When in Rome, do as the Romans do: loan syndication in a state-dominated market

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Abstract

In the developed markets, good earnings quality could effectively reduce information asymmetries in loan syndication. However, our results shows that earnings quality plays a limited role in loan syndications in a market where the state has dominant power. Examining a sample of syndicated loans to Chinese corporate borrowers, we find that state ownership overrides the signaling role of earnings quality in alleviating the problems of adverse selection and moral hazard, as it provides an implicit guarantee of the loan repayment. Nonetheless, interestingly, firms with better earnings quality, regardless of their state ownership, are rewarded with more favorable loan price. Such an overriding role of state-ownership over syndicated loan contracting prevails even with the presence of foreign lender participation, which suggests that foreign banks seem to have followed the conventional wisdom that 'when in Rome, do as the Romans do'.

1. Introduction

Syndicated lonas provide corporate borrowers a large sum and stable funds at relatively lower costs than bilateral loans, bonds and equity (Altunbaş and Gadanecz 2004) and enable borrowers to build and maintain banking relationships with multiple lenders. Over the past decades, syndicated loan market has grown significantly and continuously performs its crucial role in globle financial systems. [1] Apart from the traditional agency problems between lender and borrower in bilateral loans, there are two main extra problmes existing in loan syndication – the problems of adverse selection and moral hazard between lead arranger and participant lenders (Ivashina, 2009). Empirical studies have attempted to investigate such issues in the determination of syndicated loan prices and structure, such as the participation of non-banks (Lim et al., 2014) and foreign banks (Haselmann and Wachtel, 2011), bank risk-taking (Zhai et al., 2022) and accounting information (Ball et al., 2008).

Lenders assess their risk exposure and price loans based on the accounting information they collect from borrowers. Therefore, accounting information qualily plays an impotant role in determining loan prices and monitoring costs for lenders (Bharath et al., 2008). For example, poor accounting information quality has been found to be associated with adverse loan terms, such as higher prices, more collateral pledged, and shorter maturity (Ball et al., 2008; Armstrong et al., 2010; Costello, 2011). However, literature remains silent on two fundamental questions. First, is accounting information quality still important if the quality is poor in emerging markets, such as China where businesses have more opaque accounting information compared with that in developed markets (Li et al., 2014)? Second, does accounting

information quality alleviate the specific adverse selection and moral hazard problems in loan syndication?

These questions are important because an important channel through which potential lenders may alleviate the information asymmetries is to rely on the quality of borrower's financial reports. When lending to a firm, lenders conventionally rely on good quality of earnings to predict future cash flows (Dechow, 1994) and earnings have been suggested to outperform operating cash flows in its predictive ability of future operating cash flows (Ball and Nikolaev, 2021). In the developed markets, good earnings quality could effectively reduce the monitoring costs and improve ex post monitoring efficiency for lenders (Bharath et al. 2008). However, in an emerging market, such as China, the quality of earnings has been susceptible to wide criticism. Zweig (2019) pointed out that earnings management behavior has become more widespread in emerging market (e.g., China) than in developed markets (e.g., U.S.). Institutional investors, such as Morgan Stanley, have long term grumble over poor financial reporting quality in China which makes the financil reports less useful to financial analysts when preparing their earnings forecasts (Wastyle, 2011). In addition, Chinese companies listed on major overseas stock exchanches, e.g., NYSE, have received skeptical comments on the quality of their financial disclosures (Hughes, 2007):

> *These companies are government-controlled enterprises masquerading as independent public companies and it is virtually impossible to assess their financial condition given their poor level of disclosures.*
>
> *-- Victor Germack, founder and president of RateFinancials*

The second set of research questions this study aims to answer is whether state ownership plays a role in pricing syndicated loans and syndication structure in state-dominated economies. In other words, how

lenders, especially the lead arranger and foreign banks, 'utilize' state ownership in risk assessment and alleviating adverse selection and moral hazard problems. The information environment in China's stock markets is relatively opaque, attributable to the fact that information disclosures by Chinese firms are largely affected by political agendas, facilitated via state ownership (e.g. Allen et al., 2005). Prior studies have highlighted the important role of state ownership in the selection of sources of debt finance in China, e.g. bond vs. syndicated loan markets (Pessarossi and Weill, 2013), and local vs. cross-border borrowing (Korkeamaki et al., 2014). On one hand, state ownership has served as an implicit guarantee by government on the debt raised by state-owned enterprises (SOEs) and therefore reduces the cost of debt (Boubakri et al., 2008). On the other hand, state affiliation may give rise to moral hazard problems, ineffective monitoring, and weak value maximization incentives in pursuit of political goals. For instance, the moral hazard problem arises because the implicit guarantee of debt repayment by the government would encourage shareholders and managers to take riskier projects (Stiglitz, 1993). Improving employment and domestic investment could lower the risk-adjusted performance of the SOEs and consequently increased cost of debt (Borisova et al., 2015). It hence remains an empirical question whether, in a state-dominated economy as China, state ownership would override the monitoring role of financial reporting (measured by earnings quality) within the dynamic relationship between lenders and borrowers and amongst lenders.

Further, Tsai et al. (2014) suggest that foreign banks are beneficial to the mitigation of politically oriented investment problems among SOEs in China. We hence further our investigation by examining the impact of foreign lender participation as to whether foreign banks would put more weight on the quality of earnings, and consequently, dampen the dominating role of state ownship in loan contracting. There is also

a possibility where foreign banks would follow the conventional wisdom that 'when in Rome, do as the Romans do', i.e., the overriding impact of state ownership would prevail.

We use syndicated loan market to set up our empirical tests as we believe the Chinese syndicated loans market offers a rather high-power testing ground to examine the interconnections among earnings quality, state influences, loan contracting and particularly, foreign lender participation. *First*, loan syndication in China has become increasingly important because this market has developed substantially in recent years (CBS, 2016). *Second*, loan syndication in China is featured by the foreign lender participation.[2] With the economic integration and financial liberalization, a rapidly increasing number of foreign banks have entered the emerging markets, such as China (Caporale et al., 2018). It has been acknowledged that domestic banks have information advantages over foreign banks (e.g., Dell'Ariccia et al., 1999) and foreign banks are more concerned with borrower quality because they may "need to face the rejected old borrower from all domestic banks" (Li et al., 2013, p.27), partially contributing to the comparable inefficiencies of foreign banks operating in China (Arviran et al., 2017). Deregulation and foreign bank entry in Chinese banking market have increased banking competition in China and pressurized domestic banks to take better advantages in non-loan activities and to improve their operating efficiencies (Hsiao et al., 2015). Loan syndication therefore becomes a natural solution for foreign banks to the issue of lending 'bad' borrowers and to the restriction of local government in taking stakes in domestic banks.

With a sample of syndicated loans to Chinese corporate borrowers, our contribution to the exiting literature is twofold. First, it adds to the strand of studies on accounting practices and debt contracting. Our results show that, unlike the existing evidence from developed markets (e.g., Ball et al., 2008), in a state-

dominated market, state ownership overrides the signaling role of earning quality in alleviating adverse selection and moral hazard between lenders in structuring and foreign bank participating loan syndication; whereas earnings quality alleviates the 'typical' problem of information asymmetries between a lender and a borrower in loan pricing.

Second, our findings suggest that the overriding role of state-ownership prevails even with foreign lender participation, which suggests that foreign banks with full appreciation of the institutional environment of the Chinese market, have followed the conventional wisdom that 'when in Rome, do as the Romans do'. We find that foreign lenders disregard the political driven and ineffective monitoring problems associated with state ownership, instead, they persistently treat it as a positive signal to overcome the problems of adverse selection and moral hazard in loan syndication. Our results are robust to a rich set of tests with alternative measures of earnings quality, different model specifications, methods addressing potential endogeneity concerns, and removal of the influence of the financial crisis period. Our findings should be of interest to regulators, especially given the increasing popularity of syndicated loan and participation of foreign banks in China. When the participation of foreign bank increases after financial deregulation, regulators need to consider the unintended 'localization' of foreign banks.

Third, our empirical results demonstrate the different roles played by earnings quality and state ownership in loan syndication and contributes to the debt contracting theories. Specifically, we show that earnings quality is taken as a risk measure and used by banks to price loans, especially by foreign banks who have an information disadvantage to domestic banks and hence rely more heavily on hard information, consistent with existing evidence on bilateral loans. However, it contributes little to loan syndication

structure, in contrast to Ball et al. (2008) in U.S where firms usually have better accounting information quality than those from China. Our results shed new light to the debt contracting theories, where in a state dominant economy, state ownership has a dominant role in alleviating the problems of adverse selection and moral hazards when a group of lenders team up to syndicate loans.

The remainder of the paper is structured as follows. Section 2 reviews the relevant literature and develops testable hypotheses. Section 3 outlines the data and research methods. Section 4 presents empirical results and Section 5 concludes.

2. Literature review and hypotheses development

Asymmetric information is central to understanding debt contracting and many empirical studies have attempted to examine how loan terms are specified to mitigate information asymmetries lenders have to face when issuing loans, including syndicated loans. A unique feature of loan syndication, in addition to the widely acknowledged agency conflict between lender and borrower, are the problems associated with adverse selection and moral hazard between the lead and participant lenders where lead arranger has an information advantage and incentives to syndicate risky loans (adverse selection) and is less likely to continue to monitor the loans (moral hazard) (Ivashina, 2009).

Conventionally, lenders are mainly concerned with the certainty of the future cash flows generated by borrowers and the current earnings have long served as an anchoring point to predict future cash flows (Dechow, 1994). Particularly, accounting accruals, the non-cash part of earnings, have been widely used by financial analysts to forecast future cash flows (Francis et al., 2005). Further, accruals-based earnings

provide better information about future operating cash flows than do operating cash flows themselves (Ball and Nikolaev, 2021). Existing literature has taken accrual-based earnings management as a proxy for earnings quality and shown evidence on the association between earnings quality and the costs of debt (Wasan et al., 2013), costs of equity (Bhattacharya et al., 2012) and non-price loan terms (Bharath et al., 2008). It's documented that earnings quality plays a significant role in contracting syndicated loans in the developed markets (e.g., Ball et al., 2008). This paper contributes to this strand of literature on earnings quality and debt contracting by adding into this dynamic relationship the influence of state ownership. As discussed, we use the Chinese syndicated loans market to set up our tests as we believe it offers a unique setting to examine the interconnections among earnings quality, state influences and loan syndication.

The information environment in China is relatively more opaque (Li et al., 2014) and its capital markets are more volatile (Allen et al., 2005) than that in developed markets. Such an institutional feature is driven by the strict regulations on media and internet which make analysts and media coverage less thorough (Cheng et al., 2015) and by the ineffective law enforcement which makes the standards and regulations less binding (Piotroski and Wong, 2012). Empirical studies have highlighted the important role of state ownership in the selection of sources of debt finance in China, e.g. bond vs. syndicated loan markets (Pessarossi and Weill, 2013), and local vs. cross-border borrowing (Korkeamaki et al., 2014). On one hand, state-ownership has served as an implicit guarantee by government on the debt raised by SOEs and reduces the cost of debt finance (Boubakri et al., 2008). On the other, there are severe problems of moral hazards, ineffective monitoring and pursuit of political goals in SOEs (Borisova et al., 2015).

A syndicated loan contract always specifies both pricing (spread) and non-pricing (e.g. maturity,

collateral) terms which are used as substitutes in a risk-return mechanism (Bharath et al., 2008). These substitutes are especially important in China where interest rates are tightly regulated (Pessarossi and Weill, 2013). High earnings quality could effectively reduce the monitoring costs and improve *ex post* monitoring efficiency for lenders (Bharath et al., 2008). However, alternatively, the effects of earnings quality on syndicated loan spread and maturity could be economically insignificant with skeptical corporate accounting information and insufficient investor protection in China (Ball et al., 2000). In addition, corporate state ownership could be taken as either a favorable signal of implicit guarantee for loan repayment by government in case SOE borrowers are unable to repay their loans (Khwaja and Mian, 2005) or a unfavorable one for pursuing political objectives (Borisova et al., 2015).

A typical syndicate starts with the borrower to select a lead arranger to advise and manage the syndication and the lead arranger is usually responsible for due diligence and monitoring. However, a typical syndicated loan agreement contains an extensive disclaimer which states that lead arranger owes no fiduciary duties to any participants (Ivashina, 2009), and each participant is responsible for its own assessment of borrower's credit risk. Participant banks have no resource against the lead arranger if the borrower defaults, so the lead arranger is usually expected to obtain a higher loan share to signal the borrower's quality and perform the ex-post monitoring activity (which is costly and unobservable) (Ivashina, 2009). Consequently, in a loan syndication, lead arranger prefers a more concentrated syndication structure with a smaller number of participants to reduce the managing costs (Lee and Mullineaux, 2004). Moreover, lead arranger may also expect to sell a greater proportion to participant lenders to avoid free riding problems in information collection and monitoring.

The information asymmetries on borrowers between lead arranger and participant lenders could lead to a dispersed syndication structure (a higher lead arranger's proportion) and lending to corporate borrowers with higher earnings quality would help lead arranger create a more concentrated syndication (a lower lead arranger's proportion) by mitigating the problems of adverse selection and moral hazards (Ball et al., 2008). State-ownership is favorable to lenders due to the implicit nature of repayment guarantee, leading to a more dispersed syndication structure. On the other hand, to internalize the benefits and to minimize the managing costs, lead arrangers could invite only a small number of participants to syndicate loans to SOEs which could be alternatively characterized as having a more concentrated holding structure. This paper also adds to this strand of literature by examining the influence of state ownership in contracting syndicated loans in China. Based on the discussion above, our first hypothesis is stated as below:

Hypothesis 1: *Earnings quality and state ownership of Chinese corporate borrowers would affect the terms of syndicated loans (spread, maturity and structure).*

In recent years, foreign banks have been actively participating in loan syndications in China (Pessarossi et al., 2012; Tsai et al., 2014). According to Korkeamaki et al. (2014), loan syndicates led by foreign banks tend to suffer more information disadvantage compared with domestic banks in the emerging markets with lower transparency and under-developed corporate governance systems. According to Petersen and Rajan (2002), lending decisions are formulated over both hard (e.g., financial statement) and soft information (e.g., lending relationship, cultural and ethical behavior). Compared with domestic lenders who have advantageous access to time-consuming and local information (Frame et al., 2001), foreign lenders face more information asymmetries due to the lack of local knowledge, limited information

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collected from deposit channels and weak *ex post* monitoring (Ahn and Choi, 2009), and, hence rely more

heavily on verifiable hard information. Such reliance is also reflected by the heavy dependence on

accounting comparability (Chan et al., 2015) and quality (Lamoreaux et al., 2014) of foreign banks,

including World Bank, in lending decisions.

Foreign lender participation may lead to a more effective role played by the earning quality to

mitigate information asymmetries within syndicated loan contracting. However, there is also a possibility

that these 'localized' foreign banks would have recognized the overriding role of state ownership, as their

counterparts (domestic banks), and would have persistently treated state ownership as a positive signal

when contracting loans. There has been little evidence on the reliance of lending decisions of foreign banks

on the state ownership of corporate borrowers in China (Korkeamaki et al., 2014; Pessarossi et al., 2012),

and this paper intends to shed some light over this particular aspect. And, hence, we state the second

hypothesis as below:

Hypothesis 2: *Foreign lenders would be more willing to lead syndicated loans issued to corporate*

borrowers with better earnings quality and higher state ownership.

3. Data and Research design

3.1 Data and Sample

We collect detailed information on syndicated loans issued to Chinese corporate borrowers from DealScan

on primary loan terms and follow Caporale et al. (2018) to verify our data against those compiled by

Bloomberg. In syndicated loans, one loan package may contain several loan facilities issued to the same

borrower. Our samples are based on the facilities level where they vary with size, maturity, spread and other

non-price terms even in the same package (Lim et al., 2014). In total, we have 5,033 loan facilities raised

by Chinese companies between 1998 and 2016 and 3,017 facilities are excluded because they are either

non-syndicated loan facilities, issued to financial institutions or the type (financial or non-financial) of

borrower is missing. Second, we manually match the borrower's information (name, industry and location)

and collect firm level characteristics from Compustat. Due to our particular focus on financial reporting

quality and loan syndication, we further exclude 1,653 sample facilities issued to private (non-listed)

borrowers that are not required to comply with financial reporting standards for listed firms. Finally, we

follow Pessarossi and Weill (2013) and manually identify corporate state-ownership from CSMAR and

China Security Index Co. website.[3] Our final sample contains 363 loan facilities raised by Chinese listed

firms between 1998 and 2016.[4]

3.2 Model specification and variables

In the baseline models, we regress syndicated loan indicators on earnings quality of the corporate borrowers,

state ownership and a set of control variables for firm and loan specific characteristics as below:

$$Syndicated\ Loan_{i,t} = \partial + \beta_1 \times Earnings\ Quality_{i,t-1} + \beta_2 \times State\ Ownership_{i,t-1} +$$

$$\beta_3 \times Loan\ Specific\ Controls_{i,t} + \beta_4 \times Firm\ Specific\ Controls_{i,t-1} + Fixed\ Effect + \varepsilon.. \qquad (1)$$

where *Syndicated Loan* represents the terms of syndicated loan, i.e., loan spread (*Spread*), maturity

(*Maturity*) and loan syndication structure (*Structure*) in terms of share concentration, lead arranger's

shareholding and number of lenders in the loan syndicates. *Spread* is measured by All-In-Drawn, the total

spread paid over LIBOR (London Interbank Offered Rate) on the drawn amount for each facility. *Maturity* is measured as the number of months when the loan becomes mature. *Structure* is measured by (1) Herfindahl-Hirschman Index (HHI) of loan shares obtained by each lender within a loan facility (*ShareHHI*), (2) the number of lenders (*No. of lenders*) and (3) share held by lead arrangers (*Leadshare*).

We follow Dechow et al. (1995) and use the absolute value of abnormal accruals to measure the magnitude of *Earnings Quality* of corporate borrowers and the greater the abnormal accruals, the lower the earnings quality. We employ the modified Jones' model to measure abnormal accruals, denoted as *Accrual_D* (Dechow et al., 1995) and also use two alternative measures, *Accrual_F* and *Accrual_DD*, by following Francis et al. (2005) and Dechow and Dichev (2002), respectively, as robustness tests. *State Ownership* is denoted as a dummy variable, with state-owned enterprises coded one (*SOEs*=1). To consider the possible heterogeneity of *Earnings Quality* effects between SOEs and non-SOEs, we include an interaction term, *Earnings Quality×State Ownership,* to capture such a variation.

Consistent with the previous studies (e.g., Bharath et al., 2008, 2011; Fang et al., 2016), we include several firm-level and loan-facility-level factors as control variables. At firm-level, we control for firm size by *Ln(Asset),*[5] default risk by *Leverage* and modified Altman's *Z-score* (Altman, 1968), profitability by return on assets (*ROA*) and tangibility by the tangible assets ratio (*Tangibility*). At loan-facility level, we include loan amount, *Ln*(*Loan Amount*), in U.S dollars to control for the economies of scale in lending practices (Lian, 2017), loan collateral (*Secured*) which is coded as one if the facility is secured by collateral, and loan purpose[6] (*Repayment*). We also control for the year and industry fixed effect to eliminate the influence driven by time and industry.

To test Hypothesis 2 on the effects of foreign lender participation, we run Equation (2) below

$$Foreign\ Lender\ Participation_{i,t} = \partial + \beta_1 \times Earnings\ Quality_{i,t-1} + \beta_2 \times State\ Ownership_{i,t-1} +$$

$$\beta_3 \times Loan\ Specific\ Controls_{i,t} + \beta_4 \times Firm\ Specific\ Controls_{i,t-1} + Fixed\ Effect + \varepsilon ..... \qquad (2)$$

where *Foreign Lender Participation* is measured by a dummy variable, *All-Foreign*, which is coded as 1 if

all lead arrangers are foreign lenders; and *Foreign-Fraction* as the proportion of foreign lead arrangers in

all lead arrangers, to capture the degree of participation in leading loan syndication. All variables are defined

in Appendix 1.

4. Empirical results

4.1 Descriptive statistics

Our descriptive statistics (Table 1) shows that on average, the spread charged on syndicated loans

issued to Chinese corporate borrowers is 188 bps over LIBOR with a standard deviation of 127 bps,

comparable to the price charged on U.S syndicated loan borrowers (Fang et al., 2016). An average

syndicated loan has an amount of $230 million with 59 months maturity and 6 lenders participating in the

loan syndication. There are 14% of the loan facilities secured by collateral. Table 1 also shows that foreign

lenders play an important role in Chinese loan syndication where 62% of the loan facilities are led by all

foreign lenders and about three quarters of the lead arrangers are foreign lenders, comparable to the

participation ratio of 65% reported by Pessarossi et al. (2012). Syndicated loan borrowers have an averaged

abnormal accruals of 0.076 and more than a quarter (27.5%) of them are state-owned enterprises (SOEs),

comparable to those samples used by Wang and Yung (2011) and Korkeamaki et al. (2014) but much higher

than those of U.S firms (Wasan et al., 2013). Chinese syndicated loan borrowers have an average asset value at $10 billion, 48% of tangibility and 6.2% return on assets.

[Table 1 here please]

4.2 The effects of earnings quality and state ownership on syndicated loan terms

We run Eq. 1 to test the effects of *Earnings Quality* and *State Ownership* on primary loan terms, i.e. loan spread, maturity and structure and report the results in Table 2 to 4 respectively.[7] For Table 2 (*Spread*) and 3 (*Maturity*), we consider their independent effects (Models 1 and 2), combined effects (Models 3) and possible interaction effect (Model 4) by employing OLS models. Similarly for Table 4 (*Structure*), we follow the logic above to regress loan syndication structure, measured by loan share HHI (Models 1-4), number of lenders (Models 5 and 6) and share held by lead arranger (Models 7 and 8), on earnings quality, state ownership and the control variables.

Table 2 shows that, after controlling for a rich set of control variables and fixed effects, Chinese corporate borrowers with higher abnormal accruals, i.e. lower earnings quality, would be charged greater spreads on their syndicated loans, and this is consistent with existing evidence (e.g., Bharath et al., 2008). Such a result reflects the role played by financial reporting quality in alleviating information asymmetries on borrower and in reducing costs of monitoring for lenders. In addition, such a favorable effect (Model 4) is economically significant in the syndicated loan market in China and an increase of abnormal accruals by one standard deviation would raise the loan spread by 18.6 bps on average, equivalent to around 10% increase in interest payment for a typical Chinese corporate borrower with an average loan spread (188.44

bps). Such an effect is much greater than that in U.S syndicated loan markets which is about 5.5bps increase

with a standard deviation increase in abnormal accruals (Wasan et al., 2013), reflecting a much stronger

favorable effect of financial reporting quality on reducing financial costs in China than in U.S.

[Table 2 around here please]

Table 2 shows little evidence that state ownership affects syndicated loan prices and such a result

is in contrast to those empirical studies on bilateral loans (Boubakri et al., 2008). This is because, unlike

bilateral loans whose risks are relevant to only one lender and whose price serves as the key factor to

compensate the exposure to risk of the lender, syndication loan lenders could adjust risk factors by

managing loan syndicate structure by sharing risks with other participant lenders. Therefore, the divergent

distribution of loan terms may mitigate the individual effect of state ownership on loan spread. In addition,

our test shows that SOE loan spreads are more sensitive to earnings quality than non-SOE loans (Model 4).

This is because managers in SOEs usually have less pressure to manage earnings than those in non-SOEs

(Wang and Yung, 2011) and therefore, accounting information users are more concerned with SOE earnings

management which makes a bigger difference than that of non-SOEs.

Maturity is associated with monitoring costs and risk exposure of lenders and Table 3 shows that

loan maturity is independent on earnings quality since SOE loans would averagely have a longer maturity

than loans issued to non-SOEs, by 12 months after controlling for other variables, such as loan size and

purposes, suggesting that SOE loans have longer maturity because they have better earnings quality which

affects loan maturity indirectly via state ownership. In addition, increasing R^2 over models suggests that

state-ownership is a complementary explanatory factor, rather than a competing factor, in loan maturity

models. This is plausible because managers in SOEs have less pressure to manipulate firm-specific information (Wang and Yung, 2011). Alternatively, state ownership overrides the role of earnings quality when determining loan maturity, as, interestingly, earnings quality itself does not affect loan maturity (Model 1, Table 3).

[Table 3 around here please]

Such an overriding effect is again confirmed by our results in Table 4 that state-ownership but not earnings quality has a significant impact on loan syndicate structure. Loans issued to SOEs usually have more concentrated share holdings, fewer lenders and less shareholding by lead arranger than those loans issued to non-SOEs. The state ownership effects are economically sizable. For example, having a SOE borrower reduces the number of lenders by 9%, decreases lead arranger shareholding from 37% at mean to 19%, and increases share HHI from 28% at mean to 43%. Overall, on one hand, our findings suggest that state ownership, overriding the dominating role of earnings quality, alleviates adverse selection and moral hazards by reducing lead arranger shareholding. On the other, state ownership reduces monitoring costs for lead arrangers by constructing a more concentrated loan syndicate (Lee and Mullineaux, 2004).

[Table 4 around here please]

Combining earlier results on loan prices and maturity, we find that corporate borrowers with better earnings quality, regardless of their state ownership, are rewarded with more favorable loan price. However, state ownership overrides the monitoring role of earnings quality as it provides an implicit guarantee of the loan repayment and lower default risk. Different from the existing empirical evidence that earnings quality and state-ownership determine *both* pricing *and* non-pricing loan terms in bilateral loans, our results show

that, in syndicated loans, earnings quality and state ownership determine price and non-pricing terms *respectively*, reflecting more risk-return mechanisms available for lenders when contracting syndicated loans. Specifically, in determining loan spread, lenders are concerned with both information asymmetries and the ability of corporate borrowers to repay. Better earnings quality reduces information asymmetries between lender and borrowers and hence, lenders would reward borrowers with higher earnings reporting quality by charging lower prices. However, in determining loan maturity and structure, the impact of state ownership overrides as it reduces asymmetric information between the lead arranger and participant lenders.

4.3 The effects of foreign lender participation

The aforementioned analysis shows that, despite what's documented for the developed markets that good earnings quality could effectively reduce the monitoring costs and improve ex post monitoring efficiency for lenders (Bharath et al. 2008), in a state-dominated market, state ownership dominates the monitoring role of earnings quality as it provides an implicit guarantee of the loan repayment and lower default risk. Nonetheless, interestingly, firms with better earnings quality, regardless of their state ownership, are rewarded with more favorable loan price.

As disucssed in Section 2, we extend our investigation by considering the effects of foreign lender participation, as loan syndications in China is featured by the foreign lender participation. Foreign lenders have information disadvantages against domestic lenders who may have developed long-term banking relations with borrowers (Frame et al., 2001) and therefore, foreign lenders may rely more heavily on 'hard' information in lending decision making, and would be more likely to lead loan syndication for corporate

borrowers with better earnings quality. Another possibility is that foreign lenders would follow the

conventional wisdom that 'when in Rome, do as the Romans do', i.e., we would expect the foreign banks

to take state-ownership as implicit loan guarantee and the dominant role of state-ownership would prevail

even with the presence of foreign lender participation.

To measure *Foreign Lender Participation*, we construct two variables: *All Foreign*[8] (=1 if all lead

arranges are foreign lenders; 0 otherwise) and *Foreign Fraction* (= the proportion of foreign lenders in all

lead arrangers). We employ Probit models (Models 1 and 2) and OLS (Models 3 and 4) and report the

results in Table 5.

[Table 5 around here please]

Table 5 shows that, interestingly, better earnings quality does not significantly motivate foreign

lenders to lead or to participate the leading of loan syndication. Foreign lenders would nonetheless take

state ownership as a favorable signal of implicit guarantee of repayment by more actively leading the

syndicated loans issued to SOEs. After holding other factors constant, state ownership increases the

likelihood of a loan syndication to be led by all foreign lenders by 32.4% (Model 1) and the proportion of

foreign lead arrangers by 26.6% (Model 3)[9] Further to our investigation on the participation of foreign

lenders in leading loan syndication, we run additional tests to examine if earnings quality and state

ownership have different effects on loans led by foreign vs. domestic lenders. First, we run both OLS for

Models 1 and 2 (Table 6) and endogenous switching regression models (Bharath et al., 2008) for Models 3

and 4. We show consistent results for both model specifications that foreign lenders are more sensitive to

hard information (e.g. financial reporting quality) in pricing syndicated loans and charge lower spreads for

Chinese corporate borrowers with better earnings quality (i.e. lower abnormal accruals). For example, one standard deviation increase in *Accrual_D* (0.085) could raise loan spread by 18.09 bps (Model 1) and 17.85 bps (Model 3), respectively. Table 6 also shows consistent results to those reported in Table 2 that corporate borrowers with better earnings quality would be rewarded with more favorable loan prices, regardless of their state-ownership, and the participation of foreign banks in Chinese loan syndication. We also find that earnings quality has little impact on the spreads of loans led by domestic lenders who are subject to government control and have better access than foreign banks to private information of domestic corporate borrowers. Although interest rates have become deregulated, they may not work as an efficient pricing mechanism because they are subject to government intervention and only allowed to fluctuate in a narrow range (Chen et al., 2011).

[Table 6 around here please]

Following a similar logic, we investigate the effects of earnings quality and state ownership on loan maturity for syndicated loan facilities led by foreign vs. domestic lenders and report the results in Table 7. Consistent with earlier results (Table 3), it shows that state ownership is positively associated with loan maturity and there is little evidence that such an association varies between foreign and domestic lenders.

[Table 7 around here please]

Table 4 above has shown that lead arrangers take state ownership as a favorable signal for implicit guarantee for repayment and lower default risk. Therefore, state ownership enables lead arranger to construct a concentrated loan syndicate without the necessity to share risk with more participant lenders. It also alleviates adverse selection and moral hazard problems so that lead arranger could sell more shares to

participant lenders. Consistent with our conjecture, Table 8 shows that foreign lead arrangers who rely more heavily on hard information than on soft information for lending decision making due to their disadvantage in private information collection against domestic lenders. The coefficients for both OLS (Model 1) and endogenous switching model (Model 3) are statistically significant for foreign lead arrangers and economically sizable, but not for domestic lead arrangers. Syndicated loans led by all foreign lenders and issued to SOEs have a greater loan share concentration by 51.4% (=14.422/28.071) in the OLS model (Model 1) and 66.9% (=18.769/28.071) in the endogenous switching model (Model 3).

[Table 8 around here please]

4.5 Robustness tests

Our study has shown that in a state-dominated market, state ownership dominates the monitoring role of earnings quality. Earnings quality contributes to the mitigation of information asymmetries between lenders and borrower. Therefore, borrowers with better earnings quality would pay lower spreads on syndicated loans. State-ownership, however, reduces information asymmetries between lenders and alleviates adverse selection and moral hazard problems. The dominant role of state ownership prevails even with the presence of foreign lender participation, which suggests that foreign lenders are following the conventional wisdom that 'when in Rome, do as the Romans do'. In this section, we conduct three robustness tests.

First, alternative to the earnings quality measure derived from the modified Jones' model, *Accrual_D*, we construct two additional measures of abnormal accruals, *Accrual_F* and *Accrual_DD*, by following Francis et al. (2005) and Dechow and Dichev (2002), respectively. Consistent with our earlier

findings (Tables 2, 3 and 4), Table 9 Panel A shows that abnormal accruals, but not state-ownership, increase

loan spread and state ownership, but not earnings quality, plays a determinant role in loan maturity and

syndication structure. For foreign lender partcipation, Table 9 Panel B shows consistent results to Table 5

where the participation of foreign lenders in leading loan syndication is dependent on the state-ownership

of the borrower but not its earnings quality.

[Table 9 around here please]

Second, the quality of earnings, measured by abnormal accruals and its alternatives, varies overtime

in our syndicated loan borrowers. As Figure 1 shows, abnormal accruals increased to their peak values

during the financial crisis period (2007-2009) and decreased since then. Such a pattern in China is consistent

with the cross-country evidence (Persakis and Iatridis, 2015). To test if our earlier results are driven by such

extreme values in the financial crisis period, we exclude samples during 2007-2009 in the analysis and

Table 10 shows that our earlier results still hold where earnings quality affects loan spread and state-

ownership has impacts on loan maturity, syndication structure and the participation of foreign lenders.

[Figure 1 around here please]

[Table 10 around here please]

Third, an endogeneity issue may exist because (1) there could be a reverse causality issue where

syndicated loan places a monitoring effect on earnings quality (abnormal accruals) and (2) omitted variables

exist which affect both syndicated loan prices, structure and corporate financial reporting quality. We

overcome the first possible endogeneity issue by employing a lagged earnings quality measure in year t-1

so that a reverse causality issue is to be removed.

The endogeneity caused by omitted variables may exist in our analysis because some omitted firm level characteristics, such as corporate governance, may affect both financial reporting quality (e.g. Xie et al., 2003) and syndicated loan prices and structures (e.g., Lin et al., 2012) simultaneously. Second, corporate social responsibility (CSR) has been known as a factor which affects costs of bank loan, even economically unimportant (Goss and Roberts, 2011). However, CSR performance is not significantly associated with either accrual-based or real earnings management (Liu et al., 2017). Third, there has been little evidence that there are any other omitted variables which cause endogeneity by affecting both financial reporting quality and loan prices. We include corporate governance variable, such as state ownership, in our model to minimize the corporate governance related omitted variable problems. We also run a Placebo test to investigate if our model is subject to endogeneity by replacing *Accrual_D* by a *fake-Accrual*[10] and re-running the baseline model (Eq. 1). Our results in Table 11 validate above analysis and show that the coefficients of *fake-Accrual* are not statistically significant in all loan models. Therefore, our earlier results are robust and not subject to endogeneity.

[Table 11 around here please]

5. Summary and conclusion

Conventionally, when lending to a firm, lenders rely on good quality of earnings to predict future cash flows (Dechow, 1994) and earnings have been suggested to outperform operating cash flows in their predictive ability of future operating cash flows (Ball and Nikolaev, 2021). In the developed markets, it's documented that good earnings quality could effectively reduce the monitoring costs and improve ex post monitoring

efficiency for lenders (Bharath et al. 2008). However, our study shows that in a state-dominated market state ownership overrides the signaling role of earnings quality in reducing the problems of adverse selection and moral hazards as it provides an implicit guarantee of the loan repayment. The favorable role of state ownership is especially important for foreign banks which have an information disadvantage to domestic banks. Nonetheless, firms with better earnings quality, regardless of their state ownership, are rewarded with more favorable loan prices. Similarly, the dominant role of state-ownership prevails even with the presence of foreign lender participation, which suggests that foreign lenders follow the conventional wisdom that 'when in Rome, do as the Romans do'.

These results also suggest that earnings quality is used by lenders as an indicator of information transparency of borrower and its role is reflected in pricing syndicated loans. This effect is especially strong for loans to SOEs or loans led by foreign banks. Earnings quality, however, plays little role in alleviating problems associated with information asymmetries among lenders, such as *ex ante* adverse selection and *ex post* moral hazards. State-ownership may serve as a signal of implicit guarantee of loan repayment, mitigate moral hazard of lead arrangers, and consequently reduce adverse selection by participant lenders, especially foreign banks. With the increasing popularity of syndicated loan and the participation of foreign bank in China, our findings show the unintended consequences with 'localization' of foreign banks after financial deregulation.

Even this study has covered a long sample period between 1998 and 2016 with both year fixed effects and controlled macroeconomic factors, it might not have fully captured the variation of the roles played by state-ownership in China. Therefore, we call for future research to further investigate the recent

development in China on the role of state-ownership. This is important because foreign lenders may have

deviated from direct lending and started to lend indirectly by holding ownership of domestic banks,

especially those policy-oriented banks in China, since 2020 (Hale, 2020), primarily driven by the increased

corporate default of SOEs in energy sector (Yu, 2020) and real estate sector (Langley, 2021).

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FIGURE 1

Time Trend of Abnormal Accruals (Earnings Quality)
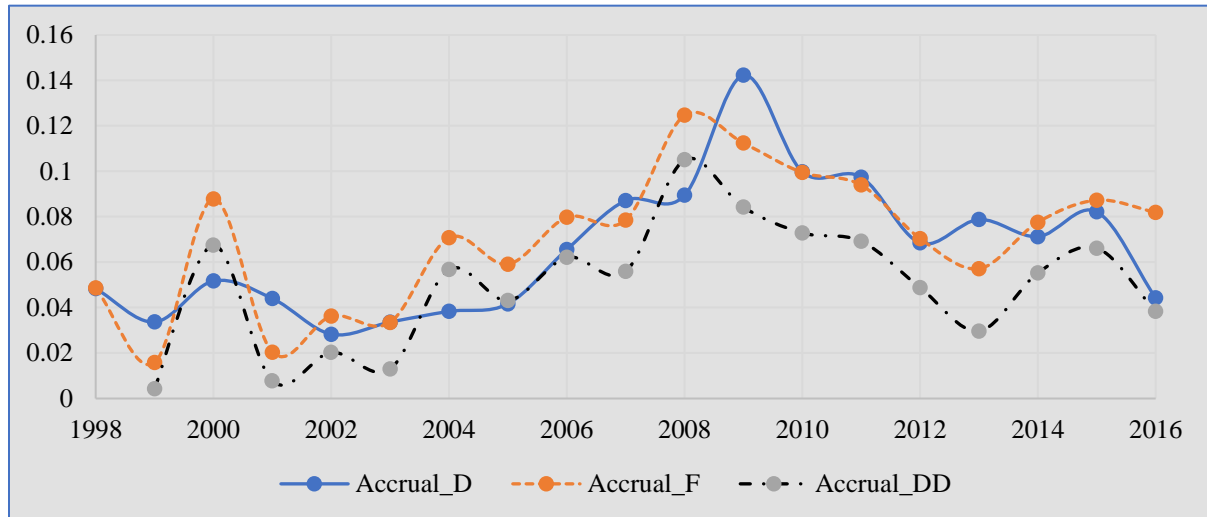
Table 1: Descriptive statistics

Variables	N	Mean	SD	P25	Median	P75
Syndicated loan facilities						
Spread (bps)	186	188.444	127.343	76	155	280
Maturity (months)	341	59.349	40.497	36	36	72
Loan Amount (USD$ m)	360	229.5	1041	29.5	70	172.8
No. of Lenders	363	5.981	5.001	2	4	9
Repayment (0,1)	363	0.207	0.405	0	0	0
Secured (0,1)	363	0.138	0.345	0	0	0
ShareHHI	203	28.071	23.653	11.117	18.750	37.610
Leadshare (%)	301	37.475	39.113	0	25	75.916
All Foreign (0,1)	341	0.619	0.486	0	1	1
Foreign Fraction	341	0.755	0.371	0.571	1	1
Chinese corporate borrowers						
Accrual_D	363	0.076	0.085	0.024	0.050	0.097
Accrual_F	337	0.082	0.079	0.034	0.050	0.098
Accrual_DD	336	0.060	0.077	0.012	0.042	0.077
State-ownership	363	0.275	0.447	0	0	1
Asset (USD$ m)	363	10,279	24,208	1,161	3,381	10,095
Leverage	363	0.602	1.222	0.152	0.369	0.636
Zscore	363	1.742	1.130	0.904	1.802	2.331
ROA	363	0.062	0.075	0.021	0.053	0.092
Tangibility	363	0.479	0.240	0.289	0.517	0.684

This table provides the descriptive statistics of the variables used in the following empirical analysis. Information on syndicated loan facilities and Chinese corporate borrowers is collected between 1998 and 2016 with a total number of 363 samples.

Table 2: Earnings quality, state ownership and syndicated loan prices

	(1)	(2)	(3)	(4)
Accrual_D	219.369**		219.354**	187.704**
	(94.074)		(94.416)	(94.808)
State Ownership		-5.805	0.798	-57.496
		(24.492)	(26.381)	(39.429)
Accrual_D × State Ownership				930.022*
				(471.400)
Ln(LoanAmount)	7.924	5.097	7.893	8.923
	(6.187)	(6.051)	(6.295)	(6.252)
Maturity	-0.751**	-0.717**	-0.751**	-0.897**
	(0.347)	(0.320)	(0.349)	(0.353)
Secured	107.231***	100.561***	107.327***	107.595***
	(20.111)	(18.957)	(20.433)	(20.223)
No. of Lenders	-1.486	-0.684	-1.478	-1.429
	(1.495)	(1.444)	(1.519)	(1.504)
Repayment	43.528***	44.831***	43.567***	38.428**
	(15.350)	(14.791)	(15.459)	(15.520)
Ln(Asset)	-26.654***	-28.540***	-26.656***	-27.227***
	(4.674)	(4.448)	(4.691)	(4.652)
ROA	-242.234*	-176.488	-243.100*	-190.642
	(132.487)	(128.499)	(136.018)	(137.216)
Leverage	36.997**	46.808***	36.932**	33.375**
	(16.435)	(14.915)	(16.635)	(16.562)
Zscore	7.551	10.964	7.669	2.920
	(8.038)	(8.599)	(8.960)	(9.188)
Tangibility	27.963	23.590	27.883	29.886
	(35.687)	(34.528)	(35.913)	(35.557)
Constant	221.097*	270.173**	189.732	202.215
	(132.663)	(129.261)	(137.163)	(135.895)
Observations	180	180	180	180
R-squared	0.674	0.670	0.674	0.683
Industry FE	YES	YES	YES	YES
YEAR FE	YES	YES	YES	YES

***, **, and * denotes statistical significant level of 1%, 5% and 10%, respectively.
Samples collected are between 1998 and 2016 with a total number of observations of 363. Dependent variable is syndicated loan spread measured by *All-in-drawn-spread (*basis point spread over LIBOR plus the annual fee and the up-front fee spread, if there is any). We also control for year and industry fixed effect. Standard errors are clustered at each firm level and reported in parentheses.

Table 3: Earnings quality, state ownership and syndicated loan maturity

	(1)	(2)	(3)	(4)
Accrual_D	-19.886		-19.416	-18.051
	(23.773)		(23.554)	(23.739)
State Ownership		11.881**	14.470**	17.306**
		(5.515)	(5.758)	(8.040)
Accrual_D × State Ownership				-51.569
				(101.873)
Ln(LoanAmount)	2.714**	2.828**	2.378*	2.420*
	(1.295)	(1.226)	(1.290)	(1.294)
Secured	9.164	12.308**	10.677*	10.460*
	(5.800)	(5.267)	(5.778)	(5.802)
No. of Lenders	-0.398	-0.314	-0.185	-0.182
	(0.415)	(0.398)	(0.420)	(0.421)
Repayment	-19.040***	-17.160***	-17.725***	-17.665***
	(4.503)	(4.375)	(4.492)	(4.499)
Ln(Asset)	0.650	0.205	0.220	0.137
	(1.382)	(1.317)	(1.380)	(1.392)
ROA	64.496*	37.250	52.908	50.437
	(34.459)	(32.247)	(34.450)	(34.840)
Leverage	4.067**	3.532*	3.609*	3.914*
	(2.020)	(1.857)	(2.009)	(2.100)
Zscore	-14.063***	-11.389***	-11.851***	-11.615***
	(2.176)	(2.207)	(2.329)	(2.378)
Tangibility	24.909***	26.192***	19.660**	19.729**
	(9.503)	(9.267)	(9.644)	(9.657)
Constant	48.024	11.163	52.896	52.354
	(40.213)	(32.055)	(39.887)	(39.955)
Observations	337	337	337	337
R-squared	0.439	0.468	0.473	0.473
Industry FE	YES	YES	YES	YES
YEAR FE	YES	YES	YES	YES

***, **, and * denotes statistical significant level of 1%, 5% and 10%, respectively.
Samples collected are between 1998 and 2016 with a total number of observations of 363. Dependent variable is syndicated loan maturity in months. We also control for year and industry fixed effect. Standard errors are clustered at each firm level and reported in parentheses.

Table 4: Financial reporting quality, state-ownership and syndicated loan structure

Variables	(1) ShareHHI	(2) ShareHHI	(3) ShareHHI	(4) ShareHHI	(5) No. of Lenders	(6) No. of Lenders	(7) Leadshare	(8) Leadshare
Accrual_D	-13.961		-13.241	-9.790	0.383	0.369	-24.958	-27.573
	(18.129)		(17.929)	(18.189)	(0.311)	(0.314)	(30.467)	(30.435)
State Ownership		9.613**	10.090**	15.143**	-0.484***	-0.517***	-17.961**	-29.348***
		(4.639)	(4.713)	(6.575)	(0.083)	(0.121)	(7.989)	(10.986)
Accrual_D × State Ownership				-87.575		0.597		248.477
				(79.505)		(1.589)		(165.034)
Ln(LoanAmount)	-5.379***	-6.028***	-5.748***	-5.757***	0.171***	0.171***	-0.565	-0.673
	(1.006)	(1.004)	(1.010)	(1.009)	(0.018)	(0.018)	(1.553)	(1.551)
Maturity	0.006	0.010	0.010	0.018	-0.002**	-0.002**	-0.246***	-0.256***
	(0.047)	(0.046)	(0.047)	(0.047)	(0.001)	(0.001)	(0.076)	(0.076)
Secured	5.946	5.555	7.785*	7.134	-0.093	-0.091	-3.122	-2.916
	(4.592)	(4.388)	(4.621)	(4.656)	(0.081)	(0.081)	(7.144)	(7.126)
Repayment	-2.175	-0.920	-1.082	-1.298	0.266***	0.266***	0.716	0.290
	(2.994)	(3.039)	(3.004)	(3.008)	(0.053)	(0.053)	(5.970)	(5.960)
Ln(Asset)	0.449	0.440	0.491	0.481	0.023	0.024	7.947***	8.209***
	(1.049)	(1.000)	(1.037)	(1.037)	(0.018)	(0.018)	(1.782)	(1.786)
ROA	-3.507	-16.800	-13.743	-15.879	-0.115	-0.091	18.248	23.635
	(26.821)	(26.138)	(26.947)	(26.999)	(0.440)	(0.444)	(46.138)	(46.155)
Leverage	2.655	1.848	2.347	2.407	-0.105***	-0.107***	-0.544	-2.225
	(1.830)	(1.684)	(1.815)	(1.815)	(0.037)	(0.038)	(2.478)	(2.712)
Z-Score	-3.853**	-2.329	-2.203	-1.959	0.037	0.035	-1.411	-2.252
	(1.932)	(2.013)	(2.060)	(2.071)	(0.032)	(0.033)	(3.059)	(3.102)
Tangibility	11.739*	10.891	10.177	10.719	-0.137	-0.138	-4.641	-5.175
	(6.967)	(6.970)	(6.928)	(6.940)	(0.117)	(0.117)	(12.542)	(12.514)
Constant	106.447***	107.381***	109.708***	109.079***	-1.805***	-1.794***	-32.929	-30.522
	(24.732)	(21.724)	(24.502)	(24.492)	(0.397)	(0.398)	(48.649)	(48.545)
Observations	201	201	186	186	312	312	266	266
R-squared	0.439	0.490	0.503	0.503			0.221	0.228
Pseudo R2					0.187	0.187		
Industry FE	YES	YES	YES	YES	YES	YES	YES	YES
YEAR FE	YES	YES	YES	YES	YES	YES	YES	YES

***, **, and * denotes statistical significant level of 1%, 5% and 10%, respectively.

Samples collected are between 1998 and 2016 with a total number of observations of 363. Dependent variable is syndicated loan structure represented by *No. of Lenders, Leadshare* and *ShareHHI*. We also control for year and industry fixed effect. Standard errors are clustered at each firm level and reported in parentheses.

Table 5: Earnings quality, state ownership and foreign lender participation

Variables	(1) All Foreign	(2) All Foreign	(3) Foreign Fraction	(4) Foreign Fraction
Accrual_D	-0.222	0.130	-0.283	-0.234
	(1.686)	(1.742)	(0.258)	(0.268)
State Ownership	1.586***	1.901***	0.266***	0.302***
	(0.474)	(0.605)	(0.063)	(0.082)
Accrual_D × State Ownership		-5.253		-0.590
		(6.104)		(0.870)
Ln(LoanAmount)	-0.004	-0.001	0.001	0.001
	(0.092)	(0.093)	(0.014)	(0.014)
Maturity	-0.000	-0.000	-0.000	-0.000
	(0.004)	(0.004)	(0.001)	(0.001)
Secured	-1.077***	-1.087***	-0.134**	-0.135**
	(0.396)	(0.398)	(0.059)	(0.059)
No. of Lenders	-0.045	-0.045	0.005	0.005
	(0.030)	(0.030)	(0.005)	(0.005)
Repayment	1.014***	1.014***	0.133***	0.133***
	(0.351)	(0.351)	(0.051)	(0.051)
Ln(Asset)	-0.114	-0.112	0.006	0.006
	(0.100)	(0.100)	(0.015)	(0.015)
ROA	3.509	3.447	1.085***	1.071***
	(2.433)	(2.436)	(0.360)	(0.361)
Leverage	-0.048	-0.068	0.003	0.001
	(0.130)	(0.133)	(0.021)	(0.021)
Zscore	0.290	0.291	0.027	0.029
	(0.178)	(0.177)	(0.026)	(0.026)
Tangibility	-0.751	-0.771	-0.167	-0.169
	(0.720)	(0.723)	(0.108)	(0.108)
Constant	0.263	0.197	0.902**	0.881**
	(2.033)	(2.040)	(0.357)	(0.359)
Observations	307	307	326	326
R-squared			0.232	0.233
Pseudo R-squared	0.120	0.121		
Industry FE	YES	YES	YES	YES
YEAR FE	YES	YES	YES	YES

***, **, and * denotes statistical significant level of 1%, 5% and 10%, respectively.
Samples collected are between 1998 and 2016 with a total number of observations of 363. Dependent variable is cross-border lending indicator, *All Foreign* and *Foreign Fraction*, respectively. *All Foreign* is a dummy variable, which equals one if all lead arrangers are foreign lenders; 0 otherwise. *Foreign Fraction* is the proportion of foreign leaders in the total number of lead arrangers. We also control for year and industry fixed effect. Standard errors are clustered at each firm level and reported in parentheses.

Table 6: Earnings quality and loan price:
foreign and domestic lead arrangers subsample tests

Variables	(1) Foreign (OLS)	(2) Domestic (OLS)	(3) Foreign (Switching)	(4) Domestic (Switching)
Accrual_D	212.840**	169.623	212.590**	210.566
	(99.100)	(297.910)	(88.245)	(162.839)
State Ownership	-4.097	-60.315	-7.146	-5.660
	(26.382)	(89.404)	(23.097)	(15.283)
Constant	386.461***	-22.938	341.501***	65.661
	(140.612)	(229.042)	(120.962)	(136.433)
Other Controls	YES	YES	YES	YES
Observations	124	56	180	180
R-squared	0.744	0.783		
LR test statistics (p-value)			27.07 (0.00)	
Industry FE	YES	YES	YES	YES
YEAR FE	YES	YES	YES	YES

***, **, and * denotes statistical significant level of 1%, 5% and 10%, respectively.
Samples collected are between 1998 and 2016 with a total number of observations of 363. Dependent variable is syndicated loan price (*spread*). In Models (1) and (2), we group lending group into foreign and domestic lead arrangers. Foreign group represents that all lead arrangers are foreign lenders. We define it as domestic group if there is one or more domestic lead arrangers in loan syndication. In Models (3) and (4), we use endogenous switching regression models corresponding to the endogenous selection in Table 5. Standard errors are clustered at each firm level and reported in parentheses.

Table 7: Earnings quality and loan maturity:
foreign and domestic lead arrangers subsample tests

Variables	(1) Foreign (OLS)	(2) Domestic (OLS)	(3) Foreign (Switching)	(4) Domestic (Switching)
Accrual_D	2.146	56.563	-28.273	26.513
	(27.859)	(47.939)	(27.131)	(50.797)
State Ownership	32.323***	23.818**	38.130***	51.819***
	(5.344)	(11.808)	(5.153)	(12.396)
Constant	68.735**	-97.280	-16.128	35.307
	(32.788)	(59.530)	(0.000)	(57.383)
Other Controls	YES	YES	YES	YES
Observations	212	125	337	337
R-squared	0.566	0.378		
LR test statistics (p-value)			170.13 (0.00)	
Industry FE	YES	YES	YES	YES
YEAR FE	YES	YES	YES	YES

***, **, and * denotes statistical significant level of 1%, 5% and 10%, respectively.
Samples collected are between 1998 and 2016 with a total number of observations of 363. Dependent variable is syndicated loan maturity (*months*). In Models (1) and (2), we group lending group into foreign and domestic lead arrangers. Foreign group represents that all lead arrangers are foreign lenders. We define it as domestic group if there is one or more domestic lead arrangers in loan syndication. In Models (3) and (4), we use endogenous switching regression models corresponding to the endogenous selection in Table 5. Standard errors are clustered at each firm level and reported in parentheses.

Table 8: Earnings quality and loan syndication structure:
foreign and domestic lead arrangers subsample tests

Variables	(1) Foreign (OLS)	(2) Domestic (OLS)	(3) Foreign (Switching)	(4) Domestic (Switching)
Accrual_D	22.128	-30.012	7.864	-8.632
	(29.549)	(37.926)	(23.277)	(36.732)
State Ownership	14.422**	5.312	18.769***	-4.642
	(6.120)	(6.367)	(4.971)	(5.991)
Constant	104.671***	102.930***	90.864	103.828
	(36.819)	(26.173)	(0.000)	(0.000)
Other Controls	YES	YES	YES	YES
Observations	118	83	201	201
R-squared	0.530	0.582		
LR test statistics (p-value)			94.31 (0.00)	
Industry FE	YES	YES	YES	YES
YEAR FE	YES	YES	YES	YES

***, **, and * denotes statistical significant level of 1%, 5% and 10%, respectively.

Samples collected are between 1998 and 2016 with a total number of observations of 363. Dependent variable is syndicated loan structure (*ShareHHI*). In Models (1) and (2), we group lending group into foreign and domestic lead arrangers. Foreign group represents that all lead arrangers are foreign lenders. We define it as domestic group if there is one or more domestic lead arrangers in loan syndication. In Models (3) and (4), we use endogenous switching regression models corresponding to the endogenous selection in Table 5. Standard errors are clustered at each firm level and reported in parentheses.

Table 9: Robustness test using alternative abnormal accruals (earnings quality) measures

Panel A: Loan structure

Variables	(1) Spread	(2) Spread	(3) Maturity	(4) Maturity	(5) ShareHHI	(6) ShareHHI
Accrual_F	219.460[*]		-3.312		-5.339	
	(117.368)		(27.569)		(19.923)	
Accrual_DD		200.124[*]		-2.613		-3.376
		(119.078)		(27.999)		(20.993)
State Ownership	-5.638	-7.336	31.199[***]	31.242[***]	13.501[***]	13.619[***]
	(26.782)	(26.763)	(5.470)	(5.448)	(4.380)	(4.353)
Constant	123.611	119.343	20.443	20.473	108.643[***]	107.652[***]
	(145.034)	(143.069)	(40.744)	(40.744)	(23.867)	(23.600)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes
Observations	169	168	314	313	187	186
R-squared	0.575	0.571	0.363	0.362	0.435	0.433
Industry FE	YES	YES	YES	YES	YES	YES
YEAR FE	YES	YES	YES	YES	YES	YES

[***], [**], and [*] denotes statistical significant level of 1%, 5% and 10%, respectively.
Samples collected are between 1998 and 2016 with a total number of observations of 363. Dependent variables are syndicated *Spread* (Models 1 and 2), *Maturity* (Models 3 and 4) and *ShareHHI* (Models 5 and 6). The key independent variables are *Accrual_F* and *Accrual_DD*, respectively. Standard errors are clustered at each firm level and reported in parentheses.

Panel B: Foreign lender participation

VARIABLES	(1) All Foreign	(2) All Foreign	(3) Foreign Fraction	(4) Foreign Fraction
Accrual_F	0.444		-0.273	
	(1.871)		(0.297)	
AccrualDD		-0.548		-0.419
		(1.893)		(0.298)
State Ownership	1.380[***]	1.348[***]	0.252[***]	0.249[***]
	(0.440)	(0.439)	(0.062)	(0.062)
Constant	0.927	0.962	0.861[**]	0.684
	(1.900)	(1.898)	(0.431)	(0.431)
Control variables	Yes	Yes	Yes	Yes
Observations	288	288	304	303
R-squared			0.227	0.229
Pseudo R-squared	0.105	0.105		
Industry FE	YES	YES	YES	YES
YEAR FE	YES	YES	YES	YES

[***], [**], and [*] denotes statistical significant level of 1%, 5% and 10%, respectively.
Samples collected are between 1998 and 2016 with a total number of observations of 363. Dependent variable is cross border lending indicator, *All Foreign* and *Foreign Fraction*, respectively. *All Foreign* is a dummy variable, which equals one if all lead arrangers are foreign lenders; 0 otherwise. *Foreign Fraction* is the proportion of foreign leaders in total lead arrangers. The key independent variables are *Accrual_F* and *Accrual_DD*. Standard errors are clustered at each firm level and reported in parentheses.

Table 10: Robustness test excluding financial crisis years 2007-2009

Variables	(1) Spread	(2) Maturity	(3) ShareHHI	(4) No. Lenders	(3) LeadShare	(6) All Foreign	(7) Foreign Fraction
Accrual_D	280.045**	34.716	14.589	0.093	2.464	-0.854	-0.313
	(127.112)	(34.400)	(28.395)	(0.410)	(36.430)	(2.583)	(0.378)
State Ownership	8.731	35.243***	19.992***	-0.614***	-29.136**	2.043***	0.374***
	(31.500)	(5.769)	(5.228)	(0.087)	(13.418)	(0.545)	(0.068)
Constant	172.665	12.815	96.769***	-1.276***	-38.387	2.174	1.027***
	(149.839)	(32.292)	(22.370)	(0.374)	(51.71)	(2.027)	(0.360)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	148	271	166	271	214	243	262
R-squared	0.612	0.392	0.501		0.221		0.288
Pseudo R2				0.185		0.135	
Industry FE	YES	YES	YES	YES	YES	YES	YES
YEAR FE	YES	YES	YES	YES	YES	YES	YES

***, **, and * denotes statistical significant level of 1%, 5% and 10%, respectively.
Samples collected are between 1998 and 2016 with a total number of observations of 363. Dependent variables are syndicated *Spread*, *Maturity*, *ShareHHI*, *No. Lenders*, *Leadshare*, *All Foreign* and *Foreign Fraction*. We repeat the previous tests by excluding samples in the financial crisis period (2007-2009). Standard errors are clustered at each firm level and reported in parentheses.

Table 11: Robustness test using lagged model structure

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Spread	Maturity	ShareHHI	Number of lenders	LeadShare	AllForeign	Foreign Fraction
Fake_Accruals	120.538	-41.269	-15.346	-0.103	9.422	1.487	0.211
	(95.042)	(30.964)	(15.834)	(0.307)	(40.465)	(1.707)	(0.255)
State Ownership	-29.191	30.217***	13.482***	-0.474***	-29.916***	1.314***	0.252***
	(23.084)	(4.845)	(4.027)	(0.070)	(11.433)	(0.418)	(0.057)
Constant	100.441	3.859	110.305***	-1.331***	8.936	0.836	0.936***
	(140.989)	(31.772)	(20.824)	(0.372)	(49.958)	(1.983)	(0.347)
Observations	180	337	201	337	266	307	326
R-squared/Pseudo	0.580	0.403	0.493	0.170	0.141	0.115	0.227
Other Controls	YES	YES	YES	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES	YES	YES	YES
YEAR FE	YES	YES	YES	YES	YES	YES	YES

***, **, and * denotes statistical significant level of 1%, 5% and 10% respectively.

Samples collected are between 1998 and 2016 with a total number of observations of 363. Dependent variables are syndicated loan indicators, such as spread, maturity, share HHI, number of lenders, All Foreign dummy and foreign fraction. We use a fake earnings quality measure (fake-Accruals) and run a placebo test. Standard errors are clustered at firm level and reported in parentheses.

Appendix 1: Definition of variables

Variables	Definition	Sources
Loan Characteristics		
Spread	All-in-drawn-spread: basis point spread over LIBOR plus the annual fee and the up-front fee spread, if there is any.	Dealscan
Ln (LoanAmount)	Natural Log of loan amount in $m	Dealscan
Maturity	Syndicated loan maturity in months	Dealscan
No. of Lenders	Number of participating lenders in the facility syndicate	Dealscan
Secured	=1 if the facility is secured with collateral; 0 otherwise	Dealscan
Repayment	=1 if the main purpose of the loan is a repayment; 0 otherwise	Dealscan
ShareHHI	The Herfindahl-Hirschman Index (HHI) of loan share retained by each lender within a loan facility	
All Foreign	=1 if all lead arrangers are foreign banks; 0 otherwise	
Foreign Fraction	The proportion of foreign lead arrangers in total lead arrangers	
Borrower Characteristics		
Accrual_D	The absolute value of abnormal accrual based on the modified Jones model (Dechow et al., 1995)	Compustat
Accrual_F	Alternative abnormal accrual (Francis et al., 2005)	Compustat
Accrual_DD	Alternative abnormal accrual (Dechow & Dichev, 2002)	Compustat
State Ownership	=1 if the firm is state-owned; 0 otherwise	CSI, CSMAR
Ln (Asset)	Natural Log of the total asset in $m	Compustat
Tangibility	The sum of net property, equipment and pant, divided by total asset	Compustat
Leverage	Long-Term debt divided by total assets	Compustat
Zscore	Modified Altman Z-score derived from (Altman, 1968)	Compustat
ROA	Net income divided by total asset	Compustat

[1] The total volume of syndicated loans achieved an amount of USD$4.7 trillion in 2015 globally, compared with USD$3.02 trillion in international bond markets for non-financial companies (see Thomson Global Syndicated Loans Review and Bank for International Settlements for more details). The syndicated loan market in China had a total amount of USD$923 billion in first half of 2016, accounting for 11.35% of total loans, compared to 1.72% in 2006 (CBS, 2016).

[2] Pessarossi et al. (2012) documented 65% foreign lender participation in China and we find that 62% of the loan facilities are led by all foreign lenders and 75% of the lead lenders are foreign banks.

[3] http://www.csindex.com.cn/sseportal_en/csiportal/indexquery.do

[4] The size of this sample is considerably larger than recent studies on Chinese syndicated loans such as Caporale et al. (2018) with 139 observations, Pessarossi et al. (2012) with 92 observations and Korkeamaki et al. (2014) with 206 observations.

[5] We also convert firm asset value into U.S. dollars and if the value is in other currencies, we use exchange rate on the date of financial statement becoming available.

[6] Debt repayment is the most frequently quoted loan purpose and accounts for over 20% of our total samples. Other purposes of loans include capital expenditure, corporate takeover for instance.

[7] We do not test the effects of financial reporting quality and state-ownership on other non-pricing terms, such as amount, collateral and covenants due to lack of data from Dealscan and Bloomberg.

[8] We use the variable *All Foreign* to group loan facilities into foreign group and domestic group. If all lead arrangers are foreign lenders, they would have more severe asymmetric information problem than domestic lenders.

[9] In addition, results reported in Table 5 also show that collateral reduces foreign lender participation, consistent with the empirical evidence on the positive relationship between the presence of collateral and corporate default risks (Booth and Booth, 2006) and the findings in China where low-risk borrowers, such as SOEs, are less inclined to provide loan collateral (An et al., 2014). We thank an anonymous referee for raising this point.

[10] We randomly reorder abnormal accruals over years for each sample borrower. If there exists an omitted variable at firm level which affects both abnormal accruals and syndicated loan, the coefficient of *fake_accrual* would be statistically significant.