.84)	-0.067 (-0.85)	-0.008 (-0.12)
<i>Public</i>		0.161** (2.54)	0.222*** (2.73)	0.169** (2.53)
<i>Foreign Sales*Post Brexit</i>			0.223** (2.40)	
<i>Foreign Sales</i>			-0.036 (-0.38)	
<i>Foreign Subsidiary*Post Brexit</i>				0.145** (2.20)
<i>Foreign Subsidiary</i>				0.016 (0.23)
Controls	Yes	Yes	Yes	Yes
Deal purpose fixed effects	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes
Observations	653	653	460	653
R-squared	0.09	0.10	0.14	0.11

Panel B

	Public firms			Private firms		
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Post Brexit</i>	0.048 (0.91)	-0.198* (-1.83)	-0.127 (-1.45)	-0.014 (-0.42)	0.005 (0.06)	-0.015 (-0.34)
<i>Foreign Sales*Post Brexit</i>		0.294** (2.28)			-0.059 (-0.85)	
<i>Foreign Sales</i>		-0.034 (-0.25)			-0.042 (-0.34)	
<i>Foreign Subsidiary*Post Brexit</i>			0.202* (1.93)			0.009 (0.19)
<i>Foreign Subsidiary</i>			0.147 (1.25)			-0.050 (-0.70)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Deal purpose fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	419	334	419	234	126	234
R-squared	0.12	0.18	0.14	0.30	0.41	0.30

Table 5 Bond market access

This table presents the results for loan spread and financial covenants around the Brexit referendum, controlling for the effect of having access to bond market. The dependent variables are the all-in-drawn spread divided by 100 in the Panel A, and the number of financial covenants in a loan contract in the Panel B. *Post Brexit* is a dummy variable, which is equal to one if a facility is issued after the referendum date on June 23, 2016, and zero otherwise. *Foreign Sales* is a dummy variable, which is equal to one if the borrower had positive foreign sales in any year of 2013, 2014 and 2015, and zero otherwise. *Foreign Subsidiary* is a dummy variable, which is equal to one if the borrower has subsidiaries that are registered outside the United Kingdom, and zero otherwise. *Bond* is a dummy variable, which is equal to one if the firm ever issued bonds since 2009. Loan purpose fixed effects, deal purpose fixed effects and Fama-French 12 industries fixed effects are included in the regressions depending on the dependent variable used. *t-Statistics* are based on robust standard errors clustered at the firm level. *, ** and *** denote statistical significance at the level of 10%, 5% and 1% respectively.

Panel A. Loan Spread

	Public firms			Private firms		
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Post Brexit</i>	0.073 (0.71)	0.322* (1.77)	0.593* (1.94)	0.334 (1.11)	1.001*** (3.38)	0.769** (2.05)
<i>Foreign Sales*Post Brexit</i>		-0.376* (-1.81)			-1.534** (-2.46)	
<i>Foreign Sales</i>		-0.119 (-0.65)			1.174*** (2.74)	
<i>Foreign Subsidiary*Post Brexit</i>			-0.559* (-1.88)			-0.801** (-2.20)
<i>Foreign Subsidiary</i>			-0.067 (-0.34)			0.492** (2.32)
<i>Bond*Post Brexit</i>	-0.051 (-0.26)	-0.128 (-0.64)	-0.093 (-0.49)	1.278* (1.95)	1.077 (1.43)	1.229** (2.29)
<i>Bond</i>	0.074 (0.59)	0.171 (1.12)	0.039 (0.30)	-0.808* (-1.74)	-0.238 (-0.64)	-0.770** (-2.10)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Loan purpose fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	256	205	256	146	78	146
R-squared	0.79	0.79	0.80	0.83	0.89	0.84

Panel B. Financial Covenants

	Public firms			Private firms		
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Post Brexit</i>	0.015 (0.20)	-0.176 (-1.56)	-0.141 (-1.48)	-0.048 (-0.75)	0.073 (0.92)	-0.071 (-0.83)
<i>Foreign Sales*Post Brexit</i>		0.259* (1.83)			-0.101 (-1.14)	
<i>Foreign Sales</i>		-0.020 (-0.13)			0.015 (0.12)	
<i>Foreign Subsidiary*Post Brexit</i>			0.189* (1.65)			0.060 (0.82)
<i>Foreign Subsidiary</i>			0.202 (1.56)			-0.122 (-1.33)
<i>Bond*Post Brexit</i>	0.095 (0.93)	0.016 (0.12)	0.078 (0.74)	-0.090 (-0.74)	-0.267 (-1.43)	-0.081 (-0.69)
<i>Bond</i>	0.023 (0.25)	0.043 (0.38)	0.017 (0.18)	-0.037 (-0.30)	0.169 (0.91)	-0.036 (-0.31)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Deal purpose fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	419	334	419	234	126	234
R-squared	0.14	0.18	0.16	0.23	0.40	0.24

Table 6: FTSE 100/250 listing for public firms

This table presents the results for loan spread and financial covenants around the Brexit referendum, controlling for the effect of being listed in the FTSE100/250 indexes, in the subsample of public firms. The dependent variables are the all-in-drawn spread divided by 100 in the Panel A, and the number of financial covenants in a loan contract in the Panel B. *Post Brexit* is a dummy variable, which is equal to one if a facility is issued after the referendum date on June 23, 2016, and zero otherwise. *Foreign Sales* is a dummy variable, which is equal to one if the borrower had positive foreign sales in any year of 2013, 2014 and 2015, and zero otherwise. *Foreign Subsidiary* is a dummy variable, which is equal to one if the borrower has subsidiaries that are registered outside the United Kingdom, and zero otherwise. *FTSE100/250* is a dummy variable, which is equal to one if the firm is listed in the FTSE100 or FTSE250 index according to the most recent information. Loan purpose fixed effects, deal purpose fixed effects and Fama-French 12 industries fixed effects are included in the regressions depending on the dependent variable used. *t-Statistics* are based on robust standard errors clustered at the firm level. *, ** and *** denote statistical significance at the level of 10%, 5% and 1% respectively.

Panel A. Loan Spread

	(1)	(2)	(3)
<i>Post Brexit</i>	0.028 (0.20)	0.220 (1.08)	0.464* (1.66)
<i>Foreign Sales*Post Brexit</i>		-0.323 (-1.48)	
<i>Foreign Sales</i>		-0.135 (-0.72)	
<i>Foreign Subsidiary*Post Brexit</i>			-0.488* (-1.69)
<i>Foreign Subsidiary</i>			-0.091 (-0.45)
<i>FTSE100/250*Post Brexit</i>	0.147 (0.74)	0.115 (0.53)	0.149 (0.75)
<i>FTSE100/250</i>	-0.314** (-2.18)	-0.258 (-1.35)	-0.296** (-2.10)
Controls	Yes	Yes	Yes
Loan purpose fixed effects	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes
Observations	256	205	256
R-squared	0.80	0.79	0.80

Panel B. Financial Covenants

	(1)	(2)	(3)
<i>Post Brexit</i>	-0.051 (-0.58)	-0.262** (-2.08)	-0.182* (-1.88)
<i>Foreign Sales*Post Brexit</i>		0.254* (1.84)	
<i>Foreign Sales</i>		-0.017 (-0.11)	
<i>Foreign Subsidiary*Post Brexit</i>			0.165 (1.39)
<i>Foreign Subsidiary</i>			0.210 (1.61)
<i>FTSE100/250*Post Brexit</i>	0.205* (1.93)	0.205 (1.59)	0.182* (1.69)
<i>FTSE100/250</i>	-0.006 (-0.05)	-0.114 (-1.04)	-0.008 (-0.08)
Controls	Yes	Yes	Yes
Deal purpose fixed effects	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes
Observations	419	334	419
R-squared	0.14	0.18	0.16

Table 7: Institutional Ownership for private firms

This table presents the results for loan spread and financial covenants around the Brexit referendum, controlling for the institutional ownership, in the sub-sample of private firms. The dependent variables are the all-in-drawn spread divided by 100 in the Panel A, and the number of financial covenants in a loan contract in the Panel B. *Post Brexit* is a dummy variable, which is equal to one if a facility is issued after the referendum date on June 23, 2016, and zero otherwise. *Foreign Sales* is a dummy variable, which is equal to one if the borrower had positive foreign sales in any year of 2013, 2014 and 2015, and zero otherwise. *Foreign Subsidiary* is a dummy variable, which is equal to one if the borrower has subsidiaries that are registered outside the United Kingdom, and zero otherwise. *Institutional Ownership* is a dummy variable, which is equal to one if the firm had institutional investors as shareholders at the time of December 2015, and zero otherwise. Loan purpose fixed effects, deal purpose fixed effects and Fama-French 12 industries fixed effects are included in the regressions depending on the dependent variable used. *t-Statistics* are based on robust standard errors clustered at the firm level. *, ** and *** denote statistical significance at the level of 10%, 5% and 1% respectively.

Panel A. Loan Spread

	(1)	(2)	(3)
<i>Post Brexit</i>	0.395 (1.11)	1.100*** (3.28)	0.842* (1.93)
<i>Foreign Sales*Post Brexit</i>		-1.304** (-2.16)	
<i>Foreign Sales</i>		1.513*** (3.45)	
<i>Foreign Subsidiary*Post Brexit</i>			-0.796** (-2.21)
<i>Foreign Subsidiary</i>			0.566** (2.59)
<i>Institutional Ownership*Post Brexit</i>	0.381 (0.83)	-0.230 (-0.33)	0.324 (0.75)
<i>Institutional Ownership</i>	-0.704* (-1.79)	-0.291 (-0.98)	-0.711** (-2.02)
Controls	Yes	Yes	Yes
Loan purpose fixed effects	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes
Observations	146	78	146
R-squared	0.82	0.89	0.83

Panel B. Financial Covenants

	(1)	(2)	(3)
<i>Post Brexit</i>	-0.083 (-1.17)	0.005 (0.05)	-0.102 (-1.17)
<i>Foreign Sales*Post Brexit</i>		-0.098 (-1.20)	
<i>Foreign Sales</i>		-0.001 (-0.01)	
<i>Foreign Subsidiary*Post Brexit</i>			0.064 (0.91)
<i>Foreign Subsidiary</i>			-0.120 (-1.37)
<i>Institutional Ownership*Post Brexit</i>	0.060 (0.72)	0.005 (0.07)	0.045 (0.57)
<i>Institutional Ownership</i>	-0.107 (-1.24)	-0.079 (-0.94)	-0.097 (-1.17)
Controls	Yes	Yes	Yes
Deal purpose fixed effects	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes
Observations	234	126	234
R-squared	0.24	0.38	0.25

Table 8: Ownership Structure

This table presents the results for loan spread and financial covenants around the Brexit referendum, controlling for the ownership structure. The dependent variables are the all-in-drawn spread divided by 100 in the Panel A, and the number of financial covenants in a loan contract in the Panel B. *Post Brexit* is a dummy variable, which is equal to one if a facility is issued after the referendum date on June 23, 2016, and zero otherwise. *Foreign Sales* is a dummy variable, which is equal to one if the borrower had positive foreign sales in any year of 2013, 2014 and 2015, and zero otherwise. *Foreign Subsidiary* is a dummy variable, which is equal to one if the borrower has subsidiaries that are registered outside the United Kingdom, and zero otherwise. *Log (1+shareholders)* is the logarithm of one plus the number of reported shareholders. Loan purpose fixed effects, deal purpose fixed effects and Fama-French 12 industries fixed effects are included in the regressions depending on the dependent variable used. *t-Statistics* are based on robust standard errors clustered at the firm level. *, ** and *** denote statistical significance at the level of 10%, 5% and 1% respectively.

Panel A. Loan Spread

	Public firms			Private firms		
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Post Brexit</i>	0.047 (0.07)	0.602 (0.87)	0.585 (0.73)	0.163 (0.33)	0.525 (1.65)	0.546 (0.99)
<i>Foreign Sales*Post Brexit</i>		-0.399* (-1.93)			-1.713** (-2.58)	
<i>Foreign Sales</i>		-0.098 (-0.53)			1.607*** (3.62)	
<i>Foreign Subsidiary*Post Brexit</i>			-0.518* (-1.83)			-0.817** (-2.29)
<i>Foreign Subsidiary</i>			-0.062 (-0.32)			0.540** (2.28)
<i>Log (1+number of shareholders) *Post Brexit</i>	0.001 (0.00)	-0.070 (-0.47)	-0.016 (-0.09)	0.161 (0.90)	0.375** (2.09)	0.210 (1.18)
<i>Log (1+number of shareholders)</i>	-0.125 (-1.38)	-0.077 (-0.81)	-0.090 (-1.05)	0.120 (0.83)	-0.233* (-1.79)	0.018 (0.12)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Loan purpose fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	256	205	256	138	75	138
R-squared	0.79	0.79	0.80	0.83	0.91	0.84

Panel B. Financial Covenants

	Public firms			Private firms		
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Post Brexit</i>	-0.605 (-1.64)	-1.087** (-2.32)	-0.675* (-1.85)	-0.090 (-1.03)	-0.002 (-0.03)	-0.093 (-0.99)
<i>Foreign Sales*Post Brexit</i>		0.222* (1.72)			-0.117 (-1.06)	
<i>Foreign Sales</i>		0.002 (0.01)			-0.001 (-0.01)	
<i>Foreign Subsidiary*Post Brexit</i>			0.167 (1.55)			0.060 (0.78)
<i>Foreign Subsidiary</i>			0.211 (1.63)			-0.132 (-1.40)
<i>Log (1+number of shareholders) *Post Brexit</i>	0.152* (1.83)	0.220** (2.16)	0.135* (1.67)	0.021 (0.56)	0.022 (0.53)	0.005 (0.14)
<i>Log (1+number of shareholders)</i>	0.036 (0.84)	0.036 (0.54)	0.037 (0.82)	-0.033 (-0.93)	-0.011 (-0.58)	-0.018 (-0.54)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Deal purpose fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	419	334	419	223	125	223
R-squared	0.14	0.19	0.16	0.23	0.38	0.24

Table 9: Firm Size and Age

This table presents the results for loan spread and financial covenants around the Brexit referendum, controlling for the time effect of firm size and age. The dependent variables are the all-in-drawn spread divided by 100 in the Panel A, and the number of financial covenants in a loan contract in the Panel B. *Post Brexit* is a dummy variable, which is equal to one if a facility is issued after the referendum date on June 23, 2016, and zero otherwise. *Foreign Sales* is a dummy variable, which is equal to one if the borrower had positive foreign sales in any year of 2013, 2014 and 2015, and zero otherwise. *Foreign Subsidiary* is a dummy variable, which is equal to one if the borrower has subsidiaries that are registered outside the United Kingdom, and zero otherwise. Loan purpose fixed effects, deal purpose fixed effects and Fama-French 12 industries fixed effects are included in the regressions depending on the dependent variable used. *t-Statistics* are based on robust standard errors clustered at the firm level. *, ** and *** denote statistical significance at the level of 10%, 5% and 1% respectively.

Panel A. Loan Spread

	Public firms			Private firms		
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Post Brexit</i>	0.378 (0.72)	0.824 (1.26)	0.934 (1.62)	0.525 (0.33)	6.789** (2.52)	1.431 (1.00)
<i>Foreign Sales*Post Brexit</i>		-0.408* (-1.88)			-1.589*** (-2.84)	
<i>Foreign Sales</i>		-0.095 (-0.53)			1.553*** (2.97)	
<i>Foreign Subsidiary*Post Brexit</i>			-0.553* (-1.97)			-0.769** (-2.18)
<i>Foreign Subsidiary</i>			-0.080 (-0.42)			0.583*** (2.89)
<i>Size*Post Brexit</i>	-0.016 (-0.33)	-0.010 (-0.19)	-0.017 (-0.35)	-0.122 (-0.56)	0.012 (0.05)	-0.169 (-0.83)
<i>Log (Age)*Post Brexit</i>	-0.064 (-0.57)	-0.137 (-1.13)	-0.081 (-0.71)	0.250 (1.13)	-1.815*** (-2.97)	0.190 (0.91)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Loan purpose fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	256	205	256	146	78	146
R-squared	0.79	0.79	0.80	0.82	0.90	0.83

Panel B. Financial Covenants

	Public firms			Private firms		
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Post Brexit</i>	0.307 (1.03)	0.146 (0.45)	0.182 (0.68)	-0.109 (-0.39)	0.480 (1.07)	-0.142 (-0.50)
<i>Foreign Sales*Post Brexit</i>		0.263* (1.83)			-0.083 (-0.92)	
<i>Foreign Sales</i>		-0.012 (-0.08)			-0.000 (-0.00)	
<i>Foreign Subsidiary*Post Brexit</i>			0.214* (1.74)			0.063 (0.82)
<i>Foreign Subsidiary</i>			0.190 (1.48)			-0.127 (-1.37)
<i>Size*Post Brexit</i>	0.009 (0.27)	0.007 (0.17)	-0.004 (-0.14)	-0.031 (-1.26)	-0.018 (-0.64)	-0.031 (-1.23)
<i>Log (Age)*Post Brexit</i>	-0.096* (-1.96)	-0.110** (-2.06)	-0.086* (-1.76)	0.084 (1.13)	-0.114 (-0.80)	0.086 (1.13)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Deal purpose fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	419	334	419	234	126	234
R-squared	0.14	0.18	0.16	0.24	0.38	0.25

Table 10: Credit lines

This table presents the results for loan spread around the Brexit referendum, controlling for the effect of being credit lines. The dependent variable is the all-in-drawn spread divided by 100. *Post Brexit* is a dummy variable, which is equal to one if a facility is issued after the referendum date on June 23, 2016, and zero otherwise. *Foreign Sales* is a dummy variable, which is equal to one if the borrower had positive foreign sales in any year of 2013, 2014 and 2015, and zero otherwise. *Foreign Subsidiary* is a dummy variable, which is equal to one if the borrower has subsidiaries that are registered outside the United Kingdom, and zero otherwise. *Credit Line* is a dummy variable if the loan facility is a credit line, and zero otherwise. Loan purpose fixed effects, and Fama-French 12 industries fixed effects are included in the regressions. *t-Statistics* are based on robust standard errors clustered at the firm level. *, ** and *** denote statistical significance at the level of 10%, 5% and 1% respectively.

	Public			Private		
	(1) Spread	(2) Spread	(3) Spread	(4) Spread	(5) Spread	(6) Spread
<i>Post Brexit</i>	-0.042 (-0.27)	0.147 (0.83)	0.509* (1.66)	0.581 (1.44)	1.060*** (3.31)	1.023** (2.30)
<i>Foreign Sales*Post Brexit</i>		-0.413* (-1.92)			-1.278** (-2.16)	
<i>Foreign Sales</i>		-0.112 (-0.62)			1.365*** (3.26)	
<i>Foreign Subsidiary*Post Brexit</i>			-0.546* (-1.90)			-0.778** (-2.22)
<i>Foreign Subsidiary</i>			-0.062 (-0.32)			0.572** (2.62)
<i>Credit Line*Post Brexit</i>	0.135 (0.71)	0.220 (1.26)	0.054 (0.28)	-0.218 (-0.66)	0.027 (0.06)	-0.250 (-0.82)
<i>Credit Line</i>	-0.304*** (-2.73)	-0.304** (-2.55)	-0.304*** (-2.83)	-0.805*** (-2.74)	-0.783* (-1.81)	-0.740** (-2.61)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Loan purpose fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	256	205	256	146	78	146
R-squared	0.79	0.79	0.80	0.82	0.89	0.83

Table 11: Relationship loans

This table presents the results for loan spread and financial covenants around the Brexit referendum, controlling for the effect of lending relationship. The dependent variables are the all-in-drawn spread divided by 100 in the Panel A, and the number of financial covenants in a loan contract in the Panel B. *Post Brexit* is a dummy variable, which is equal to one if a facility is issued after the referendum date on June 23, 2016, and zero otherwise. *Foreign Sales* is a dummy variable, which is equal to one if the borrower had positive foreign sales in any year of 2013, 2014 and 2015, and zero otherwise. *Foreign Subsidiary* is a dummy variable, which is equal to one if the borrower has subsidiaries that are registered outside the United Kingdom, and zero otherwise. *Relation* is a dummy variable, which is equal to one if the borrower ever borrowed from a same lead arranger during the past five years as in the current loan facility or loan contract, and zero otherwise. Loan purpose fixed effects, deal purpose fixed effects and Fama-French 12 industries fixed effects are included in the regressions depending on the dependent variable used. *t-Statistics* are based on robust standard errors clustered at the firm level. *, ** and *** denote statistical significance at the level of 10%, 5% and 1% respectively.

Panel A. Loan Spread

	Public			Private		
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Post Brexit</i>	-0.224 (-0.97)	0.095 (0.38)	0.303 (0.84)	0.353 (0.77)	1.068** (2.43)	0.773 (1.50)
<i>Foreign Sales*Post Brexit</i>		-0.429* (-1.89)			-1.375* (-1.78)	
<i>Foreign Sales</i>		-0.125 (-0.69)			1.100** (2.57)	
<i>Foreign Subsidiary*Post Brexit</i>			-0.511* (-1.77)			-0.817** (-2.26)
<i>Foreign Subsidiary</i>			-0.067 (-0.36)			0.532** (2.32)
<i>Relation*Post Brexit</i>	0.344 (1.33)	0.301 (1.30)	0.261 (1.04)	0.234 (0.45)	0.131 (0.18)	0.260 (0.51)
<i>Relation</i>	-0.111 (-0.90)	-0.071 (-0.51)	-0.096 (-0.79)	0.006 (0.02)	0.496 (1.33)	-0.040 (-0.15)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Loan purpose fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	256	205	256	146	78	146
R-squared	0.79	0.79	0.80	0.82	0.89	0.83

Panel B. Financial Covenants

	Public			Private		
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Post Brexit</i>	-0.039 (-0.22)	-0.246 (-1.24)	-0.216 (-1.17)	-0.101 (-1.28)	0.088 (1.01)	-0.122 (-1.42)
<i>Foreign Sales*Post Brexit</i>		0.267** (2.02)			-0.090 (-1.03)	
<i>Foreign Sales</i>		-0.021 (-0.14)			0.001 (0.01)	
<i>Foreign Subsidiary*Post Brexit</i>			0.207* (1.86)			0.060 (0.76)
<i>Foreign Subsidiary</i>			0.196 (1.54)			-0.131 (-1.46)
<i>Relation*Post Brexit</i>	0.118 (0.60)	0.089 (0.42)	0.116 (0.59)	0.067 (0.67)	-0.115 (-0.90)	0.067 (0.63)
<i>Relation</i>	-0.079 (-0.79)	-0.064 (-0.54)	-0.063 (-0.64)	0.012 (0.12)	0.134 (1.64)	0.023 (0.24)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Deal purpose fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	419	334	419	234	126	234
R-squared	0.13	0.18	0.15	0.23	0.40	0.25

Table 12: Placebo tests

This table presents the results for the placebo tests on the Brexit referendum. *Post Brexit II* is a dummy variable, which is equal to one if a facility is issued after the placebo referendum date on June 23, 2015, and zero otherwise. The sample period is from January 1st, 2014, to June 23rd, 2016. The dependent variables are the all-in-drawn spread divided by 100 in the Panel A, and the number of financial covenants in a loan contract in the Panel B. *Public* is a dummy variable, which is equal to one if the borrower is a public firm at the time of loan issuance, and zero otherwise. *Foreign Sales* is a dummy variable, which is equal to one if the borrower had positive foreign sales in any year of 2013, 2014 and 2015, and zero otherwise. *Foreign Subsidiary* is a dummy variable, which is equal to one if the borrower has subsidiaries that are registered outside the United Kingdom, and zero otherwise. *FTSE100/250* is a dummy variable, which is equal to one if the firm is listed in the FTSE100 or FTSE250 index according to the most recent information. Loan purpose fixed effects, deal purpose fixed effects and Fama-French 12 industries fixed effects are included in the regressions depending on the dependent variable used. *t-Statistics* are based on robust standard errors clustered at the firm level. *, ** and *** denote statistical significance at the level of 10%, 5% and 1% respectively.

Panel A. Loan Spread

			Public		Private	
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Post Brexit II</i>	-0.070 (-0.57)	-0.039 (-0.15)	-0.184 (-0.78)	-0.265 (-1.05)	2.825 (0.33)	-0.028 (-0.11)
<i>Public*Post Brexit II</i>		-0.024 (-0.09)				
<i>Public</i>		-0.133 (-0.50)				
<i>Foreign Sales*Post Brexit II</i>			0.189 (0.75)		-5.479 (-0.46)	
<i>Foreign Sales</i>			-0.029 (-0.16)		0.287 (0.10)	
<i>Foreign Subsidiary*Post Brexit II</i>				0.310 (1.14)		0.216 (0.63)
<i>Foreign Subsidiary</i>				-0.124 (-0.56)		0.755*** (3.45)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Loan purpose fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	244	244	133	164	52	80
R-squared	0.83	0.83	0.82	0.84	0.92	0.90

Panel B. Financial Covenants

			Public		Private	
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Post Brexit II</i>	0.139*	0.020	-0.105	0.191	0.079	-0.104
	(1.95)	(0.22)	(-0.49)	(1.19)	(0.64)	(-0.62)
<i>Public*Post Brexit II</i>		0.186				
		(1.54)				
<i>Public</i>		0.109				
		(1.26)				
<i>Foreign Sales*Post Brexit II</i>			0.354		-0.182	
			(1.40)		(-0.86)	
<i>Foreign Sales</i>			-0.064		0.001	
			(-0.38)		(0.00)	
<i>Foreign Subsidiary*Post Brexit II</i>				0.069		0.212
				(0.35)		(1.13)
<i>Foreign Subsidiary</i>				0.247**		-0.273*
				(2.16)		(-1.74)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Deal purpose fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	396	396	209	257	83	139
R-squared	0.15	0.17	0.27	0.24	0.43	0.27

Panel C. Financial Covenants and FTSE100/250 listing for public firms

	(1)	(2)	(3)
<i>Post Brexit II</i>	0.303** (2.35)	-0.077 (-0.35)	0.224 (1.34)
<i>Foreign Sales*Post Brexit II</i>		0.370 (1.45)	
<i>Foreign Sales</i>		-0.077 (-0.46)	
<i>Foreign Subsidiary*Post Brexit II</i>			0.128 (0.62)
<i>Foreign Subsidiary</i>			0.247** (2.14)
<i>FTSE100/250*Post Brexit II</i>	-0.143 (-0.72)	-0.140 (-0.72)	-0.206 (-1.04)
<i>FTSE100/250</i>	0.012 (0.11)	-0.079 (-0.69)	0.017 (0.17)
Controls	Yes	Yes	Yes
Deal purpose fixed effects	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes
Observations	257	209	257
R-squared	0.23	0.28	0.25