



## Trade credit, cash holdings, and financial deepening: Evidence from a transitional economy

Wenfeng Wu<sup>a</sup>, Oliver M. Rui<sup>b</sup>, Chongfeng Wu<sup>a,\*</sup>

<sup>a</sup> Antai College of Economics and Management, Shanghai Jiao Tong University, Shanghai, China

<sup>b</sup> China Europe International Business School 699 Hongfeng Road, Pudong Shanghai, China

### ARTICLE INFO

#### Article history:

Available online 24 April 2011

#### JEL classification:

G31

G32

#### Keywords:

Cash

Trade credit

Financial deepening

Receivables

Payables

### ABSTRACT

This paper investigates the effect of financial deepening on the relationship between trade credit and cash holdings among Chinese listed firms. We first document an asymmetric effect of trade payables and receivables on cash holdings, in that firms hold an additional \$0.71 of cash for every \$1 of credit payable but use \$1 of receivables as a substitute for only \$0.15 of cash. We then find that firms in regions with higher levels of financial deepening hold less cash for payables while substituting more receivables for cash. A more highly developed financial sector helps firms to better use trade credit as a short-term financing instrument. Finally, we find that the ratio at which receivables are substituted for cash increased following the implementation of the new receivables pledge policy in 2007, which allowed firms to use receivables as security for loans. This policy event represents an exogenous shock that mitigates the endogeneity concern.

© 2011 Elsevier B.V. All rights reserved.

### 1. Introduction

Previous studies have found that trade credit constitutes a large proportion of total assets. Rajan and Zingales (1995) find that the ratio of aggregate trade credit to total assets was 17.8% for US firms in the early 1990s. Bartholdy and Mateus (2008) show that this ratio ranges between 16% and 24% across sixteen European countries. According to the literature, firms use trade credit as a substitute form of short-term finance to conventional institutional loans, especially if they have been denied access to the institutional loan market (Petersen and Rajan, 1997; Fishman and Love, 2003).<sup>1</sup>

Although firms can delay payment to their suppliers through trade credit, they still need to hold some cash for forthcoming trade credit obligations. Late trade credit payments have costs, such as the cost of forgoing a possible cash discount, the possibility of incurring late payment penalties, the opportunity cost associated with a possible deterioration in credit reputation, and a possible increase in the selling price set by the seller. At the same time, firms often take on different roles in trade credit transactions.

\* Corresponding author. Tel.: +86 21 5230 1194; fax: +86 21 5230 1087.

E-mail addresses: [wfwu@sjtu.edu.cn](mailto:wfwu@sjtu.edu.cn) (W. Wu), [oliver@baf.msmail.cuhk.edu.hk](mailto:oliver@baf.msmail.cuhk.edu.hk) (O.M. Rui), [cfwu@sjtu.edu.cn](mailto:cfwu@sjtu.edu.cn) (C. Wu).

<sup>1</sup> Giannetti et al. (2011) provide a review of these theories. Some theories emphasize operations-oriented motives such as informational advantage, price discrimination, switching costs, product quality guarantees, and the profitability problem. Other theories focus on financial motives including the collateral hypothesis and the repayment enforcement hypothesis.

Many companies, particularly those at intermediate points in the value chain, use trade credit as a customer and provide it as a supplier. As a supplier of trade credit, a firm can accept credit receivables as a cash substitute by, for example, factoring receivables or using them to secure loans. Consequently, trade payables and receivables both have effects on firms' cash holdings: payables increase cash holdings, while receivables have the opposite effect.

As cash is not productive, firms prefer to hold less cash for payables and expect to be able to substitute more receivables for cash. The sensitivity of cash holdings to payables and receivables is affected by many factors including the nature of the firm's payables and receivables and the firm characteristics of suppliers and customers. In this study, we focus on another significant factor: the institutional finance environment. More specifically, we investigate how financial deepening affects the sensitivity of cash holdings to trade credit.

In the strand of literature that documents the importance of the financial system to economic growth (Dornbusch and Reynoso, 1989; Hasan et al., 2009), development of the financial sector is seen to improve the performance of financial intermediaries, which in turn provides the industrial sector with better financial services. Firms can consequently gain access to finance more easily and at a lower cost. This leads to a lowering of the cost of cash shortages for trade payables. In addition, a deeper financial sector increases the substitute ratio of receivables for cash, as firms can factor receivables more easily or use them to secure loans from financial intermediaries at a lower cost. We thus hypothesize that

firms in regions with higher levels of financial deepening hold less cash to cover trade payables and have a higher substitute ratio of receivables for cash.

Like their counterparts in other countries, Chinese firms exhibit high ratios of trade credit to assets. Trade payables and receivables represented 11% and 15%, respectively, of the total assets of Chinese listed firms over the period from 1999 to 2009. There are also great variations in institutional quality across Chinese regions (Jin et al., 2005), and the levels of financial deepening across regions are uneven. These characteristics make China a natural laboratory for a cross-sectional investigation of whether and how financial sector development shapes the relationship between trade credit and cash holdings. In 2007, China promulgated a new receivables pledge policy that officially allowed firms to use receivables as collateral for bank borrowings. This policy event represents an exogenous shock that affords us the opportunity to examine the influence of financial deepening on the sensitivity of cash holdings to trade credit and mitigates concerns over endogeneity.

Using data from Chinese listed firms over the period from 1999 to 2009, we find that firms need to hold an additional \$0.71 of cash for every \$1 of credit payable, whereas \$1 of credit receivable substitutes for only \$0.15 of cash. This finding is not consistent with the traditional wisdom that \$1 of credit receivable covers \$1 of credit payable in cash. Firms with zero net trade credit (those for which credit payable equals credit receivable) still need to hold cash for payables. This asymmetric influence of payables and receivables on cash holdings suggests that past studies may have drawn biased conclusions by treating net trade credit as just one component of working capital in estimating its impact on cash holdings. It is more appropriate to disentangle the impacts of payables and receivables on cash holdings, as they are separate and different from each other.

We also find that Chinese firms in regions with higher levels of financial deepening hold less cash to cover trade payables and have a higher substitute ratio of credit receivables for cash. Additionally, we find that the new receivables pledge policy introduced in 2007 has exerted a considerable impact on the sensitivity of cash holdings to trade receivables, with the substitute ratio of receivables for cash increasing significantly following implementation of the new policy. This effect is stronger in firms located in regions with higher levels of financial deepening. However, the new receivables pledge policy does not affect the sensitivity of cash holdings to trade payables, as it does not involve trade payables. Overall, these results show that development of the financial sector helps firms to mitigate the asymmetric impact of trade payables and receivables on cash holdings. A higher level of financial deepening improves the short-term financing function of trade credit.

Furthermore, we analyze the influence of related-party trades and state ownership on the sensitivity of cash holdings to trade credit. We find that state-owned enterprises (SOEs) and firms that have engaged in related-party trades hold less cash to cover payables and have a higher substitute ratio of receivables for cash. In addition, related-party trades and state ownership have substitute effects for financial deepening on the relationship between trade credit and cash holdings. The new receivables pledge policy has a stronger effect on the sensitivity of cash holdings to receivables in both firms that conduct related-party trades and SOEs, but its effect on the sensitivity of cash holdings to payables is not different for related-party trade firms and state-owned entities. These results not only support our hypothesis, but also partially address the concern that factors other than financial deepening or the new receivables pledge policy drive our results at the province-year level, as related-party trades and state ownership are firm-specific, but are not related to the province-year level.

This study contributes to the literature in several ways. First, it extends research on the impact of financial deepening (Dornbusch

and Reynoso, 1989; Hasan et al., 2009). It investigates the influence of financial deepening at the micro level by linking two important firm operations: trade credit and cash holding policies.<sup>2</sup> We demonstrate that financial deepening can help firms to make better use of trade credit as a short-term financing instrument.

Second, we enrich existing studies on trade credit. Most of the literature on trade credit focuses on why firms extend and take credit (Petersen and Rajan, 1997; Cunat, 2007; Giannetti et al., 2011). This study instead examines how trade credit influences the firm's operations or, more specifically, its cash management policy. Our finding that payables and receivables exert different impacts on cash holdings deepens our understanding of the difference between the demand and supply sides of trade credit.

Third, this study complements research on the determinants of cash holdings (Opler et al., 1999; Dittmar et al., 2003; Ozkan and Ozkan, 2004; Dittmar and Mahrt-Smith, 2007; Guney et al., 2007). Past studies have not examined trade credit as a separate determinant of cash holdings (Opler et al., 1999; Dittmar and Mahrt-Smith, 2007).<sup>3</sup> However, our results show that trade credit plays a significant role in explaining cash holdings, as it increases the explanatory power of the regression model of their determinants. Furthermore, the asymmetric influence of credit payables and credit receivables indicates that it is better to disentangle their distinct effects in considering their overall impact on cash holdings.

Finally, we find that the ratio at which receivables are substituted for cash has increased since implementation of the new receivables pledge policy in 2007 allowing firms to use receivables as security for loans, which represents a deepening of the financing environment. This policy event also represents an exogenous shock that mitigates concerns over endogeneity, which are common in corporate finance research (Li and Prabhala, 2005).

The remainder of the paper is organized as follows. Section 2 introduces the institutional background on bank lending in Chinese firms, the use of trade credit, and the 2007 receivables pledge policy. Section 3 develops the hypotheses. Section 4 describes the data, variables, and methodology. Section 5 presents the empirical results and Section 6 concludes the paper.

## 2. Institutional background

### 2.1. Banking lending in Chinese firms

The Chinese financial system is dominated by a large banking sector. The big four state-owned banks, comprising the Industrial and Commercial Bank of China (ICBC), Agricultural Bank of China (ABC), Bank of China (BOC), and China Construction Bank (CCB), account for more than two-thirds of total deposits and loans in China.<sup>4</sup> At the end of 2009, the big four banks had deposits of 30.06 trillion RMB and loans of 17.32 trillion RMB, while the other 13 joint-stock commercial banks had deposits of 10.95 trillion RMB and loans of 8.19 trillion RMB (People's Bank of China, 2010).

<sup>2</sup> Only a few studies investigate the influence of financial deepening at the micro level, such as the way in which financing development affects firm growth and investment (Demirgüç-Kunt and Maksimovic, 1998; Beck et al., 2004).

<sup>3</sup> Among the determinants of cash holdings examined in the literature, the term most closely related to trade credit is "net working capital", which is regarded as a liquidity substitute. Net trade credit (accounts receivable minus accounts payable) is just one component of net working capital (Opler et al., 1999; Dittmar and Mahrt-Smith, 2007).

<sup>4</sup> In the mid-1990s, the Chinese Government promulgated the Commercial Bank Law and established three "policy banks" to take over the "policy"-related lending of the above big four banks. Thus, the big four banks were commercialized. In addition to the big four banks, there are another 13 joint-stock commercial banks such as the Bank of Communications, China CITIC Bank, Shenzhen Development Bank, and China Merchants Bank. Other than these 17 banks, there were 143 city commercial banks, 43 rural commercial banks, and 196 rural cooperative banks in China at the end of 2009 (China Banking Regulatory Commission, 2010).

Download English Version:

<https://daneshyari.com/en/article/5089476>

Download Persian Version:

<https://daneshyari.com/article/5089476>

[Daneshyari.com](https://daneshyari.com)