



Law and borders: Entrepreneurs' immigration status and trade credit

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ABSTRACT

We examine whether the immigration status of entrepreneurs is a concern for creditors when extending trade credit. Utilizing the disclosure of overseas residence rights of controlling shareholders in China, we show that overseas residence rights negatively affect firms' ability to obtain trade credit. This negative association is attenuated if the overseas jurisdiction has an extradition treaty with China. Our results are robust to the introduction of the Hong Kong national security law as a source of exogenous variation in the boundary of domestic law. The decrease in trade credit provision is more pronounced in firms that are perceived as less trustworthy (i.e., with less social trust or higher expropriation risk). Our results offer new insights into how the reach of law across borders can affect firms' financing activities.

1. Introduction

Law and the quality of its enforcement are important for credit market development (La Porta et al., 1998). They provide a last resort for investor protection when corporate governance mechanisms and other methods of redress have failed. Traditionally, legal measures are perceived as “national” in scope; that is, investor protection is restricted to the country in which credit is provided. However, with the globalization of investments, the challenge to this traditional framework is that domestic law can barely protect the rights of creditors if borrowers with fraudulent behaviors travel beyond a country's border.

We explore this question by utilizing a unique setting to ask: what if borrowers immigrate to other jurisdictions? How would their residency status change the credit provision? China's mandatory disclosure of the overseas residency information (ORR thereafter) of controlling shareholders, required by the China Securities Regulatory Commission (CSRC), provides us with a unique opportunity to examine this question.¹ Specifically, we investigate whether and how entrepreneurs' ORR affects financing in Chinese listed firms,

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¹ A controlling shareholder generally refers to a natural person who is an ultimate controller of a firm, either directly or indirectly. In most East Asian countries such as China, where listed firms are characterized by highly concentrated ownership structures, controlling shareholders are representative of entrepreneurs. From a managerial entrenchment perspective, concentrated ownership enables controlling shareholders to effectively control a firm while being, at the same time, its principal borrowers (e.g., Claessens et al., 2000).

with a particular focus on trade credit.

Trade credit is an important source of external financing for firms of all sizes (Demirgüç-Kunt and Maksimovic, 1998).² In general, suppliers may be more willing to trust large, investment-grade buyers with longer terms as it is easier to gauge buyer default risk (Mian and Smith, 1992). In the context of business, immigration can be controversial, with the phenomenon of “fleeing entrepreneurs” raising increasing concern among creditors.³ When entrepreneurs have well-prepared exit routes from a jurisdiction, they are seemingly less committed to their debt obligations *ex ante* and, once they default, *ex post* repayment of trade creditors is not guaranteed from the perspective of trade creditors. Therefore, we conjecture that when entrepreneurs have ORR, creditors are more likely to be conservative when extending trade credit to the firms associated with them.

Focusing Chinese listed firms between 2003 and 2020, our baseline regression results show that the trade credit received decreases significantly for firms whose controlling shareholders have ORR.⁴ This relationship is also economically significant. Consider an “average” firm with trade credit at the sample mean value (2.4% of total assets, quarterly): overseas status on the part of controlling shareholders is associated with a 49.6% drop in the sample mean value.

To evaluate variation in the power of a country’s legal enforcement, we also take into account whether the overseas country/region has signed an extradition treaty with mainland China, because such agreements can enable the Chinese government to pursue criminals living in other jurisdictions, thereby extending the boundaries of domestic law. In general, ORR in countries/regions without extradition treaties are likely to create more doubt about the ability of domestic legal institutions to discipline fleeing entrepreneurs. Our empirical results confirm this conjecture by showing that the negative association between a firm’s trade credit and ORR is weaker if the overseas jurisdiction has signed an extradition treaty with China.

For countries/regions without such agreements, we further find that the more distant its bilateral political relations with mainland China are, the higher its quality of national governance is, and the higher its quality of rule of law is, the stronger the negative relationship is. These results are consistent with our conjecture because they all point to a lower likelihood of fleeing entrepreneurs being subject to Chinese domestic law.

To establish causality, we utilize the introduction of the Hong Kong national security law as a quasi-natural experiment and perform a difference-in-differences (DID) estimation. As the name suggests, the Hong Kong national security law is a piece of national security legislation concerning Hong Kong.⁵ It was passed on 30 June 2020 to enable extradition from Hong Kong to mainland China, and came into force the same day, potentially strengthening the power of Chinese law to address criminality on the part of controlling shareholders with Hong Kong residence permits. We expect, therefore, to observe an increase in trade credit following the introduction of the law in firms whose controlling shareholders have been holding Hong Kong residence (i.e., treated firms). Overall, the DID results show that, compared to the pre-law period, the quarterly trade credit in the post-law period increases by 54.2% of sample mean value. This suggests the boundary of law is indeed a concern for creditors. Further test shows treated and control firms exhibit parallel trends beforehand.

To circumvent the potential confounding effects if individuals’ biographical traits, we control for the age, gender, political connections, and various forms of related work experience of controlling shareholders in our further analyses. Moreover, we implement placebo tests to show that our results are not driven purely by chance.

We also divide our sample in several ways on the basis of the levels of *ex ante* trust associated with borrowers, given Duarte et al. (2012) show that borrowers’ trustworthiness is what matters most in investor decisions and predictions of borrower behavior. We find that the negative association between ORR and trade credit is more pronounced in firms located in regions with low social trust and firms with higher expropriation potential, because such firms are perceived as less trustworthy *ex ante*.

While trust is an important element that shapes the supplier-customer relationship, there is an outstanding strand of literature stressing that the bargaining power between suppliers and customers is an important driver of both the trade credit terms offered by suppliers and the ones actually used by customers (e.g., Dass et al., 2015; Fabbri and Klapper, 2016; Klapper et al., 2012; Giannetti et al., 2021). Therefore, it is likely for a supplier firm to provide less trade credit when it is in a stronger bargaining position, especially when the customer firm appears less trustworthy. Our findings echo this insight in the way that the negative association between ORR and trade credit only persists when the bargaining power of suppliers is strong.

It is also possible that controlling shareholders obtain ORR in order to expand overseas markets; whereas the risk of an overseas business is more difficult for creditors to evaluate, leading to the reduction of trade credit provision. For this argument to prevail, we would expect a significant and positive relationship between ORR and firms’ export performance. However, we find there is no such a relationship. There are concerns that trade credit terms for multi-residency owners are worse because changing residency signals to the market that the government may take negative actions towards the firm. If this alternative explanation did hold, we should be able to observe the negative actions are indeed taken by the government against firms with ORR. However, we do not find any difference in

² Suppliers often offer trade credit financing to buyers, some of whom may be small or credit constrained (Mcmillan and Woodruff, 1999). Trade credit has also been shown to act as a substitute for bank credit during periods of monetary tightening or financial crisis (see, e.g., Choi and Kim, 2005; Love et al., 2007).

³ People may immigrate for a variety of reasons; for example, investment, lifestyle, healthcare, education, and political environment (Furnham, 1990; Freeman, 1993; Winter-Ebmer, 1994).

⁴ We exclude state-owned enterprises (SOEs) from our sample because the controllers of these are typically the state or its representatives, and therefore unlikely to be natural persons.

⁵ The Hong Kong national security law is officially known as the Law of the People’s Republic of China on Safeguarding National Security in the Hong Kong Special Administrative Region.

government treatment, including subsidies or tax exemptions, for such firms. We also find that when a controlling shareholder is first granted with ORR, the firm experiences a decline in firm performance, suggesting the link between trade credit and firm performance.

Our study contributes to the literature in two ways. First, it is related to studies of the role of legal systems and institutions on creditor rights (e.g., La Porta et al., 1998; Esty and Megginson, 2003; Qian and Strahan, 2007; Bae and Goyal, 2009). With the globalization of investments and the rise of cross-listings, the notion of investor protection beyond national boundaries has become hugely salient. However, existing studies of legal systems tend to focus on how legal institutions reinforce the efficiency of domestic financial markets. One exception is that of Massa et al. (2020), who find that private enforcement in the U.S. can, through U.S. cross-listing, have worldwide consequences. Our focus on borrowers' ORR has implications for international investor protection because the mobility of borrowers challenges the power of a country's legal institutions. We extend the framework of La Porta et al. (1998) by advancing the understanding of the scope of corporate law beyond a country's borders.

Second, our findings complement a large number of studies that examine the role of trust in financial markets. For example, Guiso et al. (2008) show that lack of trust can explain why individuals do not participate in the stock market even in the absence of any other friction; Levine et al. (2018) find that liquidity-dependent firms in high-trust countries obtain more trade credit during banking crises than similar firms in low-trust economies; Pevzner et al. (2015) find social trust affects investor reactions to corporate earnings announcements; Lins et al. (2017) show that building firm-specific social trust can be seen as an insurance policy that pays off when investors and the overall economy face a severe crisis of confidence; Duarte et al. (2012) show that borrowers who appear more trustworthy are more likely to obtain loans on P2P lending platforms; Xie et al. (2022) find that trust can enhance innovation by acting as an informal contracting mechanism. We complement this literature by showing that the relationship of trust between a firm and its trade creditors can be influenced by the immigration status of its controlling shareholders, and that it is, in particular, the impression of a borrower's trustworthiness that matters for investors' decisions and, indeed, that predicts borrowers' behaviors.

The remainder of the paper proceeds as follows: Section 2 introduces the institutional background and Section 3 describes our sample, measurement of the variables used, and descriptive statistics; Section 4 presents the empirical results, and Section 5 discusses the channels through which overseas residency status affects trade credit, as well as describing our robustness tests; Section 6 concludes the study.

2. Institutional background

2.1. The fleeing entrepreneurs concern

Although it is no secret that China has been a machine of wealth creation for the past two decades, that wealth is increasingly on the move. According to the *Global Wealth Migration Review 2019* published by AfrAsia Bank and its research partner New World Wealth, >15,000 Chinese high-net-worth individuals (HNWIs), that is, persons with wealth of more than US\$1 million, chose to migrate to other countries in 2018, representing the most significant migration from any country documented in the *Review*. Focusing on "emerging emigration trends," the Hurun Research Institute published the *Immigration and the Chinese HNWIs 2018* report, based on a survey of 224 Chinese HNWIs with an average wealth of US\$4.5 million who had already emigrated, were applying to emigrate, or planned to do so in the future. According to the report, 90% of respondents were considering an emigration plan, and 14% saw themselves as global citizens with financial and visa freedoms. Concerns about education and the environment were the key drivers of emigration, cited by 83% and 69%, respectively, of respondents as their reasons for emigrating.

There is also anecdotal evidence of the emigration of economic criminals. In 2014, China launched the Sky Net campaign to seize overseas fugitives accused of corruption and confiscate their illicit assets. In 2015, Interpol issued Red Notices for China's 100 most-wanted economic fugitives, including high-profile businessmen and government officials; for example, Yan Yongming, former chairman of Tonghua Golden-Horse Pharmaceutical Industry Co. in Jilin Province. He fled in 2001, first to Australia, under the name Liu Yang, before obtaining New Zealand citizenship. In 2015, he was ranked number five on Interpol's list of Beijing's 100 most-wanted economic fugitives, for allegedly embezzling >180 million yuan.

2.2. Disclosure of controlling shareholders' residency information

Unlike more developed markets such as the U.S., East Asian economies have highly concentrated corporate ownership, with a majority of shares held by controlling shareholders who ultimately gain effective control of the firms involved (Claessens et al., 2000; Claessens et al., 2002). In China, most listed firms are partially privatized, so corporate ownership is highly concentrated in the hands of a few investors, including SOEs, companies, individuals/families, and institutions. A controlling shareholder may be a natural person, or a small group of closely related natural persons, that holds >50% of a firm's shares. In some cases, holding <50% of a firm's shares in this way is still considered as amounting to a controlling shareholding if those involved have a significant influence on corporate decisions. In our study, we identify controlling shareholders by paying close attention to the information disclosed in annual reports.

On January 6, 2003, the CSRC published an instrument defining revisions to "Information Disclosure of Firms Issuing Public Securities #2—Content and Format of the Annual Report." One of the key revisions applied to Rule 25, concerning the disclosure of information on the identity of controlling shareholders, and read as follows:

A firm's controlling shareholder is either the shareholder with the highest shares, or the shareholder who can control the board composition and make key decisions through share ownership, contracts, or other legal arrangements. If the controlling

shareholder is a legal person, then the firm should report the legal person's name, legal representative, founding date, registered capital, and main operational activities. If the controlling shareholder is a natural person, the firm should report his/her name, nationality, residency information (whether he/she has obtained residency status in other countries/regions), and professions and titles held in the last five years.

Thus, since 2003, Chinese firms have been required to disclose the residency status of controlling shareholders who are natural persons. Residency information can be collected in relation to two types of ownership structure: 1) when there is a controlling shareholder who happens to be a natural person; 2) when there is an ultimate controlling shareholder, defined according to Corporate Law, who is not a direct shareholder but can make critical decisions for the firm (e.g., a natural person who controls a firm through an intermediate controlling entity) (Chen et al., 2018).

3. Sample selection, variable measurement, and descriptive statistics

3.1. Sample selection

We start with all non-SOEs (i.e., private firms) listed on the Shanghai and Shenzhen stock exchanges between 2003 and 2020. We focus mainly on non-SOEs because their controlling shareholders are more likely to be natural persons, as described in Section 2.2, whereas SOEs are mostly controlled by the state and/or its representatives. We collect the residency status of the controlling shareholders by manually checking, matching, and verifying information from prospectuses, annual reports, Sina Finance and RoyalFlush Finance platforms, and the CSMAR database.⁶ We obtain firm-level financial and accounting information from the CSMAR database. We exclude all financial and utility firms, and observations with missing values.

Table 1 shows the distribution of firm-year observations from 2003 to 2020 by year and country/region, respectively. Panel A reports the sample distribution by year. First, the firm-year observations of private firms show an upward trend over our sample period (increasing from 119 in 2003 to 2353 in 2020). Within this sample, the number and percentage of firm-year observations with controlling shareholders with overseas residence rights increase by year in our sample period. Specifically, the percentage of firm-year observations with controlling shareholders with overseas residence rights for the overall sample (*Overseas %*) is only 7.56% in 2003, then it gradually increases over the sample period and doubles to 15.43% in 2020. This indicates that it has become a trend for controlling shareholders of Chinese non-SOEs to obtain overseas residence permits. This upward trend is also depicted in Appendix Fig. 1 in a more visible way. Our evidence is in light of the anecdotal evidence reported by the New York Times that more Chinese businessmen and entrepreneurs are wary about the economic uncertainty in the future and are considering immigration for various reasons.⁷

Panel B reports the sample distribution by the country/region where the controlling shareholders have overseas residence rights. Hong Kong is the most popular region for Chinese entrepreneurs regarding residency rights as for historical reasons, holders of (mainland) Chinese passports without a visa for Hong Kong cannot freely enter these regions unless in transit, and vice versa. Apart from Hong Kong, Canada, the United States, Australia, and Singapore are the most attractive countries for Chinese entrepreneurs looking to emigrate.

3.2. Variable measurement

3.2.1. Measuring the boundaries of law and trade credit

We use the overseas residency status of the controlling shareholders to proxy for the boundaries of domestic law, and hypothesize that those with overseas residence permits challenge the exclusivity of domestic law enforcement. We define *Overseas* as a dummy variable that takes a value of 1 if any of a firm's controlling shareholders in a given year has residence rights outside mainland China, and 0 otherwise.

Our study focuses on how the controlling shareholders' overseas residency rights affect the receipt/use of trade credit by firms (rather than their provision of it to others). Therefore, we measure trade credit with the variable *Trade Credit Received*, defined as the sum of notes payable, accounts payable, and unearned revenue on a quarterly basis, divided by total assets by the end of the quarter, adjusted by industry-year-quarter median. Note that the variable is measured at a quarterly level to allow for seasonal variations in trade credit provision.

3.2.2. Measuring control variables

Following the trade credit literature (Peterson and Rajan, 1997; Love et al., 2007; Wu et al., 2012), we control for a vector of corporate characteristics (including performance and governance) that may affect a firm's use of trade credit. All of the control variables are computed for firm *i* in year *t*–1.

The performance variables include: leverage (*LEV*), measured as the sum of short-term loans, long-term loans, long-term loans due within one year, and bonds payable, divided by total assets by the end of the quarter; return on assets (*ROA*), measured by net income

⁶ Sina Finance: <https://finance.sina.com.cn/>; RoyalFlush Finance: <http://www.10jqka.com.cn/>

⁷ See <https://www.nytimes.com/2019/02/23/business/china-entrepreneurs-confidence.html> and <https://www.nytimes.com/2023/01/19/business/china-singapore-immigration-entrepreneurs.html>.

Table 1
Sample distribution.

Panel A: Distribution by year			
Year	Year <i>N</i>	Overseas <i>N</i>	Overseas %
2003	119	9	7.56
2004	260	14	5.38
2005	289	22	7.61
2006	347	27	7.78
2007	420	35	8.33
2008	472	44	9.32
2009	601	61	10.15
2010	889	94	10.57
2011	1129	126	11.16
2012	1260	151	11.98
2013	1330	154	11.58
2014	1425	165	11.58
2015	1591	196	12.32
2016	1823	241	13.22
2017	2130	296	13.90
2018	2154	305	14.16
2019	2217	330	14.88
2020	2353	363	15.43

Panel B: Distribution by Overseas Country/Region	
Country/Region	Overseas <i>N</i>
Hong Kong	710
Canada	392
United States of America	364
Australia	291
Singapore	201
New Zealand	102
Taiwan	83
Macao	48
Gambia	46
Philippines	42
Belize	29
Germany	26
United Kingdom	24
Guinea-Bissau	24
France	12
Japan	11
Cyprus	8
Italy	6
Republic of Korea	6
Argentina	6
Niger	5
The Federation of Saint Kitts and Nevis	3
Greece	2
Vanuatu	2
Unknown	190
Total	2633

This table describes the distribution of firm-year observations between 2003 and 2020. Panel A reports the sample distribution by year. Panel B reports the sample distribution by the country/region in which controlling shareholders obtain overseas residency rights. *Year N* indicates the number of firms in each year. *Overseas N* indicates the number of observations involving controlling shareholders with overseas residency rights; *Overseas %* indicates the percentage of such observations relative to the overall sample.

divided by total assets by the end of the quarter; property, plant, and equipment (*PPE*), measured as the sum of fixed assets and construction in progress, divided by total assets by the end of the quarter; firm age (*Age*), measured by the natural logarithm of the age of a firm in a given year; operating cash flow (*CFFO*), measured as net operating cash flow divided by total sales by the end of the quarter; firm size (*Size*), measured by the natural logarithm of a firm's total assets by the end of the quarter; *Liquidity*, measured as current assets minus current liabilities, divided by total assets by the end of the quarter; *SEO*, measured by a dummy variable that takes a value of 1 if a firm has had a seasoned equity offering or rights offering in the preceding two years, and 0 otherwise.

The governance variables include: *Board Size*, measured as the natural logarithm of the number of board directors; board independence (*Independent*), measured by the ratio of the number of independent directors to the total number of directors; *Top1*, measured by the ratio of the number of shares held by the largest shareholder to the total number of shares outstanding; *Pay*, measured by the

natural logarithm of the total compensation of the top three executives; *CEO Duality*, measured by a dummy variable that takes a value of 1 if a firm's chairman is also its CEO in a given year, and 0 otherwise. More detailed definitions of these variables can be found in [Appendix 1](#).

3.3. Descriptive statistics

Panel A of [Table 2](#) reports the summary statistics for the dependent variables, independent variables, and control variables. The mean value of *Trade Credit Received* is 0.024, indicating that the quarterly trade credit received by non-SOEs in the Chinese stock market represents, on average, 2.4% of their total assets. In unreported results, we find that trade credit received accounts for 42.58% of total corporate debt, which is significantly higher than the 25% reported by [Levine et al. \(2018\)](#) for 3500 listed firms in 34 other countries. The average value of *Overseas* is 0.126, with a standard deviation of 0.331. Panel B of [Table 2](#) shows the Pearson correlation matrix for the main variables used in the empirical analysis. According to the correlation matrix, most of the correlations between variables are below 0.5, suggesting that our models are not likely to be vulnerable to multicollinearity.

4. Empirical results

4.1. Ordinary least squares (OLS) specification

To investigate the relationship between the overseas residency status of controlling shareholders and firms' use of trade credit, we first estimate the following model as our baseline regression:

$$\text{Trade Credit Received}_{i,t} = \beta_0 + \beta_1 \text{Overseas}_{i,t} + \sum_{p=1}^m \beta_p \text{Controls}_{i,t-1} + \sum \text{Year-quarter}_t + \sum \text{Industry}_t + \sum \text{Region}_t + \epsilon_{i,t} \quad (1)$$

where i indexes the firm and t is the year-quarter. The main dependent variable is the use of trade credit by firms, *Trade Credit Received*. The main independent variable is *Overseas*. All of the control variables are lagged by one year to alleviate potential endogeneity issues. We include year-quarter fixed effects to account for intertemporal variation that may affect the relationship between mobility and trade credit, and industry and region fixed effects to cater for idiosyncratic differences between industries/regions in our baseline model specifications.⁸ Standard errors are robust and clustered at the industry level ([Petersen, 2009](#)). To ensure that our results are not driven by outliers, all of the continuous variables are winsorized at the 1st and 99th percentiles.

[Table 3](#) presents the baseline OLS regression results for the effect of ORR on trade credit. We first run the regression based on the full sample and then re-run the regressions for each quarter, which allows for seasonal variations in trade credit provision. In all model specifications, *Overseas* is negatively associated with firms' use of trade credit (the coefficient is -0.0119 for the sample as a whole). This relationship is also economically significant. Consider an "average" firm with trade credit at the sample mean value (2.4% of total assets): overseas status on the part of controlling shareholders is associated with a 49.6% drop in the sample mean value. These results support creditors' concerns about the limits of domestic law in relation to borders: creditors are less likely to extend trade credit to firms whose controlling shareholders have overseas residence permits.

4.2. Variation in the boundaries of domestic law

To evaluate variation in the "reach" of domestic corporate law across borders, we also take into account whether an overseas country/region has signed an extradition agreement with mainland China. Such joint agreements can facilitate the countries/regions involved in apprehending criminals resident in each other's jurisdictions, implicitly limiting the mobility of controlling shareholders by expanding a country's legal jurisdiction over them. In our sample, of the countries/regions in which controlling shareholders are residents, South Korea, the Philippines, France, Australia, Italy, and Argentina have signed extradition agreements with mainland China.⁹ Thus, we define *Overseas Extradition Yes* as a dummy variable that takes a value of 1 if any of a firm's controlling shareholders in a given year has residence rights in one of these countries, and 0 otherwise, and *Overseas Extradition No* as a dummy variable that takes a value of 1 if any of a firm's controlling shareholders in a given year has residence rights in countries/regions without extradition agreements with mainland China, and 0 otherwise.

[Table 4](#) presents how variation in the boundaries of law impacts on firms' use of trade credit. In column (1), the independent variables are *Overseas Extradition Yes* and *Overseas Extradition No*. We find that *Overseas Extradition No* is significant (and negative), but *Overseas Extradition Yes* is not significant. This result suggests that the negative association between overseas residency rights and trade credit is, indeed, mitigated if the overseas jurisdiction has signed an extradition treaty with mainland China.

For countries/regions that do not have extradition agreements with China, we conjecture that their bilateral political relationships with China and the quality of their domestic law may also affect the likelihood of fleeing entrepreneurs being disciplined beyond the bounds of Chinese law. Therefore, we subdivide these countries/regions according to, respectively, their bilateral political relations

⁸ We control for industry fixed effects on the basis of CSRC industry classifications.

⁹ As of July 2019, the countries that have signed extradition agreements with mainland China are South Korea (2000), the Philippines (2001), France (2007), Australia (2007), Italy (2010), and Argentina (2013).

Table 2
Descriptive statistics.

Panel A: Summary Statistics														
Variable	N	Mean	Std.	Min	P25	P50	P75	Max.						
<i>Trade Credit Received</i>	79,040	0.024	0.118	−0.189	−0.056	0.000	0.081	0.450						
<i>Overseas</i>	79,040	0.126	0.331	0.000	0.000	0.000	0.000	1.000						
<i>Overseas_Extradition_Yes</i>	78,296	0.017	0.130	0.000	0.000	0.000	0.000	1.000						
<i>Overseas_Extradition_No</i>	78,296	0.100	0.300	0.000	0.000	0.000	0.000	1.000						
<i>LEV</i>	79,040	0.155	0.143	0.000	0.017	0.127	0.257	0.551						
<i>ROA</i>	79,040	0.029	0.039	−0.112	0.007	0.022	0.047	0.163						
<i>PPE</i>	79,040	0.226	0.152	0.002	0.108	0.203	0.321	0.643						
<i>Age</i>	79,040	2.819	0.335	1.946	2.639	2.833	3.045	3.526						
<i>CFFO</i>	79,040	−0.013	0.348	−1.902	−0.090	0.040	0.142	0.841						
<i>Size</i>	79,040	21.606	1.057	19.492	20.828	21.493	22.257	24.806						
<i>Liquidity</i>	79,040	0.294	0.249	−0.294	0.119	0.284	0.470	0.845						
<i>SEO</i>	79,040	0.278	0.448	0.000	0.000	0.000	1.000	1.000						
<i>Board Size</i>	79,040	2.095	0.193	1.099	1.946	2.197	2.197	2.890						
<i>Independent</i>	79,040	0.376	0.054	0.000	0.333	0.333	0.429	0.750						
<i>Top1</i>	79,040	32.281	13.767	2.197	21.840	30.020	40.880	95.950						
<i>Pay</i>	79,040	14.204	0.807	4.886	13.728	14.216	14.700	24.440						
<i>CEO Duality</i>	79,040	0.362	0.481	0.000	0.000	0.000	1.000	1.000						

Panel B: Pearson Correlations														
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
<i>Trade Credit Received</i>	(1)													
<i>Overseas</i>	(2)	−0.01												
<i>LEV</i>	(3)	−0.02	−0.05											
<i>ROA</i>	(4)	0.02	0.04	−0.29										
<i>PPE</i>	(5)	−0.10	−0.05	0.27	−0.05									
<i>Age</i>	(6)	−0.04	0.05	0.06	−0.10	−0.06								
<i>CFFO</i>	(7)	0.01	0.01	−0.03	0.25	0.19	−0.01							
<i>Size</i>	(8)	0.18	0.02	0.36	0.00	0.00	0.29	0.06						
<i>Liquidity</i>	(9)	−0.19	0.03	−0.62	0.28	−0.50	−0.15	−0.09	−0.33					
<i>SEO</i>	(10)	0.03	−0.03	0.12	−0.04	−0.01	0.13	−0.02	0.34	−0.17				
<i>Board Size</i>	(11)	0.03	−0.01	0.09	0.03	0.08	−0.04	0.01	0.12	−0.08	0.03			
<i>Independent</i>	(12)	−0.01	0.01	−0.04	−0.01	−0.04	0.04	−0.01	−0.03	0.03	−0.01	−0.60		
<i>Top1</i>	(13)	0.05	0.02	−0.01	0.15	0.02	−0.14	0.05	0.04	0.09	−0.09	−0.06	0.04	
<i>Pay</i>	(14)	0.09	0.13	−0.05	0.14	−0.12	0.31	0.04	0.50	0.01	0.13	0.01	0.04	0.00
<i>CEO Duality</i>	(15)	0.00	0.00	−0.11	0.05	−0.05	−0.02	0.00	−0.07	0.12	−0.03	−0.13	0.12	0.06

This table reports the descriptive statistics. Panel A provides the summary statistics for the variables used in the empirical analysis. Panel B shows Pearson correlations among the main variables. Correlations with statistical significance at 5% or above are highlighted in **bold**. Definitions of variables are presented in [Appendix I](#).

Table 3
OLS Specifications.

	(1)	(2)	(3)	(4)	(5)
	<i>DV = Trade Credit Received</i>				
	All Quarters	Quarter 1	Quarter 2	Quarter 3	Quarter 4
<i>Overseas</i>	−0.0119*** (−3.53)	−0.0100*** (−3.42)	−0.0111*** (−3.09)	−0.0119*** (−3.29)	−0.0140*** (−3.76)
<i>LEV</i>	−0.2780*** (−6.16)	−0.2586*** (−6.00)	−0.2671*** (−5.86)	−0.2891*** (−6.26)	−0.3132*** (−6.91)
<i>ROA</i>	0.0460 (0.60)	−0.4509*** (−4.13)	−0.1404 (−1.35)	−0.0684 (−0.69)	0.1570** (2.38)
<i>PPE</i>	−0.2568*** (−5.97)	−0.2185*** (−6.21)	−0.2454*** (−6.05)	−0.2720*** (−6.04)	−0.2845*** (−5.84)
<i>Age</i>	−0.0371*** (−4.40)	−0.0244*** (−3.39)	−0.0315*** (−3.83)	−0.0412*** (−4.78)	−0.0493*** (−4.92)
<i>CFFO</i>	−0.0065 (−1.03)	−0.0000 (−0.00)	−0.0007 (−0.10)	−0.0056 (−0.56)	−0.0256 (−1.70)
<i>Size</i>	0.0240*** (4.65)	0.0215*** (4.62)	0.0228*** (4.43)	0.0262*** (4.85)	0.0265*** (4.89)
<i>Liquidity</i>	−0.2583*** (−6.76)	−0.2398*** (−7.16)	−0.2471*** (−6.62)	−0.2567*** (−6.30)	−0.2786*** (−6.86)
<i>SEO</i>	−0.0146*** (−4.69)	−0.0141*** (−5.75)	−0.0149*** (−4.55)	−0.0142*** (−3.73)	−0.0149*** (−4.86)
<i>Board Size</i>	0.0001 (0.01)	−0.0001 (−0.01)	0.0004 (0.05)	0.0006 (0.06)	0.0001 (0.01)
<i>Independent</i>	−0.0119 (−0.41)	−0.0089 (−0.35)	−0.0073 (−0.25)	−0.0091 (−0.31)	−0.0201 (−0.60)
<i>Top1</i>	0.0005*** (3.49)	0.0004*** (3.37)	0.0004*** (2.94)	0.0005*** (2.94)	0.0006*** (4.91)
<i>Pay</i>	0.0028 (0.98)	0.0031 (1.37)	0.0043 (1.56)	0.0037 (1.19)	0.0025 (0.75)
<i>CEO Duality</i>	0.0041 (1.13)	0.0011 (0.31)	0.0035 (1.01)	0.0044 (1.25)	0.0070* (1.97)
Constant	−0.2470** (−2.77)	−0.2445*** (−3.37)	−0.2345** (−2.59)	−0.2564** (−2.65)	−0.2413** (−2.23)
Year-Quarter FE	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes
Region FE	Yes	Yes	Yes	Yes	Yes
N	79,040	18,821	19,480	19,930	20,809
Adj. R ²	0.21	0.22	0.21	0.21	0.21

This table presents the baseline regression results of the impact of controlling shareholders' overseas residency rights on trade credit on a quarterly basis. The dependent variable is *Trade Credit Received*, measured as the total of notes payable, accounts payable, and unearned revenue on a quarterly basis, divided by total assets by the end of the quarter, adjusted by industry-year-quarter median. In columns (1) to (5), the independent variable is *Overseas*, a dummy variable that is assigned a value of 1 if any of a firm's controlling shareholders has residency rights outside mainland China, and 0 otherwise. Definitions of other variables are presented in Appendix I. All continuous variables are winsorized at the 1st and 99th percentiles. Standard errors are robust to heteroskedasticity and clustered at the industry level with *t*-statistics reported in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

with China, the quality of their national governance, and the quality of their rule of law. Thus, *Overseas_UNConsistency_High* is defined as a dummy variable that takes a value of 1 when a country/region that does not have an extradition agreement with China is ranked among the top 50 of such countries when it comes to United Nations voting in alignment with China, and otherwise takes a value of 0. *Overseas_UNConsistency_Low* is a similar dummy variable that takes a value of 1 when such a country/region is not ranked among the top 50 in such voting (and 0 otherwise).

Likewise, *Overseas_Governance_High* is defined as a dummy variable that takes a value of 1 when a country/region that does not have an extradition agreement with China has a world governance indicator that is above the yearly median for such countries/regions, and 0 otherwise, and *Overseas_Governance_Low* is its effective inverse, taking a value of 1 when such a country/region is below the yearly median. Finally, *Overseas_Rule of Law_High* is defined as a dummy variable that takes a value of 1 when the rule of law indicator is above the yearly median for such countries/regions, and 0 otherwise, with *Overseas_Rule of Law_Low* being its effective inverse.¹⁰

The results in columns (2), (3), and (4) of Table 4 show that the further apart bilateral political relations with mainland China are, the higher the country's quality of national governance is, and the higher is its quality of rule of law, the stronger is the negative relationship between overseas residency rights and trade credit. All three outcomes might be regarded as intuitive because they all point to a lower likelihood of fleeing entrepreneurs being subject to Chinese domestic law.

¹⁰ The governance and rule of law indicators are taken from the *World Governance Indicators*(<http://info.worldbank.org/governance/wgi/>).

Table 4
Variations in the boundaries of law.

	(1)	(2)	(3)	(4)
	<i>DV = Trade Credit Received</i>			
<i>Overseas_Extradition_Yes</i>	0.0085 (0.78)	0.0078 (0.70)	0.0085 (0.79)	0.0085 (0.79)
<i>Overseas_Extradition_No</i>	−0.0166*** (−5.18)			
<i>Overseas_UNConsistency_High</i>		−0.0083 (−0.56)		
<i>Overseas_UNConsistency_Low</i>		−0.0087** (−2.11)		
<i>Overseas_Governance_High</i>			−0.0163*** (−5.06)	
<i>Overseas_Governance_Low</i>			−0.0194 (−1.38)	
<i>Overseas_Rule of Law_High</i>				−0.0164*** (−5.10)
<i>Overseas_Rule of Law_Low</i>				−0.0184 (−1.24)
<i>LEV</i>	−0.2780*** (−6.20)	−0.2875*** (−6.70)	−0.2780*** (−6.20)	−0.2780*** (−6.20)
<i>ROA</i>	0.0494 (0.61)	0.0544 (0.68)	0.0494 (0.61)	0.0494 (0.62)
<i>PPE</i>	−0.2552*** (−5.94)	−0.2554*** (−6.30)	−0.2552*** (−5.92)	−0.2552*** (−5.92)
<i>Age</i>	−0.0369*** (−4.15)	−0.0358*** (−4.07)	−0.0369*** (−4.15)	−0.0369*** (−4.15)
<i>CFFO</i>	−0.0064 (−1.03)	−0.0088 (−1.68)	−0.0064 (−1.03)	−0.0064 (−1.03)
<i>Size</i>	0.0236*** (4.59)	0.0230*** (4.79)	0.0236*** (4.59)	0.0236*** (4.59)
<i>Liquidity</i>	−0.2584*** (−6.71)	−0.2660*** (−7.43)	−0.2584*** (−6.72)	−0.2584*** (−6.72)
<i>SEO</i>	−0.0142*** (−4.60)	−0.0139*** (−4.12)	−0.0142*** (−4.62)	−0.0142*** (−4.62)
<i>Board Size</i>	−0.0010 (−0.10)	0.0007 (0.07)	−0.0010 (−0.10)	−0.0010 (−0.10)
<i>Independent</i>	−0.0132 (−0.48)	−0.0112 (−0.37)	−0.0131 (−0.47)	−0.0131 (−0.48)
<i>Top1</i>	0.0005*** (3.35)	0.0005*** (3.32)	0.0005*** (3.28)	0.0005*** (3.28)
<i>Pay</i>	0.0033 (1.14)	0.0030 (0.90)	0.0033 (1.14)	0.0033 (1.14)
<i>CEO Duality</i>	0.0035 (0.95)	0.0029 (0.80)	0.0035 (0.95)	0.0035 (0.95)
Constant	−0.2227** (−2.46)	−0.2104** (−2.42)	−0.2226** (−2.45)	−0.2226** (−2.45)
Year-Quarter FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Region FE	Yes	Yes	Yes	Yes
N	78,296	75,068	78,296	78,296
Adj. R ²	0.21	0.21	0.21	0.21

This table presents how variation in the bounds of law impacts on firms' use of trade credit. In column (1), the independent variables are *Overseas_Extradition_Yes* and *Overseas_Extradition_No*; the former is a dummy variable that takes a value of 1 if any of a firm's controlling shareholders in the current year has residency rights in countries/regions that have signed extradition agreements with mainland China, and 0 otherwise, while the latter is its effective inverse. In column (2), *Overseas_UNConsistency_High* is a dummy variable that takes a value of 1 if a country/region without an extradition agreement with China is ranked among the top 50 such countries when it comes to voting in alignment with China at the United Nations, and 0 otherwise; *Overseas_UNConsistency_Low* is its effective inverse, identifying such countries/regions not ranked among the top 50. In column (3), *Overseas_Governance_High* is a dummy variable assigned a value of 1 when a country/region without an extradition agreement with China has a world governance indicator above the yearly median for such countries/regions, and 0 otherwise; *Overseas_Governance_Low* is its effective inverse, indicating a world governance indicator below the yearly median. Similarly, in column (4), *Overseas_Rule of Law_High* and *Overseas_Rule of Law_Low* are dummy variables that indicate whether the rule of law indicator for a country is, respectively, above or below the yearly median for such countries/regions. The dependent variable is *Trade Credit Received*, measured as total of notes payable, accounts payable, and unearned revenue on a quarterly basis, divided by total assets by the end of the quarter, adjusted by industry-year-quarter median. Definitions of all variables are presented in [Appendix I](#). All continuous variables are winsorized at the 1st and 99th percentiles. Standard errors are robust to heteroskedasticity and clustered at the industry level with *t*-statistics reported in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

4.3. Difference-in-differences estimation: The Hong Kong National Security Law

Although we find a robust negative relationship between ORR and firms' use of trade credit, the causal interpretation remains hypothetical. First, one could reasonably be concerned about the possible endogeneity of the overseas residency status of controlling shareholders. Although we control in our model (Eq. (1)) for a standard set of variables that, according to previous studies, affect trade credit, there may still be omitted trends that simultaneously drive the decisions of controlling shareholders to apply for overseas residency and the use of trade credit by firms. For example, in high-risk industries, controlling shareholders may be more likely to apply for an overseas residence permit, but firms may find it harder to secure trade credit. Second, firms do not randomly acquire controlling shareholders that have been granted overseas residence permits, and firms with such shareholders may differ systematically, in various dimensions, from those without; that is, there may be selection bias. Therefore, to establish causality, we utilize the introduction of the Hong Kong national security law as a quasi-natural experiment to perform a difference-in-differences (DID) estimation.

The Hong Kong national security law was passed on 30 June 2020 by the Chinese government through the Standing Committee of the National People's Congress in the wake of intense pro-democracy protests in Hong Kong, which were instigated by an earlier proposal, in 2019, to enable extradition from Hong Kong to the Chinese mainland. The security law came into force on the same day and established an office outside Hong Kong's jurisdiction to administer the enforcement of the law. Following its enactment, the new powers of extradition therein effectively strengthened domestic Chinese law in its regulation of the behavior of controlling shareholders with Hong Kong residence permits, and we would expect to observe a corresponding increase in trade credit for firms with such shareholders.

Table 5 presents the DID results of utilizing the introduction of the Hong Kong national security law as a quasi-natural experiment. As the law passed on Q2 of 2020, our experiment focuses on a sample period between Q2 of 2019 and Q3 of 2021. The treatment group consists of firms whose controlling shareholders have held Hong Kong residence permits throughout ($Treat = 1$), and the control group consists of firms in which none of the controlling shareholders have ever obtained overseas residence permits ($Treat = 0$). The indicator $Post_{HK}$ takes a value of 1 for Q3 and Q4 of 2020 and Q1, Q2, and Q3 of 2021, and a value of 0 for Q2, Q3, and Q4 of 2019 and Q1 and Q2 of 2020. Columns (1) and (2) show the DID and propensity-score-matched DID regression results, respectively. The propensity score matching (PSM) is based on nearest-neighbor matching.¹¹

Overall, both the DID and PSM-DID results show that, compared to the pre-law period, quarterly trade credit in the post-law period increases significantly, suggesting that the power of a country's legal institutions to regulate borrowers exclusively within its own territories is, indeed, a potential concern for creditors when making the decision to extend trade credit.

To exclude the possibility of a pre-treatment trend between the two groups, we perform a parallel trends test. Columns (3) and (4) in Table 5 show, respectively, the results of the parallel trends tests for the DID and PSM-DID populations, and we find that none of the positive effects of the security law on trade credit prevails before the law's enactment.

4.4. Other identification strategies

Although the use of the DID approach is very powerful in ruling out alternative explanations, it does not entirely eliminate the possibility of an unobservable factor affecting the treatment and control groups differently and being correlated with the outcome variable (*Trade Credit Received*). We address this concern in several alternative ways in the following sections.

4.4.1. Controlling for other personal characteristics of controlling shareholders

The effect of information about controlling shareholders' residency on trade credit could be confounded by other personal characteristics, such as their age, gender, or work experience. To circumvent the potential confounding effects arising from individuals' other biographical traits, we also control for their age, gender, political connections, and various types of work-related experience in our regressions.

Table 6 presents the results of the consequent regressions. In columns (1) to (5), we separately incorporate controls for each of the five personal characteristics of controlling shareholders, before incorporating all of them together in column (6). Thus, *Controller Age* is the natural logarithm of the controlling shareholder's age; *Gender* is a dummy variable assigned a value of 1 if the controlling shareholder is male, and 0 otherwise; *Political Connection* is a dummy variable assigned a value of 1 if the controlling shareholder is a member of the People's Congress or the Chinese People's Political Consultative Conference (CPPCC), and 0 otherwise; *Finance* is a dummy variable assigned a value of 1 if the controlling shareholder has a financial background, and 0 otherwise; *Foreign* is a dummy variable assigned a value of 1 if the controlling shareholder has overseas work or study experience, and 0 otherwise. After controlling for the potential confounding effects of these personal characteristics, the negative relationship between *Overseas* and *Trade Credit Received* still holds in all model specifications.

4.4.2. Placebo tests

We also conduct placebo tests to rule out the possibility that our results arise purely by chance. In particular, following Gao and Zhang (2019), we randomly select a group of firms as (pseudo)-treatment firms, making the assumption that they have controlling

¹¹ Appendix Figure 2 shows the resulting nearest-neighbor matching density function.

Table 5

Difference-in-differences estimation: the Hong Kong National Security Law.

	(1)	(2)	(3)	(4)
	<i>DV = Trade Credit Received</i>			
	<i>Main Model</i>		<i>Parallel Trends Test</i>	
	<i>DID</i>	<i>PSM-DID</i>	<i>DID</i>	<i>PSM-DID</i>
<i>Treat*Post_HK</i>	0.0130*** (4.26)	0.0142*** (3.59)		
<i>Before4</i> (Q3 2019)			0.0020 (0.29)	0.0012 (0.14)
<i>Before3</i> (Q4 2019)			0.0004 (0.06)	0.0012 (0.13)
<i>Before2</i> (Q1 2020)			0.0048 (0.70)	0.0118 (1.32)
<i>Before1</i> (Q2 2020)			0.0087 (1.27)	0.0084 (0.96)
<i>After1</i> (Q3 2020)			0.0151** (2.21)	0.0180** (2.05)
<i>After2</i> (Q4 2020)			0.0197*** (2.88)	0.0211** (2.39)
<i>After3</i> (Q1 2021)			0.0135** (1.97)	0.0223** (2.54)
<i>After4</i> (Q2 2021)			0.0152** (2.23)	0.0158* (1.80)
<i>After5</i> (Q3 2021)			0.0177*** (2.59)	0.0168* (1.88)
<i>LEV</i>	-0.2196*** (-27.14)	-0.2793*** (-10.74)	-0.2195*** (-27.11)	-0.2764*** (-10.59)
<i>ROA</i>	0.1245*** (11.21)	0.1111*** (3.22)	0.1248*** (11.23)	0.1127*** (3.25)
<i>PPE</i>	-0.2025*** (-19.12)	-0.2842*** (-6.94)	-0.2024*** (-19.11)	-0.2825*** (-6.88)
<i>Age</i>	0.1046** (2.24)	0.3333** (2.21)	0.1088** (2.33)	0.3427** (2.27)
<i>CFFO</i>	0.0141*** (8.92)	0.0171*** (3.59)	0.0141*** (8.91)	0.0170*** (3.56)
<i>Size</i>	0.0632*** (28.87)	0.0688*** (8.05)	0.0632*** (28.85)	0.0685*** (8.00)
<i>Liquidity</i>	-0.2368*** (-44.62)	-0.2221*** (-12.03)	-0.2368*** (-44.62)	-0.2221*** (-12.00)
<i>SEO</i>	-0.0123*** (-7.00)	-0.0100* (-1.81)	-0.0123*** (-6.97)	-0.0096* (-1.73)
<i>Board Size</i>	-0.0110 (-0.97)	0.0110 (0.27)	-0.0109 (-0.97)	0.0142 (0.34)
<i>Independent</i>	-0.0108 (-0.32)	0.0800 (0.68)	-0.0111 (-0.33)	0.0754 (0.64)
<i>Top1</i>	-0.0005 (-1.18)	0.0004 (0.32)	-0.0005 (-1.22)	0.0003 (0.22)
<i>Pay</i>	0.0082*** (3.69)	-0.0164** (-2.55)	0.0082*** (3.70)	-0.0163** (-2.53)
<i>CEO Duality</i>	0.0019 (0.84)	0.0000 (0.00)	0.0019 (0.83)	-0.0002 (-0.02)
<i>Constant</i>	-1.6345*** (-10.62)	-2.2197*** (-4.28)	-1.6467*** (-10.68)	-2.2488*** (-4.33)
<i>Firm FE</i>	Yes	Yes	Yes	Yes
<i>Year-Quarter FE</i>	Yes	Yes	Yes	Yes
<i>N</i>	17,360	2445	17,360	2445
<i>Within R²</i>	0.19	0.20	0.19	0.20

This table presents the DID results utilizing the introduction of the Hong Kong national security law as a quasi-natural experiment. The dependent variable is *Trade Credit Received*, measured as total of notes payable, accounts payable, and unearned revenue on a quarterly basis, divided by total assets by the end of the quarter, adjusted by industry-year-quarter median. The treatment group consists of firms whose controlling shareholders have been holding Hong Kong residence permits throughout (*Treat* = 1), while the control group comprises firms in which none of the controlling shareholders have ever obtained overseas residency permits (*Treat* = 0). The indicator *Post_HK* takes a value of 1 for Q3 and Q4 of 2020, and Q1, Q2, and Q3 of 2021; it takes a value of 0 for Q2, Q3, and Q4 of 2019, and Q1 and Q2 of 2020. Columns (1) and (2) report the DID and PSM-DID regression results, respectively. The propensity score matching is based on nearest-neighbor matching. Columns (3) and (4) report the parallel trend tests for DID and PSM-DID, respectively. Definitions of other variables are presented in [Appendix I](#). All continuous variables are winsorized at the 1st and 99th percentiles. Standard errors are robust to heteroskedasticity and clustered at the industry level with *t*-statistics reported in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

Table 6
Controlling other personal characteristics of controlling shareholders.

	(1)	(2)	(3)	(4)	(5)	(6)
	<i>DV = Trade Credit Received</i>					
<i>Overseas</i>	−0.0104** (−2.26)	−0.0108** (−2.40)	−0.0106** (−2.30)	−0.0114** (−2.52)	−0.0093* (−1.95)	−0.0084* (−1.73)
<i>Controller Age</i>	−0.0434*** (−3.04)					−0.0498*** (−3.43)
<i>Gender</i>		0.0020 (0.40)				0.0032 (0.60)
<i>Political Connection</i>			0.0048 (0.81)			0.0062 (1.10)
<i>Finance</i>				−0.0195*** (−4.42)		−0.0198*** (−4.21)
<i>Foreign</i>					−0.0149** (−2.81)	−0.0177*** (−3.06)
<i>LEV</i>	−0.3136*** (−5.91)	−0.3135*** (−5.91)	−0.3134*** (−5.91)	−0.3133*** (−5.90)	−0.3129*** (−5.90)	−0.3123*** (−5.92)
<i>ROA</i>	0.0655 (1.13)	0.0661 (1.09)	0.0665 (1.11)	0.0681 (1.13)	0.0622 (1.03)	0.0643 (1.11)
<i>PPE</i>	−0.2813*** (−5.10)	−0.2879*** (−5.26)	−0.2879*** (−5.27)	−0.2894*** (−5.33)	−0.2888*** (−5.31)	−0.2837*** (−5.22)
<i>Age</i>	−0.0295*** (−3.32)	−0.0333*** (−4.08)	−0.0332*** (−4.09)	−0.0331*** (−4.03)	−0.0329*** (−4.06)	−0.0283*** (−3.18)
<i>CFFO</i>	−0.0179*** (−2.91)	−0.0179*** (−2.96)	−0.0179*** (−2.95)	−0.0181*** (−3.05)	−0.0178*** (−2.93)	−0.0178*** (−2.95)
<i>Size</i>	0.0242*** (4.14)	0.0236*** (3.97)	0.0235*** (4.07)	0.0238*** (3.99)	0.0237*** (3.97)	0.0242*** (4.24)
<i>Liquidity</i>	−0.2933*** (−6.48)	−0.2957*** (−6.55)	−0.2958*** (−6.55)	−0.2973*** (−6.59)	−0.2951*** (−6.53)	−0.2938*** (−6.55)
<i>SEO</i>	−0.0201*** (−5.00)	−0.0199*** (−5.01)	−0.0201*** (−4.91)	−0.0202*** (−5.07)	−0.0198*** (−4.94)	−0.0204*** (−5.02)
<i>Board Size</i>	−0.0146 (−1.15)	−0.0158 (−1.13)	−0.0158 (−1.16)	−0.0156 (−1.17)	−0.0161 (−1.16)	−0.0135 (−1.10)
<i>Independent</i>	−0.0479 (−1.59)	−0.0451 (−1.44)	−0.0460 (−1.46)	−0.0470 (−1.51)	−0.0453 (−1.45)	−0.0501 (−1.63)
<i>Top1</i>	0.0004*** (3.87)	0.0004*** (4.54)	0.0004*** (4.27)	0.0004*** (4.07)	0.0004*** (4.22)	0.0004*** (3.55)
<i>Pay</i>	−0.0016 (−0.74)	−0.0013 (−0.63)	−0.0013 (−0.58)	−0.0014 (−0.64)	−0.0009 (−0.41)	−0.0011 (−0.52)
<i>CEO Duality</i>	0.0036 (1.08)	0.0050 (1.44)	0.0051 (1.46)	0.0049 (1.39)	0.0053 (1.57)	0.0039 (1.19)
Constant	0.0360 (0.31)	−0.1130 (−1.34)	−0.1094 (−1.34)	−0.1124 (−1.30)	−0.1192 (−1.42)	0.0498 (0.43)
Year-Quarter FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Region FE	Yes	Yes	Yes	Yes	Yes	Yes
N	55,897	55,897	55,897	55,897	55,897	55,897
Adj. R ²	0.23	0.23	0.23	0.23	0.23	0.23

This table presents the regression results after controlling for other personal characteristics of controlling shareholders. The dependent variable is *Trade Credit Received*, measured as total of notes payable, accounts payable, and unearned revenue on a quarterly basis, divided by total assets by the end of the quarter, adjusted by industry-year-quarter median. The independent variable is *Overseas*, a dummy variable that takes a value of 1 if any of a firm's controlling shareholders in the current year has residency rights outside mainland China, and 0 otherwise. In columns (1) to (5), we separately incorporate specific characteristics of controlling shareholders, while including all of them in column (6). *Controller Age* is taken as the natural logarithm of the controlling shareholder's age; *Gender* is a dummy variable assigned a value of 1 when the controlling shareholder is male, and 0 otherwise; *Political Connection* is a dummy variable assigned a value of 1 if the shareholder is a member of the People's Congress or the Chinese People's Political Consultative Conference (CPPCC), and 0 otherwise; *Finance* is a dummy variable assigned a value of 1 if the controlling shareholder has a financial background, and 0 otherwise; *Foreign* is a dummy variable assigned a value of 1 if the shareholder has overseas work or study experience, and 0 otherwise. Definitions of other variables are presented in [Appendix I](#). All control variables are lagged by one year. All continuous variables are winsorized at the 1st and 99th percentiles. Standard errors are robust to heteroskedasticity and clustered at the industry level with *t*-statistics reported in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

shareholders with overseas residence rights, and classify the remainder as (pseudo-)control firms. We repeat this procedure 1000 times and in each iteration we draw 9926 observations (the number of observations in which controlling shareholders actually have overseas residence rights) at random from our full sample to form the pseudo-treatment group, and deem the rest as the pseudo-control group. Using these pseudo-treatment and pseudo-control subsamples, we re-estimate the baseline regressions associated with column (1) in [Table 3](#) and obtain the coefficients of *Overseas*. [Fig. 1](#) shows a histogram distribution of these coefficients from the 1000 bootstrap simulations of the corresponding model when the dependent variable is *Trade Credit Received*.

The results indicate that the association between controlling shareholders' overseas residency status and the receipt of trade credit revealed in our main tests is unlikely to be spurious: the minimum value of the coefficients estimated in the placebo tests (-0.0036) is significantly greater than that of the actual coefficient in the main test (-0.0119).

To summarize, although endogeneity is a perennial issue that no empirical test can completely rule out, we conduct a battery of tests to alleviate such concerns and find that our main conclusion holds. Although criticism can be leveled at each individual test, the combination of evidence points to a causal relationship between the ability of controlling shareholders to place themselves beyond the borders of domestic law and firms' use of trade credit.

4.5. Cross-sectional analyses

A growing body of literature emphasizes the importance of trust in trade credit provision as an informal financing channel. Duarte et al. (2012) show that borrowers' trustworthiness is what matters most in investor decisions and predictions of borrower behavior. As Guiso et al. (2004) point out, trade credit extension depends not only on the legal enforceability of the associated contract but also on the extent to which the supplier trusts their customer. Moreover, Wu et al. (2014) argue that in China, social trust may provide the most persuasive explication of trade credit flows in situations where courts are less effective. In fact, more than half-a-century ago, Arrow (1969), p. 357) argued that "virtually every commercial transaction has within itself an element of trust."

In the (implicit) contract for trade credit, the financiers (suppliers) bear the risk that the financed (customers) will not pay in the future because, in most cases, there is no collateral behind the transaction and no underlying guarantees from third parties or financial intermediaries. Thus, trust plays an inherent role in trade credit, and creditors are more likely to be concerned that their informal credit to firms may not be honored if the probability of breach of (implicit) contracts is higher as a result of controlling shareholders' overseas residency status.

To verify that such a trust-based channel plays a significant role in shaping the negative relationship between overseas residency rights and trade credit, we examine whether the negative effect on trade credit is more pronounced for firms that are perceived as less trustworthy *ex ante*, according to indirect measures at regional level (using "Runaway" and "Fintech Lending" indexes) and at the firm level (expropriation risk).

4.5.1. Social trust

To provide more evidence of the underlying trust mechanism, we examine how regional differences in social trust may shape the relationship between borders of law and trade credit financing. The main challenge here is the empirical identification of social trust. Inspired by Fukuyama (1995), p. 27) and Putnam (2000), p. 19), who respectively define social trust as the expectations within a community that people will behave in honest and cooperative ways, and the extent to which human interactions are governed by norms of reciprocity and trustworthiness, we use two regional indexes, that is, "Runaway" and "Fintech Lending," to proxy for social trust, as defined above (Section 1). A higher "Runaway" value indicates a lower level of social trust, while a higher "Fintech Lending" value indicates a higher level of social trust (Hasan et al., 2022).

Table 7 presents the regression results for how social trust at the regional level affects the association between controlling shareholders' residency status and trade credit received. In columns (1) and (2), the full sample is divided according to the median of

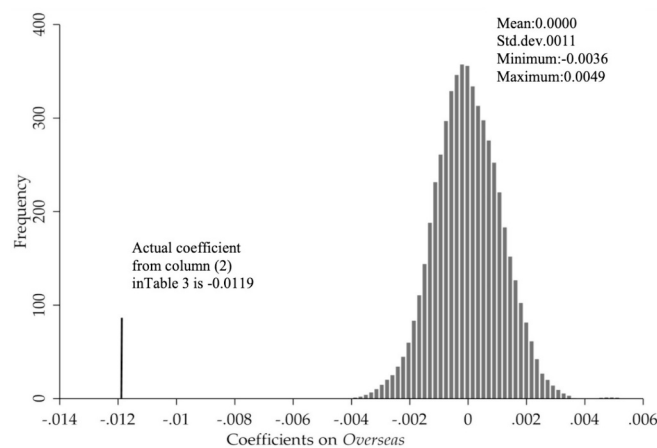


Fig. 1. Placebo Test.

Fig. 1 shows a histogram distribution of the coefficients on *Overseas* from 1000 bootstrap simulations of the model in column (1) of Table 3 when the dependent variable is *Trade Credit Received*, measured as total of notes payable, accounts payable, and unearned revenue, on a quarterly basis, divided by total assets by the end of the quarter, adjusted by industry-year-quarter median. For each iteration, we draw a random sample of 9926 observations (the number of observations having actual overseas residency rights) from our full sample pool to act as "pseudo-treated" and classify the rest of the pool as "pseudo-control". Based on these "pseudo-treated" and "pseudo-control" samples, we re-estimate the baseline regression results of column (1) in Table 3 and obtain the coefficients on *Overseas*.

“Runaway” across different regions. The coefficient of *Overseas* is negative and significant in column (1), suggesting that concern about whether domestic law can regulate entrepreneurs is more severe when the regional “Runaway” index is high. In columns (3) and (4), the full sample is divided according to the median of “Fintech Lending.” We only document a negative relationship between *Overseas* and *Trade Credit Received* when “Fintech Lending” indicates a lower level of social trust (i.e., in column (4)). Taken together, the results for the influence of social trust provide evidence of a trust-based mechanism underpinning how creditors factor in the mobility of controlling shareholders when making their decision to extend trade credit to firms.

4.5.2. Expropriation risk

Since La Porta et al. (1999) identified the divergence between the control rights and cash flow rights of controlling shareholders, their ability to expropriate other stakeholders has been widely studied (Claessens et al., 2000; Claessens et al., 2002; Faccio and Lang, 2002; Lemmon and Lins, 2003; Gompers et al., 2010; Lin et al., 2011a; Lin et al., 2011b; Lin et al., 2012). Most studies argue that controlling shareholders are strongly motivated to pursue their private benefits by transferring or tunneling resources out of firms,

Table 7

Overseas residency rights, social trust and trade credit.

	“Runaway” Index		-	“Fintech Lending” Index	
	High	Low		High	Low
	(1)	(2)		(3)	(4)
DV = Trade Credit Received					
Overseas	−0.0117** (−2.82)	−0.0097 (−1.53)	0.0037 (0.64)	−0.0205*** (−5.52)	
Difference Test	chi2 (1) = 0.57 Prob > chi2 = 0.0496		chi2 (1) = 96.63 Prob > chi2 = 0.0000		
LEV	−0.2800*** (−6.91)	−0.2411*** (−4.70)	−0.3148*** (−7.78)	−0.2609*** (−5.12)	
ROA	0.0740 (0.77)	0.0485 (0.88)	0.0381 (0.54)	0.0516 (0.59)	
PPE	−0.2500*** (−5.05)	−0.2157*** (−4.32)	−0.2804*** (−6.00)	−0.2375*** (−6.01)	
Age	−0.0392*** (−3.32)	−0.0346*** (−5.30)	−0.0344*** (−5.79)	−0.0362** (−2.59)	
CFFO	−0.0112 (−1.40)	−0.0090 (−1.65)	−0.0146** (−2.12)	−0.0015 (−0.28)	
Size	0.0212*** (4.62)	0.0237*** (4.02)	0.0220*** (6.50)	0.0245*** (3.62)	
Liquidity	−0.2753*** (−6.45)	−0.2388*** (−6.90)	−0.2986*** (−7.90)	−0.2322*** (−5.84)	
SEO	−0.0225*** (−6.20)	−0.0102*** (−3.92)	−0.0168*** (−8.51)	−0.0122** (−2.23)	
Board Size	0.0079 (0.95)	−0.0097 (−0.78)	0.0029 (0.36)	−0.0008 (−0.08)	
Independent	−0.0059 (−0.17)	−0.0245 (−0.74)	0.0036 (0.13)	−0.0273 (−0.77)	
Top1	0.0007*** (3.91)	0.0004*** (2.92)	0.0005*** (4.32)	0.0005** (2.33)	
Pay	0.0026 (1.06)	0.0018 (0.37)	−0.0019 (−0.53)	0.0073** (2.40)	
CEO Duality	0.0054 (1.33)	0.0040 (0.89)	−0.0019 (−0.57)	0.0096** (2.13)	
Constant	−0.2296** (−2.81)	−0.2114 (−1.47)	−0.2095*** (−4.40)	−0.3022** (−2.55)	
Year-Quarter FE	Yes	Yes	Yes	Yes	
Industry FE	Yes	Yes	Yes	Yes	
Region FE	Yes	Yes	Yes	Yes	
N	32,028	34,736	39,176	39,864	
Adj. R ²	0.20	0.21	0.24	0.19	

This table presents the regression results for how social trust affects the association between controlling shareholders’ overseas residency rights and trade credit received. The independent variable is *Overseas*, a dummy variable that takes a value of 1 if any of a firm’s controlling shareholders in the current year has residency rights outside mainland China, and 0 otherwise. The dependent variable is *Trade Credit Received*, measured as total of notes payable, accounts payable, and unearned revenue on a quarterly basis, divided by total assets by the end of the quarter, adjusted by industry-year-quarter median. The “Runaway” index is a regional index constructed on the basis of the volumes of keyword searches for “Paolu” on Baidu.com by netizens in different regions of China. The “Fintech Lending” index is defined as the success rate for loans in each region on the *RenRenDai* platform, which is one of the largest P2P lending platforms in mainland China. The full sample is divided on the basis of the medians of the respective measures. Definitions of other variables are presented in Appendix I. All continuous variables are winsorized at the 1st and 99th percentiles. Standard errors are robust to heteroskedasticity and clustered at the industry level with *t*-statistics reported in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

because this enables them to reap all of the benefits without bearing the full financial consequences (Lin et al., 2012).

Firms with overseas controlling shareholders are perceived by creditors to be less trustworthy when expropriation is less costly, for example, in the presence of a higher agency cost arising from the separation of cash flow and control rights. It would, therefore, be reasonable to expect that firms with higher risks of expropriation experience greater reductions in trade credit when their controlling shareholders are less likely to be disciplined by the domestic law.

Thus, we follow the studies referred to above and measure firms' expropriation risk with three proxies: the cash flow rights of the controlling shareholders, the duality of controlling shareholders as either chairman or CEO, and the degree of separation between cash flow rights and control rights. Firms whose controlling shareholders have fewer cash flow rights, those where controlling shareholders also act as chairman or CEO, and those with a higher separation of cash flow and control rights are all subject to a higher risk of expropriation.

Table 8 presents the results of the regression in relation to the effect of expropriation risk on the association between controlling

Table 8
Overseas residency rights, expropriation risk, and trade credit.

	Cash flow rights of the controlling shareholder		Whether the controlling shareholder serves as chairman or CEO		Separation of cash flow and control rights	
	≥ 50%	< 50%	Yes	No	High	Low
	(1)	(2)	(3)	(4)	(5)	(6)
DV = Trade Credit Received						
Overseas	−0.0007 (−0.10)	−0.0158*** (−3.89)	−0.0125** (−2.73)	−0.0089 (−1.04)	−0.0172*** (−4.29)	−0.0056 (−1.55)
Difference Test	chi2 (1) = 31.02 Prob > chi2 = 0.0000		chi2 (1) = 1.42 Prob > chi2 = 0.2328		chi2 (1) = 21.61 Prob > chi2 = 0.0000	
LEV	−0.4362*** (−11.79)	−0.2506*** (−5.47)	−0.3097*** (−6.20)	−0.2331*** (−8.01)	−0.2906*** (−5.82)	−0.2647*** (−5.90)
ROA	0.0219 (0.26)	0.0225 (0.28)	0.0397 (0.51)	−0.0537 (−0.74)	−0.0062 (−0.06)	0.0816 (1.58)
PPE	−0.4148*** (−6.86)	−0.2359*** (−6.11)	−0.2965*** (−5.77)	−0.1670*** (−4.61)	−0.2847*** (−6.15)	−0.2259*** (−4.89)
Age	−0.0328*** (−4.75)	−0.0363*** (−3.58)	−0.0348*** (−3.87)	−0.0094 (−0.44)	−0.0400*** (−4.98)	−0.0366*** (−3.77)
CFFO	−0.0165** (−2.11)	−0.0061 (−1.08)	−0.0143* (−1.94)	0.0083** (2.33)	0.0006 (0.10)	−0.0156* (−2.00)
Size	0.0191*** (4.34)	0.0241*** (4.67)	0.0240*** (4.63)	0.0236*** (5.45)	0.0261*** (5.26)	0.0223*** (3.83)
Liquidity	−0.4215*** (−11.21)	−0.2330*** (−6.17)	−0.2951*** (−6.46)	−0.1972*** (−8.38)	−0.2679*** (−6.68)	−0.2536*** (−6.20)
SEO	−0.0249*** (−2.93)	−0.0117*** (−4.45)	−0.0187*** (−4.62)	−0.0167*** (−4.46)	−0.0132*** (−4.48)	−0.0170*** (−4.84)
Board Size	0.0002 (0.01)	0.0010 (0.12)	−0.0062 (−0.49)	0.0212 (1.29)	−0.0115 (−0.83)	0.0127* (1.73)
Independent	−0.0236 (−0.67)	−0.0097 (−0.30)	−0.0225 (−0.78)	−0.0215 (−0.28)	−0.0383 (−1.04)	0.0125 (0.54)
Top1	−0.0003 (−1.56)	0.0005*** (3.51)	0.0004*** (3.91)	0.0007*** (2.93)	0.0005*** (3.27)	0.0005*** (3.40)
Pay	−0.0041 (−0.83)	0.0042 (1.70)	−0.0012 (−0.40)	0.0140** (2.42)	0.0046 (0.91)	0.0006 (0.25)
CEO Duality	0.0078** (2.34)	0.0029 (0.68)	0.0049 (1.34)	0.0013 (0.18)	0.0052 (0.83)	0.0036 (1.20)
Constant	0.0754 (0.79)	−0.2657*** (−3.03)	−0.1727* (−1.94)	−0.4827*** (−3.89)	−0.2592** (−2.11)	−0.2270*** (−4.35)
Year-Quarter FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Region FE	Yes	Yes	Yes	Yes	Yes	Yes
N	15,285	63,755	61,574	15,732	39,516	39,524
Adj. R ²	0.33	0.20	0.23	0.24	0.23	0.19

This table presents the regression results for how perceived expropriation risk affects the association between controlling shareholders' overseas residency status and trade credit received. The independent variable is *Overseas*, a dummy variable that takes a value of 1 if any of a firm's controlling shareholders in the current year has residency rights outside mainland China, and 0 otherwise. The dependent variable is *Trade Credit Received*, measured as total of notes payable, accounts payable, and unearned revenue on a quarterly basis, divided by total assets by the end of the quarter, adjusted by industry-year-quarter median. In columns (1) and (2), we divide the sample according to whether the cash flow rights of the controlling shareholder are above or below 50%. In columns (3) and (4), we divide the sample on the basis of whether the controlling shareholder also serves as chairman or CEO. In columns (5) and (6), we divide the sample according to whether the separation of cash flow and control rights of the controlling shareholder is above or below the median value for the sample. Definitions of other variables are presented in Appendix I. All continuous variables are winsorized at the 1st and 99th percentiles. Standard errors are robust to heteroskedasticity and clustered at the industry level with *t*-statistics reported in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

shareholders' overseas residency status and trade credit received. In columns (1) and (2), we divide the sample according to whether the cash flow rights of the controlling shareholder do or don't exceed 50%; in columns (3) and (4), we divide the sample according to whether the controlling shareholder is also the chairman or CEO; in columns (5) and (6), we divide the sample according to whether separation of the cash flow and control rights of the controlling shareholder is above or below the median value for the sample. We find that the negative relationship between *Overseas* and *Trade Credit Received* is statistically significant in firms in which: the cash flow rights of the controlling shareholder are <50% (column (2)); the controlling shareholder is also the chairman or CEO (column (3)); the separation of cash flow and control rights of the controlling shareholder is above the sample median (column (5)).

These results support our conjecture that the effect of controlling shareholders' ORR on trade credit is more pronounced in firms perceived as being less trustworthy because of their potential for expropriation.

4.5.3. The bargaining power of suppliers

There is a strand of literature stressing that the bargaining power between suppliers and customers is an important driver of both the trade credit terms offered by suppliers and the ones actually used by customers (e.g., [Dass et al., 2015](#); [Fabbri and Klapper, 2016](#);

Table 9
Overseas residency rights, suppliers' bargaining power and trade credit.

	<i>HHI_Top5Supplier</i>			<i>HHI_Top3Supplier</i>	
	<i>High</i>	<i>Low</i>		<i>High</i>	<i>Low</i>
	(1)	(2)		(3)	(4)
<i>DV = Trade Credit Received</i>					
<i>Overseas</i>	−0.0085** (−2.06)	−0.0117 (−1.51)		−0.0093** (−2.26)	−0.0111 (−1.46)
<i>LEV</i>	−0.1926*** (−6.36)	−0.2329*** (−6.64)		−0.1934*** (−6.35)	−0.2327*** (−6.68)
<i>ROA</i>	−0.1566*** (−3.70)	−0.1970*** (−3.94)		−0.1551*** (−3.56)	−0.1995*** (−4.06)
<i>PPE</i>	−0.1574*** (−7.34)	−0.2035*** (−6.93)		−0.1578*** (−7.32)	−0.2027*** (−7.11)
<i>Age</i>	−0.0143* (−1.71)	−0.0112 (−1.54)		−0.0145* (−1.75)	−0.0112 (−1.50)
<i>CFFO</i>	−0.0034 (−0.54)	−0.0112*** (−2.84)		−0.0033 (−0.52)	−0.0118*** (−3.01)
<i>Size</i>	0.0180*** (4.19)	0.0138*** (4.44)		0.0182*** (4.27)	0.0137*** (4.43)
<i>Liquidity</i>	−0.1972*** (−8.98)	−0.2298*** (−10.92)		−0.1978*** (−8.99)	−0.2297*** (−10.93)
<i>SEO</i>	−0.0278*** (−8.83)	−0.0280*** (−8.89)		−0.0271*** (−8.67)	−0.0286*** (−8.92)
<i>Board Size</i>	−0.0109 (−0.97)	−0.0051 (−0.50)		−0.0081 (−0.74)	−0.0068 (−0.65)
<i>Independent</i>	−0.0227 (−0.80)	−0.0301 (−1.06)		−0.0179 (−0.64)	−0.0329 (−1.13)
<i>Top1</i>	0.0003* (1.69)	0.0003** (2.15)		0.0003 (1.58)	0.0004** (2.25)
<i>Pay</i>	−0.0034 (−1.38)	0.0010 (0.30)		−0.0036 (−1.48)	0.0009 (0.29)
<i>CEO Duality</i>	0.0110* (1.81)	0.0018 (0.36)		0.0120* (1.98)	0.0005 (0.10)
Constant	−0.2204*** (−3.00)	−0.2723*** (−3.61)		−0.2103** (−2.26)	−0.0852 (−0.00)
Year-Quarter FE	Yes	Yes		Yes	Yes
Industry FE	Yes	Yes		Yes	Yes
Region FE	Yes	Yes		Yes	Yes
N	27,154	27,157		27,155	27,156
Adj. R ²	0.20	0.25		0.20	0.25

This table presents the regression results for supplier's bargaining power affects the association between controlling shareholders' overseas residency rights and trade credit received. The independent variable is *Overseas*, a dummy variable that takes a value of 1 if any of a firm's controlling shareholders in the current year has residency rights outside mainland China, and 0 otherwise. The dependent variable is *Trade Credit Received*, measured as total of notes payable, accounts payable, and unearned revenue on a quarterly basis, divided by total assets by the end of the quarter, adjusted by industry-year-quarter median. The *HHI_Top5Supplier* is a proxy for the bargaining power of the top five suppliers (the Herfindahl index of the top five suppliers), that is, the sum of the squares of the proportion (%) of the purchases of the top five suppliers as the total purchases of the firm. The *HHI_Top3Supplier* is a proxy for the bargaining power of the top three suppliers (the Herfindahl index of the top three suppliers), that is, the sum of the squares of the proportion (%) of the purchases of the top three suppliers as the total purchases of the firm. The full sample is divided on the basis of the medians of the respective measures. Definitions of other variables are presented in [Appendix I](#). All continuous variables are winsorized at the 1st and 99th percentiles. Standard errors are robust to heteroskedasticity and clustered at the industry level with *t*-statistics reported in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% levels.

Klapper et al., 2012; Giannetti et al., 2021).

The supplier's bargaining power might depend on the degree of competition in the product market. When the product market is very competitive because many firms supply homogenous goods, profit margins are low. Each supplier of the good is in a weak position to enforce payments and is eager to allow delayed repayments to attract new customers, or to prevent existing customers from switching to a different supplier. The opposite is true when the supplier is a monopolist. Bargaining power might also explain why credit-constrained suppliers still offer trade credit: when they are forced by influential buyers to allow delayed repayments of goods. It follows that a supplier's market power is negatively associated with trade credit provision (Fabbri and Klapper, 2016). Therefore, it is likely for a supplier firm to provide less trade credit when it is in a stronger bargaining position, especially when the customer firm appears less trustworthy.

To empirically test whether our argument supports this insight, we construct two measures for the bargaining power of major suppliers. *HHL_Top5Supplier* is the Herfindahl index of the top five suppliers, that is, the sum of the squares of the proportion (%) of the purchases of the top five suppliers as the total purchases of the firm. *HHL_Top3Supplier* is the Herfindahl index of the top three suppliers, that is, the sum of the squares of the proportion (%) of the purchases of the top three suppliers as the total purchases of the firm. A higher *HHL_Top5Supplier* or *HHL_Top3Supplier* indicates that the bargaining power of suppliers is strong as the customer firms heavily depend on them. The full sample is divided on the basis of the medians of the respective measures.

Table 9 presents the regression results for how suppliers' bargaining power affects the association between controlling shareholders' residency status and trade credit received. In columns (1) and (2), the full sample is divided according to the median of

Table 10
Overseas residency rights, overseas business and trade credit.

	(1) <i>DV = Export_Total</i>	(2) <i>DV = Export_Pair</i>
<i>Overseas</i>	0.0671 (0.73)	0.0031 (1.22)
<i>LEV</i>	0.1583 (1.42)	0.0275** (2.14)
<i>ROA</i>	-0.0182 (-0.03)	-0.0563** (-2.38)
<i>PPE</i>	-0.1779 (-0.41)	0.0591*** (3.86)
<i>Age</i>	0.1027 (0.81)	-0.0093** (-2.12)
<i>CFFO</i>	-0.0320 (-0.25)	0.0110** (2.70)
<i>Size</i>	-0.1660*** (-2.88)	-0.0051*** (-4.41)
<i>Liquidity</i>	-0.1317 (-0.64)	0.0300*** (3.61)
<i>SEO</i>	0.2352*** (3.13)	-0.0009 (-0.93)
<i>Board Size</i>	0.0481 (0.68)	0.0043 (0.85)
<i>Independent</i>	-0.1793 (-0.47)	0.0008 (0.04)
<i>Top1</i>	0.0023 (1.53)	0.0000 (0.09)
<i>Pay</i>	0.1093*** (3.32)	0.0031 (1.62)
<i>CEO Duality</i>	0.0447 (0.84)	0.0028 (1.36)
Constant	1.7132 (1.21)	0.0648** (2.75)
Year-Quarter FE	Yes	Yes
Industry FE	Yes	Yes
Region FE	Yes	Yes
N	61,443	44,901
Adj. R ²	0.01	0.17

This table presents the regression results for how controlling shareholders' overseas residency status affects firms' overseas business. In column (1), the dependent variable is *Export_Total*, measured in terms of a firm's export revenue divided by its total revenue by the end of the quarter. In column (2), the dependent variable is *Export_Pair*, measured in terms of a firm's value of exports to the respective region/country in which the controlling shareholder has a residency permit, divided by the firms' total revenue by the end of the quarter. The independent variable is *Overseas*, a dummy variable that takes a value of 1 if any of a firm's controlling shareholders in the current year has residency rights outside mainland China, and 0 otherwise. Definitions of other variables are presented in Appendix I. All continuous variables are winsorized at the 1st and 99th percentiles. Standard errors are robust to heteroskedasticity and clustered at the industry level with *t*-statistics reported in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

HHI_Top5Supplier. The coefficient of *Overseas* is negative and significant in column (1). In columns (3) and (4), the full sample is divided according to the median of *HHI_Top3Supplier*. We only document a negative relationship between *Overseas* and *Trade Credit Received* when the suppliers' bargaining power indicates a higher level (i.e., a higher *HHI_Top3Supplier* index in column (3)). Taken together, we show that the negative association between controlling shareholders' overseas residency status and trade credit is only pronounced when the bargaining power of suppliers is strong, which is consistent but also provides new insights into the existing literature.

5. Further analyses

5.1. Overseas business

As previously stated, there is an alternative hypothesis to the effect that controlling shareholders obtain overseas residence rights to expand into overseas markets, and the reduction in trade credit arises because the risk of an overseas business is relatively difficult for trade creditors to evaluate. If this hypothesis is to be borne out, we should find a significant and positive relationship between controlling shareholders' residency status and firms' export performance. However, our further empirical analysis of firms' export activities finds no such relationship, thereby extinguishing this hypothesis.

The results of the regression in relation to how firms' overseas business affects the association between controlling shareholders' residency status and trade credit received are shown in Table 10. In column (1), the dependent variable is *Export_Total*, measured in terms of a firm's export revenue divided by its total revenue by the end of the quarter.¹² Because *Export_Total* is the aggregate value of a firm's overseas income across all regions/countries, regardless of its business connections, we introduce a further measure to capture the specific relationships or connections between controlling shareholders and the overseas regions/countries for which they have a residence permit. Thus, in column (2), the dependent variable is *Export_Pair*, measured as the value of a firm's exports to the region/country where the controlling shareholders have a residence permit, divided by its total revenue by the end of the quarter.¹³ The independent variable in all model specifications is *Overseas*. On the basis of the results in columns (1) and (2), we find no significant relationship between controlling shareholders' overseas residency status and firms' export performance.

5.2. The signal of overseas residency rights

There are concerns that trade credit terms for multi-residency owners are worse because changing residency signals to the market that the government may take negative actions towards the company. Despite the efforts to move towards a more market-oriented economy, China is still different from a traditional market economy in many respects. For instance, the Chinese government maintains much more influence over the economy than governments in other middle-income or developed countries. A number of papers have documented the financial advantages firms can gain from maintaining close relationships with politicians. Findings by Fisman (2001); Johnson and Mitton (2003); Sapienza (2004); and Faccio et al. (2006) also suggest that political leaders often use their power to grant economic favors to the firms that are connected to them, which can lead to economic advantages for the connected firms.

In this system, firms with good relationship with the government can have favorable treatment such as subsidies and tax exemptions and vice versa. Therefore, it is likely that Taking subsidies as an example, subsidies serve as a major instrument for facilitating government intervention in the market; not surprisingly, the Chinese government has provided massive subsidies to both industries and individual firms. For instance, according to The Wall Street Journal (2013), Chinese listed firms received \$13.83 billion in government subsidies in 2012, 23% up on 2011.¹⁴ Such subsidies were equivalent to >4% of the companies' total profits in 2012, up from around 3% in the period between 2009 and 2011.

If the alternative explanation did hold, we should be able to observe the negative actions are indeed taken by the government against firms with multi-residency owners. To test this, we examine whether entrepreneurs' overseas residency rights affect or signal governments' favorable treatment such as subsidies and tax rates. Panel A of Table 11 reports the summary statistics based on firm-year observations. *Subsidies/Revenue* is defined as the value of subsidies received as a percentage of total revenue. *Subsidies/Assets* is defined as the value of subsidies received as a percentage of total assets. *Ln(Subsidies)* is the natural logarithm value of subsidies received plus one. *Tax Rate* is the average corporate income tax in a year. From the summary statistics we can find, for both the value of subsidies and tax rates, there are large variations across firms.

Panel B of Table 11 presents the regression results of the impact of controlling shareholders' overseas residency rights on the receipt of subsidies and tax rate. Across all four model specifications, we did not document any significant relationship between entrepreneurs' overseas residency rights and subsidies or tax rates. This can, to a large extent, help rule out the alternative explanation that the government takes negative actions towards firms with multi-residency owners.

Beyond our evidence, the media report from the *China News* also states that "according to relevant laws, obtaining overseas residency rights does not imply a change in nationality. Residents who solely acquire residency rights are still considered Chinese citizens, and their actions remain subject to relevant Chinese laws. Professor Xie Yongzhen from the Shandong University Corporate Governance Research Center told reporters that when domestic controlling shareholders have residency rights abroad, it does not affect the

¹² These data are obtained from the footnotes of the financial statements in firms' annual reports.

¹³ These original data are obtained from the General Administration of Customs. We manually match them with firm-level export activities.

¹⁴ See <https://www.wsj.com/articles/SB10001424127887323836504578551474072138676>.

Table 11
Overseas residency rights and government treatment.

Panel A Descriptive statistics								
Variable	N	Mean	Std.	Min	P25	P50	P75	Max.
<i>Subsidies/Revenue</i>	19,794	0.010	0.013	0.000	0.002	0.006	0.013	0.081
<i>Subsidies/Assets</i>	19,794	0.005	0.005	0.000	0.001	0.003	0.006	0.028
<i>Ln(Subsidies)</i>	19,789	14.810	4.237	0.000	14.848	15.843	16.726	19.264
<i>Tax Rate</i>	20,809	0.151	0.158	−0.587	0.100	0.146	0.203	0.822

Panel B Regression Results				
	(1)	(2)	(3)	(4)
	DV= <i>Subsidies/Revenue</i>	DV= <i>Subsidies/Assets</i>	DV = <i>Ln(Subsidies)</i>	DV = <i>Tax Rate</i>
<i>Overseas</i>	−0.0001 (−0.44)	−0.0001 (−0.08)	0.0076 (0.07)	0.0017 (0.45)
<i>LEV</i>	0.0002 (0.59)	0.0013 (1.58)	−0.1067 (−0.23)	0.0449** (2.69)
<i>ROA</i>	0.0094*** (5.49)	−0.0150** (−2.15)	4.4844*** (3.42)	0.4562*** (14.54)
<i>PPE</i>	0.0038*** (5.43)	0.0117*** (3.85)	3.2641*** (8.85)	−0.0111 (−0.93)
<i>Age</i>	−0.0009*** (−5.85)	−0.0024*** (−5.95)	−0.5699 (−1.72)	0.0145*** (3.19)
<i>CFFO</i>	0.0003 (1.43)	0.0019 (1.33)	1.0135*** (3.23)	0.0122 (1.32)
<i>Size</i>	−0.0008*** (−7.28)	−0.0012*** (−8.04)	1.1268*** (8.42)	0.0110*** (6.72)
<i>Liquidity</i>	0.0005 (1.61)	0.0082*** (4.94)	1.8459*** (4.73)	0.0061 (0.55)
<i>SEO</i>	−0.0000 (−0.25)	0.0009* (1.80)	−0.0120 (−0.17)	−0.0063** (−2.11)
<i>BoardSize</i>	0.0000 (0.06)	0.0003 (0.35)	0.7992 (1.53)	−0.0098 (−0.96)
<i>Independent</i>	0.0007 (0.97)	0.0046* (1.91)	1.4025 (1.51)	−0.0330 (−1.17)
<i>Top1</i>	0.0000 (0.60)	−0.0000 (−0.94)	0.0123** (2.76)	0.0001 (0.74)
<i>Pay</i>	0.0008*** (10.53)	0.0009*** (5.57)	0.5185*** (3.86)	−0.0036 (−1.22)
<i>CEODuality</i>	−0.0000 (−0.40)	0.0003* (1.80)	−0.0409 (−0.33)	−0.0092*** (−4.03)
Constant	0.0083*** (3.59)	0.0201*** (4.60)	−21.1587*** (−5.07)	−0.0842 (−1.51)
Year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Region FE	Yes	Yes	Yes	Yes
N	19,794	19,794	19,789	20,809
Adj. R ²	0.14	0.10	0.29	0.08

Panel A reports the summary statistics of the firm-year observations. *Subsidies/Revenue* is defined as the value of subsidies received as a percentage of total revenue. *Subsidies/Assets* is defined as the value of subsidies received as a percentage of total assets. *Ln(Subsidies)* is the natural logarithm value of subsidies received plus one. *Tax Rate* is the average corporate income tax in a year. Panel B presents the regression results of the impact of controlling shareholders' overseas residency rights on subsidies and tax rate. The independent variable is *Overseas*, a dummy variable that is assigned a value of 1 if any of a firm's controlling shareholders has residency rights outside mainland China, and 0 otherwise. Definitions of other variables are presented in Appendix I. All continuous variables are winsorized at the 1st and 99th percentiles. Standard errors are robust to heteroskedasticity and clustered at the industry level with *t*-statistics reported in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

nature of their firms. But investors did concern that if the controlling shareholder or the person in charge of a company holds residency rights abroad encounters economic issues, they can flee overseas, not returning in the short term, which increases the difficulty of tracking them and imposes relative challenges on supervision".¹⁵

These evidence collectively helps to alleviate the concern that trade credit terms for multi-residency owners are worse because changing residency signals to the market that the government may take negative actions towards the company but supports our argument that from the perspective of trade creditors, entrepreneurs with overseas residency rights are seemingly less committed to their debt obligations *ex ante* and, once they default, *ex post* repayment of trade creditors is not guaranteed. Therefore, when

¹⁵ See <https://www.chinanews.com.cn/stock/2014/06-14/6280541.shtml>.

entrepreneurs have overseas residency rights, creditors are more likely to be conservative when extending trade credit to the firms associated with them.

5.3. The link between trade credit and firm performance

Previous literature has largely shown that the provision of trade credit is key to a firm's growth. For example, Bougheas et al. (2009) show that for a given (insufficient) amount of liquidity, a firm will need to take more trade credit for finance production as a higher production is associated with a higher production cost. Fisman and Love (2003) find evidence that industries that use more trade credit grow relatively faster in countries with poorly developed financial markets, and they extend the analysis to link trade credit substitutability for institutional financing to the overall development of the financial sector. Based on above evidence, the reduction in trade credit is negatively associated with firm performance.

The media report from *the China News* in June 2014 also provides examples about the negative market reaction of investors when controlling shareholders have overseas residency rights.¹⁶ It reports as "In public listed companies, it is not uncommon for family businesses to hold overseas residency rights, and this trend has been accelerating recently. Take the example of IPOs in January this year. The ultimate controllers of many firms have already obtained foreign nationality or permanent residency overseas. For instance, Chen Hui and Yang Jinfu, the couple behind Dongyi Risheng, have obtained permanent residency in Canada. Lin Tianfu and Lin Qinghui, as well as Ding Cuiyuan and her husband, from Guiren Bird, have permanent residency in the Philippines. Shi Shenxiang and Luo Lianqin, the couple behind Youbang Ceiling, have permanent residency in Australia. There are also such examples among the firms intending to go public. Xu Taoming, Chairman and CEO of Shanghai Lianming Machinery, and his wife Ji Weidi, both serve as the ultimate controllers, jointly holding 75.93% of the shares. Both of them possess permanent residency in Australia. Xu Zhou Saimo Electric, is another example. Its controlling shareholders and ultimate controllers are Li Da, Wang Qian, and Li Ran, a family of three. Together, they hold 76.68% of the shares and respectively hold positions as Chairman and CEO, Director, and Director and Vice General Manager. All three also hold permanent residency in Australia. Reporters have noticed that although these stocks have been listed for half a year, many investors still hold negative views on the controlling shareholders' overseas residency rights. The market performance of some firms is also not optimistic. For example, excluding the initial irrational speculation, since the close of trading on March 4th, Dongyi Risheng, Guiren Bird, and Youbang Ceiling have fallen by 35%, 24.45%, and 25.3% respectively."

To better link the reduction in trade credit to the real side of the economy, ideally, we should examine how firm performance changes before and after the change in residency of controlling shareholders. However, we do not have access to the dates of residency changes. This is because, first, most of the owners have already obtained overseas residency rights before the IPO process indicated from the above media report; second, the owners are not required to disclose the exact dates of residency changes after going public. However, given China's mandatory disclosure of the (overseas) residency information of controlling shareholders in the annual report, we are still able to manually track the firm-level dynamic changes in the overseas residency status of controlling shareholders over the sample period on a yearly basis, to determine the effect of a change of residency on firm performance.

Panel A in Table 12 summarizes the dynamic changes in the overseas residency status of the controlling shareholders in the sample. All of the firms are grouped based on how the number of these controlling shareholders with overseas residency permits varies over the sample period. Group 1 includes the firms in which none of the controlling shareholders has ever obtained a residence permit. Group 2 includes the firms in which there are always controlling shareholders with overseas residence permits. Group 3 includes the firms in which the number of controlling shareholders with overseas residence permits changes from zero to non-zero between 2003 and 2020. Group 4 includes the firms in which the number of controlling shareholders with overseas residence permits changes from non-zero to zero between 2003 and 2020. Finally, Group 5 includes the firms that experience multiple changes in the number of controlling shareholders with overseas residence permits during the sample period.

Panel B reports the PSM-DID analysis for firm performance. The treatment group is Group 3 in which the number of controlling shareholders with overseas residency permits changes from zero to non-zero between 2003 and 2020, and the control group is Group 1 in which none of the controlling shareholders have ever obtained overseas residency permits over the entire sample period. *Treated* is a dummy variable that equals one if a firm is in the treatment group, and zero otherwise. *Post* is a dummy variable that equals one if the observation year is after the firm-level staggered change, and zero otherwise. The dependent variables are *Operating Profits/Revenue*, measured as total operating profits divided by total revenue in a quarter; and *Net Profits /Revenue*, measured as total net profits divided by total revenue in a quarter.

As many other factors can determine the likelihood that a firm will have a controlling shareholder who changes his/her residency status, and to the extent that these factors are also correlated with firm performance, we match each treatment observation with control observations by 1:3, while imposing a 0.005 caliper and common support to run the PSM-DID regressions.

In column (1), the negative coefficient of *Treated*Post* (−0.0448) confirms that compared with the control group with zero such controlling shareholders, the firms in the treatment group experience a decline in operating profits when their shareholders start to have overseas residence permits. In column (2), the negative coefficient of *Treated*Post* (−0.0414) confirms that compared with the control group with zero such controlling shareholders, the firms in the treatment group experience a decline in net profits when their shareholders start to have overseas residence permits. This model specification allows the interaction term *Treated*Post* to capture how the change of controlling shareholders' residency rights affects the firm performance, thus building the link between the reduction in

¹⁶ <https://www.chinanews.com.cn/stock/2014/06-14/6280541.shtml>.

Table 12

Changes of controlling shareholders' overseas residency status and firm performance.

Panel A: Staggered Changes of Controlling Shareholders' Overseas Residency Status			
<i>The number of controlling shareholders with overseas residency permits in a firm from 2003 to 2020</i>	<i>Firm N</i>	<i>Year-Quarter N</i>	<i>Overseas N</i>
Group 1: Zero	2208	63,160	0
Group 2: Non-zero	268	5300	5300
Group 3: From Zero to Non-zero	136	5913	2430
Group 4: From Non-zero to Zero	87	2910	1600
Group 5: Other	42	1757	596
Total	2741	79,040	9926
Panel B: PSM-DID Analysis for Firms' Performance			
	(1)	(2)	
	<i>Treatment: Group 3</i>	<i>Treatment: Group 3</i>	
	<i>Control: Group 1</i>	<i>Control: Group 1</i>	
	<i>DV=Operating Profits/Revenue</i>	<i>DV=Net Profits /Revenue</i>	
Treated*Post	-0.0448**	-0.0414**	
	(-2.25)	(-2.12)	
<i>Post</i>	0.0225	0.0211	
	(1.16)	(1.11)	
<i>LEV</i>	-0.2285**	-0.2712***	
	(-2.40)	(-2.91)	
<i>ROA</i>	0.2014**	0.1982**	
	(2.00)	(2.00)	
<i>PPE</i>	0.2088	0.3011	
	(0.85)	(1.25)	
<i>Age</i>	0.2177***	0.2100***	
	(13.26)	(13.05)	
<i>CFFO</i>	0.1099***	0.1205***	
	(6.66)	(7.44)	
<i>Size</i>	0.3366***	0.3066***	
	(5.75)	(5.34)	
<i>Liquidity</i>	-0.0155	-0.0180	
	(-1.08)	(-1.28)	
<i>ST</i>	0.0857	0.0791	
	(1.01)	(0.95)	
<i>SEO</i>	0.4605*	0.4123*	
	(1.88)	(1.72)	
<i>Board Size</i>	0.0032***	0.0034***	
	(2.68)	(2.88)	
<i>Independent</i>	0.0018	0.0007	
	(0.10)	(0.04)	
<i>Top1</i>	-0.0624***	-0.0602***	
	(-3.19)	(-3.14)	
<i>Pay</i>	-3.6988***	-4.1638***	
	(-4.14)	(-4.75)	
<i>CEO Duality</i>	-0.0448**	-0.0414**	
	(-2.25)	(-2.12)	
<i>Constant</i>	0.0225	0.0211	
	(1.16)	(1.11)	
<i>Firm FE</i>	Yes	Yes	
<i>Year-Quarter FE</i>	Yes	Yes	
<i>N</i>	3210	3210	
<i>Within R2</i>	0.14	0.13	

Panel A summarizes the dynamic changes of controlling shareholders' overseas residency status. Firms are grouped based on how controlling shareholders' residency status varies over the sample period. Panel B reports the PSM-DID analysis for firm performance. The treatment group is Group 3 in which the number of controlling shareholders with overseas residency permits changes from zero to non-zero between 2003 and 2020, and the control group is Group 1 in which none of the controlling shareholders have ever obtained overseas residency permits over the entire sample period. *Treated* is a dummy variable that equals one if a firm is in the treatment group, and zero otherwise. *Post* is a dummy variable that equals one if the observation year is after the firm-level staggered change, and zero otherwise. The dependent variables are *Operating Profits/Revenue*, measured as total operating profits divided by total revenue in a quarter; and *Net Profits /Revenue*, measured as total net profits divided by total revenue in a quarter. Definitions of other variables are presented in [Appendix I](#). All control variables are lagged for one year. All continuous variables are win-sorized at the 1st and 99th percentiles. Standard errors are robust and clustered at the industry level with t-statistics reported in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

trade credit and the real side of the economy.

5.4. Other robustness tests

As a robustness test, in addition to trade credit received, we examine whether controlling shareholders' overseas residency status

Table 13

Robustness check: alternative measures.

	(1)	(2)	(3)	(4)
	DV = Trade Credit Provided	DV = Net Trade Credit	DV = Trade Credit Received _{t+1}	DV = Trade Credit Received
<i>Overseas</i>	−0.0037 (−0.54)	0.0102 (1.28)	−0.0130*** (−3.96)	
<i>Overseas_Ratio</i>				−0.0173*** (−4.38)
<i>LEV</i>	0.1454*** (5.80)	0.4190*** (8.21)	−0.2262*** (−4.87)	−0.2781*** (−6.16)
<i>ROA</i>	0.3592*** (4.25)	0.3119*** (5.43)	−0.0704 (−1.21)	0.0456 (0.60)
<i>PPE</i>	−0.2478*** (−6.93)	0.0083 (0.36)	−0.1947*** (−5.47)	−0.2575*** (−6.01)
<i>Age</i>	−0.0263*** (−3.83)	0.0115** (2.34)	−0.0274*** (−3.52)	−0.0372*** (−4.40)
<i>CFFO</i>	−0.0465*** (−3.68)	−0.0399*** (−5.87)	−0.0122** (−2.24)	−0.0066 (−1.04)
<i>Size</i>	−0.0084*** (−2.70)	−0.0325*** (−7.27)	0.0178*** (3.68)	0.0239*** (4.65)
<i>Liquidity</i>	0.0363* (1.78)	0.2917*** (9.75)	−0.2165*** (−6.38)	−0.2588*** (−6.76)
<i>SEO</i>	0.0111*** (4.31)	0.0255*** (7.17)	−0.0185*** (−4.98)	−0.0145*** (−4.63)
<i>Board Size</i>	0.0261*** (3.87)	0.0275*** (5.29)	0.0034 (0.38)	0.0002 (0.03)
<i>Independent</i>	0.0529** (2.53)	0.0685** (2.84)	−0.0018 (−0.07)	−0.0113 (−0.39)
<i>Top1</i>	−0.0002** (−2.24)	−0.0007*** (−4.50)	0.0005*** (3.12)	0.0005*** (3.51)
<i>Pay</i>	−0.0086*** (−2.86)	−0.0110*** (−2.85)	0.0067* (2.01)	0.0029 (1.01)
<i>CEO Duality</i>	−0.0011 (−0.33)	−0.0053* (−1.87)	0.0013 (0.43)	0.0041 (1.14)
Constant	0.3389*** (5.20)	0.5998*** (4.61)	−0.2312** (−2.58)	−0.2466** (−2.77)
Year-Quarter FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Region FE	Yes	Yes	Yes	Yes
N	79,040	79,040	76,611	79,040
Adj. R ²	0.12	0.23	0.15	0.21

This table presents the results of robustness tests using alternative measures of the dependent and independent variables. In column (1), the dependent variable is *Trade Credit Provided*, measured as total of notes receivable, accounts receivable, and prepayments on a quarterly basis, divided by total assets by the end of the quarter, adjusted by industry-year-quarter median. In column (2), the dependent variable is *Net Trade Credit*, calculated as *Trade Credit Received* minus *Trade Credit Provided*. In column (3), the dependent variable is *Trade Credit Received* for the year $t + 1$. The independent variable in columns (1) to (3) is *Overseas*, a dummy variable that takes a value of 1 if any of a firm's controlling shareholders in the current year has residency rights outside mainland China, and 0 otherwise. In column (4), the independent variable *Overseas_Ratio* is the percentage of controlling shareholders that have residency rights outside mainland China. Definitions of other variables are presented in [Appendix I](#). All continuous variables are winsorized at the 1st and 99th percentiles. Standard errors are robust to heteroskedasticity and clustered at the industry level with t -statistics reported in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

can affect a firm's provision of trade credit (*Trade Credit Provided*) and its trade credit balance (*Net Trade Credit*). We measure *Trade Credit Provided* as the sum of notes receivable, accounts receivable, and prepayments on a quarterly basis, divided by total assets by the end of the quarter, adjusted by industry-year-quarter median. *Net Trade Credit* is calculated as *Trade Credit Provided* minus *Trade Credit Received*. We do not find any evidence of a relationship between controlling shareholder's residency status and either measure (see columns (1) and (2) in [Table 13](#)). The heterogeneity of the effects of *Overseas* on *Trade Credit Received* and *Trade Credit Provided* further supports our conjecture that the exclusive nature of the power of a country's legal institutions to enforce entrepreneurs within its territories is more likely to be of concern to suppliers than to customers. To consider a longer horizon for the effect, we also use *Trade Credit Received* _{$t+1$} as the dependent variable: the results, shown in column (3) of [Table 13](#), suggest that the negative effect of controlling shareholders' mobility on trade credit received is long-lasting.

Because concerns about trustworthiness may be more pressing for trade creditors when multiple controlling shareholders in the same firm have a raised default potential, we conduct a further robustness test in which we define *Overseas_Ratio* as the percentage of controlling shareholders that have residence rights outside mainland China.¹⁷ The negative and significant coefficient of *Overseas_Ratio*

¹⁷ A firm can have more than one natural person as a controlling shareholder.

(see column (4) of Table 13) supports our baseline results.

6. Conclusion

We examine whether the power of a country's domestic legal institutions is a potential concern for creditors when extending trade credit. Utilizing the disclosure of the residency status of controlling shareholders in Chinese listed firms, we show that having overseas residence rights negatively affects firms' abilities to obtain trade credit. This negative association is mitigated if the overseas jurisdiction has an extradition treaty with China. For jurisdictions without such treaties, their bilateral political relations with China, quality of national governance, and quality of rule of law also matter because they are associated with the likelihood that fleeing entrepreneurs will be brought to justice beyond Chinese domestic law.

Our results are robust to a quasi-natural experiment that uses the introduction of the Hong Kong national security law as a source of exogenous variation in the borders of law. Trade creditors' concern is especially detrimental to firms that are perceived as less trustworthy *ex ante* (i.e., in regions of lower social trust and/or with higher expropriation potential).

We expect our results to be of interest to a variety of stakeholders, including investors, academics, and policymakers. Given the vital role of trade credit in informal financing and the growing trend in entrepreneurial emigration, the significant influence of controlling shareholders' overseas residency status on the ability of firms to obtain trade credit highlights the crucial role of the legal systems and institutions of other countries in the era of globalization. The notion of investor protection beyond national boundaries has become far more salient with the globalization of investments and the rise of cross-listings.

Existing studies of the legal system have tended to focus on how legal institutions reinforce the efficiency of domestic financial markets. However, our focus on borrowers' overseas residency rights has implications for international investor protection because such mobility challenges the exclusive nature of the power of a country's legal institutions to regulate borrowers within its own territories. This is particularly important with the prevalence of multinational corporations in today's global economy. Identifying financing challenges due to institutional segmentation across markets is valuable to the academic literature. In doing so, we extend the framework of La Porta et al. (1998) by advancing the understanding of the scope of the disciplining effects of corporate law beyond national borders.

CRedit authorship contribution statement

Changqin Luo: Data curation, Formal analysis, Investigation, Methodology, Conceptualization, Funding acquisition, Project administration, Resources, Software, Supervision, Validation, Visualization, Writing – original draft, Writing – review & editing. **Hanwen Sun:** Conceptualization, Data curation, Formal analysis, Funding acquisition, Investigation, Methodology, Project administration, Resources, Software, Supervision, Validation, Visualization, Writing – original draft, Writing – review & editing. **Guochao Yang:** Conceptualization, Data curation, Formal analysis, Funding acquisition, Investigation, Methodology, Project administration, Resources, Software, Supervision, Validation, Visualization, Writing – original draft, Writing – review & editing. **Bohui Zhang:** Conceptualization, Data curation, Formal analysis, Funding acquisition, Investigation, Methodology, Project administration, Resources, Software, Supervision, Validation, Visualization, Writing – original draft, Writing – review & editing.

Data availability

Data will be made available on request.

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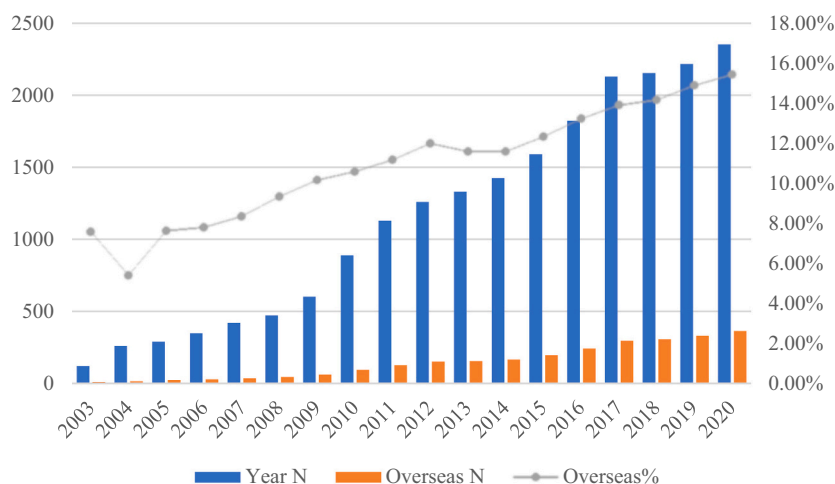
Appendix I. Variable definitions

Variable	Definition
Dependent Variables	
<i>Trade Credit Received</i>	Total of notes payable, accounts payable, and unearned revenue, on a quarterly basis, divided by total assets by the end of the quarter, adjusted by industry-year-quarter median
<i>Trade Credit Provided</i>	Total of notes receivable, accounts receivable, and prepayments, on a quarterly basis, divided by total assets by the end of the quarter, adjusted by industry-year-quarter median
<i>Net Trade Credit</i>	<i>Trade Credit Provided</i> minus <i>Trade Credit Received</i>
Independent Variables	

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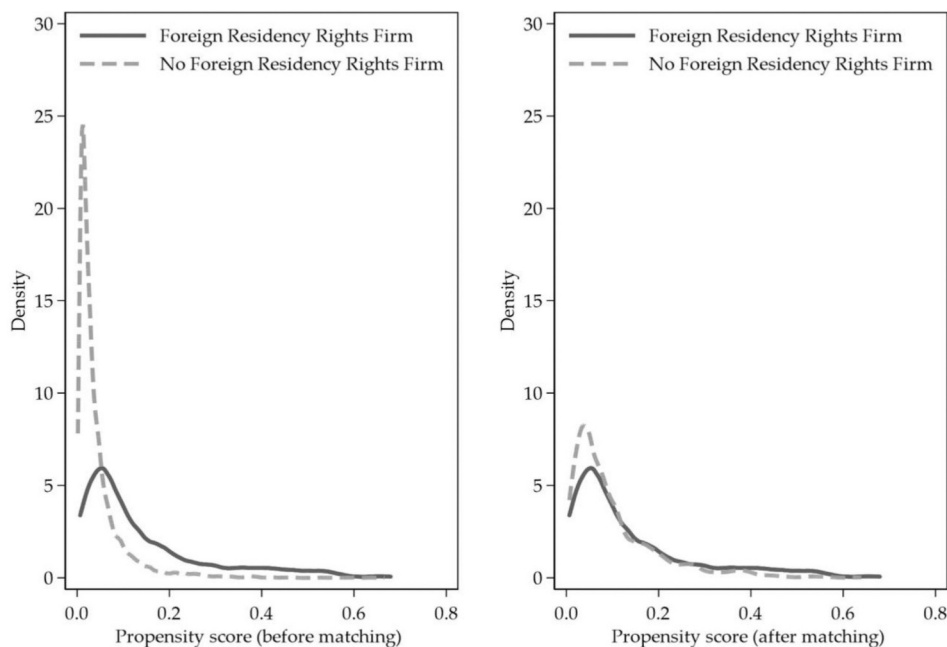
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Variable	Definition
<i>Overseas</i>	A dummy variable that equals one if any of a firm's controlling shareholders in the current year has residency rights outside mainland China, and zero otherwise
<i>Overseas_Ratio</i>	The number of controlling shareholders with residency rights outside mainland China as a percentage of the total number of controlling shareholders
<i>Overseas_Extradition_Yes</i>	A dummy variable that equals one when any of a firm's controlling shareholders in the current year has residency rights in countries/regions that have signed extradition agreements with mainland China, and zero otherwise
<i>Overseas_Extradition_No</i>	A dummy variable that equals one when any of a firm's controlling shareholders in the current year has residency rights in countries/regions without extradition agreements with mainland China, and zero otherwise
<i>Overseas_UNConsistency_High</i>	A dummy variable that equals one when a country/region's consistency of voting records in the United Nations with China is ranked among the top 50 for countries/regions without extradition agreements, and otherwise as zero
<i>Overseas_UNConsistency_Low</i>	A dummy variable that equals one when a country/region's consistency of voting records in the United Nations with China is not ranked among the top 50 for countries/regions without extradition agreements, and otherwise as zero
<i>Overseas_Governance_High</i>	A dummy variable that equals one when a country/region's world governance indicator is above the yearly median for countries/regions without extradition agreements, and otherwise as zero
<i>Overseas_Governance_Low</i>	A dummy variable that equals one when a country/region's world governance indicator is below the yearly median for countries/regions without extradition agreements, and otherwise as zero
<i>Overseas_Rule of Law_High</i>	A dummy variable that equals one when a country/region's rule of law indicator is above the yearly median for countries/regions without extradition agreements, and otherwise as zero
<i>Overseas_Rule of Law_Low</i>	A dummy variable that equals one when a country/region's rule of law indicator is below the yearly median for countries/regions without extradition agreements, and otherwise as zero
Control Variables	
<i>LEV</i>	Leverage: the total of short-term loans, long-term loans, long-term loans due within one year, and bonds payable, divided by total assets by the end of the quarter
<i>ROA</i>	Return on assets: net income divided by total assets by the end of the quarter
<i>PPE</i>	Property, plant and equipment: the total of net fixed assets and net construction in progress, divided by total assets by the end of the quarter
<i>Age</i>	Firm age: the natural logarithm of firm age plus one in the current year
<i>CFFO</i>	Operating cash flows: net operating cash flow divided by total sales by the end of the quarter
<i>Size</i>	Firm size: the natural logarithm of the firm's total assets by the end of the quarter
<i>Liquidity</i>	Liquidity: current assets minus current liabilities divided by total assets by the end of the quarter
<i>SEO</i>	A dummy variable that equals one if the firm has had a seasoned equity offering or rights offering over the past two years, and zero otherwise
<i>Board Size</i>	Board size: the natural logarithm of the number of directors on the board
<i>Independent</i>	Independence of board: the ratio of the number of independent directors to the total number of directors
<i>Top1</i>	The ratio of the number of shares held by the largest shareholder to the total number of shares outstanding
<i>Pay</i>	The natural logarithm of the total compensation of the top three executives
<i>CEO Duality</i>	A dummy variable that equals one if a firm's chairman of board also serves as CEO in the current year, and zero otherwise
Other Variables	
<i>"Runaway" Index</i>	A regional index constructed using the volumes of keyword searches for "Paolu" on Baidu.com by netizens in different regions of China
<i>"Fintech Lending" Index</i>	The loan success rate for each region on the <i>RenRenDai</i> platform, one of the largest P2P lending platforms in mainland China
<i>HHI_Top5Supplier</i>	A proxy for the bargaining power of the top five suppliers (the Herfindahl index of the top five suppliers), that is, the sum of the squares of the proportion (%) of the purchases of the top five suppliers as the total purchases of the firm
<i>HHI_Top3Supplier</i>	A proxy for the bargaining power of the top three suppliers (the Herfindahl index of the top three suppliers), that is, the sum of the squares of the proportion (%) of the purchases of the top three suppliers as the total purchases of the firm
<i>Export_Total</i>	A firm's export revenue divided by total revenue by the end of the quarter
<i>Export_Pair</i>	The value of a firm's exports to the region/country in which its controlling shareholders have obtained a residency permit, divided by total revenue by the end of the quarter
<i>Controller Age</i>	The natural logarithm of the controlling shareholder's age
<i>Gender</i>	A dummy variable that equals one when the controlling shareholder is male, and zero otherwise
<i>Political Connection</i>	A dummy variable that equals one if the controller is a member of the People's Congress or the Chinese People's Political Consultative Conference (CPPCC), and zero otherwise
<i>Finance</i>	A dummy variable that equals one if the controlling shareholder has a financial background, and zero otherwise
<i>Foreign</i>	A dummy variable that equals one if the controlling shareholder has overseas work or study experience, and zero otherwise



Appendix Fig. 1. The Distribution of Observations with Overseas Residency Permits.

This figure presents the distribution of firm-year observations in which controlling shareholders have overseas residency permits. *Year N* indicates the number of firms in each year. *Overseas N* indicates the number of observations involving controlling shareholders with overseas residency rights in each year; *Overseas %* indicates the percentage of such observations relative to the overall sample.



Appendix Fig. 2. Nearest-neighbor Matching Density Function: Hong Kong National Security Law.

This figure presents the nearest-neighbor matching density function for the PSM-DID results in column (2) of Table 5.

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