Journal of Economic Behavior & Organization 112 (2015) 1–16

Contents lists available at ScienceDirect

Journal of Economic Behavior & Organization

journal homepage: www.elsevier.com/locate/jebo

Foreign currency borrowing and knowledge about exchange rate risk

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ARTICLE INFO

Article history:
Received 5 May 2014
Received in revised form
10 December 2014
Accepted 17 December 2014
Available online 10 January 2015

JEL classification:
D12
G11
D80

Keywords:
Household borrowing
Financial literacy
Foreign currency loans
Emerging economies

ABSTRACT

Foreign currency loans by unhedged borrowers are widespread in many regions of the world. Against this background, we study whether the demand for foreign currency loans is driven by a lack of knowledge about the exchange rate risk emanating from such loans. We employ individual-level survey data from eight Central and Eastern European countries that provides information on agents' knowledge about exchange rate risk. Results show, first, that a majority of respondents is aware that depreciations increase loan installments. Second, we find that knowledge about the exchange rate risk exerts a strong impact on the choice of the loan currency.

1. Introduction

Foreign currency loans are widespread in many regions of the world with a share of about 25% in Latin America, 40% in the Middle East and above 50% in several Central and Eastern European countries (CEECs). While previous research has shown that foreign currency borrowing may well be individually and socially optimal (e.g. Ize and Levy-Yeyati, 2003) and can be conducive to economic growth, the depreciations that have occurred during the financial crisis in some CEECs and the rises in loan delinquencies also have made it clear that foreign currency borrowing can pose a substantial threat to mostly unhedged households which are vulnerable to currency fluctuations.[1] This has negative repercussions for financial stability and, ultimately, macroeconomic stability (Ranciere et al., 2010). Against this background, it is remarkable that households' demand for such loans has not stalled (Fidrmuc et al., 2013).

Given that the choice of an optimal loan is already complex in domestic currency (Campbell, 2006) and the finding that financially illiterate borrowers choose less advantageous loans than financially literate borrowers (e.g. Disney and Gathergood, 2013; Lusardi and de Bassa Scheresberg, 2013), we presume that a lack of knowledge about yet another dimension of the loan, exchange rates, could be an important determinant of widespread foreign currency borrowing. To assess

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[1] E.g. "Interest-rate swings in Europe sting borrowers and banks – Households, small firms sink under weight of foreign-currency debts" (Wall Street Journal, July 29, 2010, p. 14).

http://dx.doi.org/10.1016/j.jebo.2014.12.015
0167-2681/

this conjecture, we utilize data from a household survey that has been conducted in eight CEECs on commission of the Oesterreichische Nationalbank. This representative survey provides information on the borrowing behavior of households, the currency denomination of their loans as well as on factors that have been identified in the literature as drivers of foreign currency loan demand, like expectations of monetary conditions. Importantly, a novel survey question provides information on agents' literacy regarding exchange rate risk: "*Suppose that you have taken a loan in euro. Then the exchange rate of the [respective local currency] depreciates against the euro. How does this change the amount of local currency you need to make your loan installments? (increases/decreases/stays exactly the same/don't know)*".

Based on this information, we provide evidence on two issues: First, what is the share of borrowers who cannot give a correct answer to the exchange rate literacy question? Closely connected, we also analyze how exchange rate literacy relates to other financial literacy measures. Second, focusing on the behavioral response of agents, does knowledge about the implications of depreciations affect the demand for foreign currency loans (FCLs)? Answers to both questions are important for understanding widespread foreign currency borrowing and can inform policy makers, i.e., whether loan application procedures should be adapted to improve borrowers' awareness of exchange rate risks.

Our results show that in seven out of eight countries the majority of borrowers understand the risk of exchange rate depreciations – although in some countries the share of correct answers is close to 50% only. At first sight, this evidence suggests that misinformation of consumers alone cannot be the main source of widespread demand for FCLs. However, to substantiate this statement, one also has to demonstrate that financial literacy actually causes a behavioral response. Therefore, we estimate a model which relates demand for FCLs to factors which have been shown in the literature to affect the loan denomination choice. This model accounts for measures of monetary credibility, the risk exposure of borrowers (hedging capabilities) and socio-demographic factors – essentially building upon the results of Fidrmuc et al. (2013). Additionally, we control for exchange rate literacy. Our findings confirm that a better knowledge about exchange rate risks exerts a negative impact on demand for FCLs. To ascertain that we do not misinterpret the direction of causality, we utilize information about agents' depreciation expectations. Interacting this information with exchange rate literacy, demonstrates that agents behave as predicted by economic reasoning which lends support to the existence of a causal link from exchange rate literacy to the choice of the loan currency.

Our paper contributes, both to research on financial literacy and to research on the determinants of foreign currency borrowing. As is outlined in Section 2, foreign currency borrowing can be the result of optimizing behavior, assuming that individuals understand the associated risks. However, the plausibility of this assumption is challenged by findings from the literature on the interrelationship between financial literacy and households' indebtedness. Stango and Zinman (2009) reveal that borrowers underestimate the cost of borrowing. For the U.S., Lusardi and Tufano (2009) report that financially illiterate individuals tend to over-borrow and incur higher fees when borrowing and Lusardi and de Bassa Scheresberg (2013) show that financially illiterate individuals are more likely to engage in high-cost borrowing. Gerardi et al. (2013) and Gathergood (2012) find that financially illiterate individuals are more likely to default on their mortgage. In the broader context of research on the effect of financial literacy on saving, consumption and borrowing decisions, Lusardi and Mitchell (2014) note that only relatively few papers account for endogeneity and measurement error and thus identify a causal relationship between financial literacy and financial decision making.[2]

Against this background, our contribution is, first, to provide evidence on agents' basic knowledge of exchange rate risk (exchange rate literacy) in eight countries and to compare it to other financial literacy measures. Second, we utilize individual-level information on monetary expectations to assess whether demand for FCLs is causally driven by a lack of knowledge about exchange rate risk.

2. Extent and determinants of foreign currency borrowing in Central and Eastern Europe

In the sample of countries covered in this analysis the share of loans denominated in foreign currency or indexed to foreign currency ranges from 33% in Poland to 77% in Croatia (in value terms). These loans are granted both for consumption purposes and for mortgages, although, on average, a higher percentage of mortgages than consumption loans is denominated in foreign currency (Beckmann et al., 2015). It has been suspected that the high share of foreign owned banks – accounting for 70–95% of total banking assets[3] – may have impacted lending practices. While this question has not been fully answered yet, descriptive evidence from households shows that foreign currency loans are held both at domestically and at foreign owned banks and that there is no difference with respect to the share of granted FCLs (except for Croatia and Hungary, where the share of FCLs is significantly higher at foreign owned banks; Beckmann et al., 2015). Due to a lack of harmonized data, interest rates on loans to households in local and in foreign currency are not straightforward to compare across countries. For 2010, available information from central banks shows that the interest rate on a local currency mortgage was between 1 and 5% points higher than for a foreign currency mortgage.

[2] Typically, such inference rests on instrumental variable estimations (e.g. van Rooij et al., 2011; Behrman et al., 2012; Klapper et al., 2013) or on field experiments. In the latter case, both Cole et al. (2011) and Collins (2013) find only a modest impact of financial literacy programs on actual behavior.

[3] *Source*: EBRD Banking Survey, available at www.ebrd.com (last accessed 04.12.14).