The Rise in Foreign Currency Bonds: The Role of US Monetary Policy and Capital Controls[†,*]

Philippe Bacchetta
University of Lausanne
Swiss Finance Institute
CEPR

Rachel Cordonier
Swiss National Bank

Ouarda Merrouche
University Paris-Nanterre
EconomiX

This draft: January 2022

Abstract

An unintended consequence of loose US monetary policy is the increase in currency risk exposure abroad. Using firm-level data on corporate bond issuances in 16 emerging market economies (EMEs) between 2003 and 2017, we find that EME companies are more likely to issue bonds in foreign currency when US interest rates are low. This effect is driven by non-exporters. Interestingly, capital controls on bond inflows significantly decrease the likelihood of issuing in foreign currency and can even eliminate the adverse impact of low US interest rates. In contrast, macroprudential foreign exchange regulations increase foreign currency issuances among nonfinancial companies.

JEL classification numbers: G21, G30, E44

Keywords: foreign currency, corporate bonds, emerging markets, capital controls, currency risk.

[†] Philippe Bacchetta (corresponding author), Internef 523, Faculty of Business and Economics, University of Lausanne, 1015 Lausanne, Switzerland, philippe.bacchetta@unil.ch; Rachel Cordonier, Swiss National Bank, Börsenstrasse 15 P. O. Box CH-8022 Zurich, Switzerland, Rachel.Cordonier@snb.ch; Ouarda Merrouche, Faculty of Business and Economics, University of Paris-Nanterre, Bâtiment G, 200, Avenue de la République 92001 Nanterre cedex, France, ouarda.merrouche@alumni.eui.eu or omerrouc@parisnanterre.fr.

[*] We would like to thank Alessandro Rebucci and two referees for comments on an earlier draft. Ka Lok Wong provided excellent research assistance. The views expressed in this paper are those of the authors and do not necessarily reflect those of the SNB. Ouarda Merrouche thanks the ANR for financial support under project DERIVREG N° ANR-19-CE26-0016-01 and the SNSF exchange program for financial support.

1. Introduction

A striking feature of emerging market economies (EMEs) in the last decade has been the substantial growth of debt by nonfinancial corporations in both local and foreign currency. Most of the increase has come from bond issuance rather than from banks because of tighter regulations forcing banks in advanced economies to retreat from EME and de-risk in the aftermath of the Global Financial Crisis.[1] A concern is that risks migrate to less regulated and less transparent entities that behave more pro-cyclically making markets more volatile. Another concern is that firms increase their foreign currency exposure, which contributes to financial instability.[2] This concern has been fueled by the dominance of corporate bonds issued in dollars. First, there is a search for yield due to low short-term interest rates in the US (e.g., see McCauley et al., 2015). Second, there has been a growing demand for dollar assets (e.g., Maggiori et al., 2018), which has led to cheaper borrowing in dollars.[3] Lower borrowing costs increase the incentive to issue bonds in dollars despite the exchange rate risk and heighten solvency risk (as firms become vulnerable to tightening of dollar conditions).[4] Are there policies that can limit this increase in systemic risk? Standard macroprudential policies may not be appropriate, as they typically focus on financial intermediaries. In contrast, there might be a role for capital controls.

This paper sheds light on these issues by using firm-level data on corporate bond issuances for EME companies and analyzing the determinants of foreign currency borrowing. The results show that companies are more likely to issue in foreign currency with more expansionary US

[1] E.g., see Gozzi et al. (2015), Ayala et al. (2017), and CGFS (2021) for descriptions. The issuance of new debt (our focus) is dominated by bonds, while the stock remains dominated by loans as of 2017.
[2] Krugman (1999), Aghion et al. (2004), and the subsequent theoretical literature show how corporate debt denominated in foreign currency can lead to financial crises.
[3] Liao (2019) documents deviations from covered interest rate parity on corporate bonds since 2008. In this context, Jiang et al. (2019) develop a theoretical model where the dollar provides a convenience yield, which implies increased dollar borrowing outside of the US. Another reason issuing in dollars might be cheaper is that bonds may be included in international indices. See Calomiris et al. (2019).
[4] For systematic analyses of these developments, see Shin (2014), Chui et al. (2014), Feyen et al. (2015), Acharya et al. (2015), International Monetary Fund (2015), Chow (2015), Chui et al. (2016), Chang et al. (2017) or Cerutti and Hong (2018).

monetary policy. This effect is stronger for domestic-oriented firms whose revenues are negatively correlated with a currency depreciation and concerns a wide range of firms along the leverage distribution. Higher leverage increases financial fragility and is magnified by foreign currency debt especially for non-exporters. Therefore, there may be systemic risk implications from increased foreign currency corporate bonds. We examine the role of policies in this context. We find that capital controls on bond inflows significantly decrease the likelihood to issue in foreign currency and can even eliminate the adverse effect of low US interest rates. In contrast, macroprudential FX regulations increase the probability of issuance in foreign currency, in line with Ahnert et al. (2021). These results indicate that capital controls may complement other prudential tools when leverage increases through market borrowing.[5]

The empirical analysis is conducted on 16 EMEs[6] over the period 2003-2017. The data on publicly issued corporate bonds come from the SDC Platinum database (Thomson Reuters). We focus on the private nonfinancial sector and exclude all government-related companies. The sample includes only companies that have a positive demand for debt, resulting in a baseline dataset of 1647 companies and 4697 bond issuances. Our matched covers on average 40 percent of the bond activity across the sample period.[7] Our sample is naturally biased towards firms issuing bonds.

To assess variations in companies' foreign currency exposure, we look at the proportion of corporate bond issuances denominated in foreign currency among companies that have issued bonds. By looking at the share of foreign currency-denominated bonds, conditional on an issuance taking place, we focus on the decision to issue in a particular currency and not on the decision to issue or on the size of issuance.

[5] See Ostry et al. (2011) for a policy discussion of the role of capital controls as prudential measures in the presence of corporate bonds.
[6] Argentina, Brazil, Chile, China, Colombia, India, Indonesia, Malaysia, Mexico, Peru, Philippines, Poland, Russian Federation, South Africa, Thailand, and Turkey.
[7] This is the average across the nine countries that contribute 90 percent of our observations and ignoring years before 2005 when Orbis data are sparse.

To obtain firm characteristics and, in particular, balance-sheet data, we use two databases: Worldscope (Datastream – Thomson Reuters), which contains data only on (large) publicly listed companies, and Orbis (Bureau van Dijk), which offers data for the last decade. Data on capital controls are taken from Fernandez et al. (2016) and allow us to distinguish across various types of capital flows and to focus on controls on bond inflows. For macroprudential policies, we use the databases of Ahnert et al. (2021) and Cerutti et al. (2017).

For the empirical methodology, we apply fractional logistic methods as suggested by Papke and Wooldridge (2008) and reviewed by Ramalho et al. (2011). The reason is that our dependent variable is a fractional variable. An interesting feature of our empirical specification is the neat identification that allows for clear causal inference. Indeed, global variables such as US interest rates or the VIX are exogenously given for individual companies in EMEs. Moreover, a company's decision to issue in domestic or foreign currency can hardly be thought to influence domestic macro variables. To further ensure that this is the case, we lag by one period (one year or quarter) all our macro variables.[8] Lagging our capital control variables by one year also solves the issue of the exact timing of their introduction within a year.

Controlling for relevant variables used in the literature, we start by analyzing the determinants of foreign currency borrowing using firm-level, country-level and global variables. We find that loose US monetary policy, measured by a shadow Fed funds rate, significantly increases the likelihood of a firm issuing in a foreign currency.[9] In our baseline regression, we find that a decrease in the shadow rate of one standard deviation increases the share of bonds issued in foreign currency by 13 percentage points. The threat to financial stability associated with such increase in foreign currency debt is significant because it is concentrated at domestic-

[8] One could argue that if companies decide simultaneously to issue in foreign currency, this could influence some macro variables, for instance the activation of capital controls. By lagging by one year, we overcome this potential issue.

[9] Brauning and Ivashina (2020) find similar results when looking at lending by global banks to EMEs. On the other hand, Avdjiev and Hale (2018) find more ambiguous results.

oriented firms whose debt burden increases when the local currency depreciates. However, systemic risk is somewhat mitigated by the fact that these firms are ranked at the bottom end of the leverage distribution.

Turning to the role of policies, we find that capital controls significantly reduce the likelihood of foreign currency issuance and curb the impact of US monetary policy: having controls on bonds acquired by foreign investors reduces the share of issuances in foreign currency by 15 to 20 percentage points. Interestingly, the marginal effects of capital controls are particularly strong at low values of the shadow Fed funds rate. Furthermore, capital controls can fully eliminate the effect of the shadow Fed funds rate on the probability of foreign currency issuances. Looking at the role of macroprudential policies, we find that more FX regulations on financial intermediaries lead to a higher likelihood of issuing bonds in foreign currency, in line with previous findings by Ahnert et al. (2021).

Having documented that capital controls can curb firms' reliance on foreign currency debt, we address the question of whether they have been used effectively by policymakers to reduce firms' vulnerability to exchange rate fluctuations. In the spirit of Adler and Dumas (1984) and similarly to Ahnert et al. (2021), we analyze how stock returns react to exchange rate fluctuations and extend their framework to explore the role capital controls. We find that capital controls can significantly mitigate the vulnerability of firms to exchange rate fluctuations.

Finally, to balance costs and benefits, we provide an analysis of the real effects of capital controls. We find a strong negative effect of capital controls on employment growth, especially for firms with a high external finance dependency, larger firms, and domestic-oriented firms. For the latter category of firms, we also find significant negative effects on sales growth, cash growth, and capital expenditure in line with Alfaro et al. (2017).

The contribution of this paper is to focus on the choice of currency composition of corporate debt and the role of capital controls. While there is a large literature on the determinants

of foreign currency borrowing, only a small number of studies analyze corporate bonds in EMEs.[10] Bruno and Shin (2017) examine the determinants of the issuance of US dollar-denominated bonds by nonfinancial corporations outside the United States at the firm level. Their findings show that companies issue more debt in US dollars when they have large cash holdings, especially in periods of advantageous carry-trade opportunities. In a similar vein, Caballero et al. (2015) emphasize that nonfinancial firms act as financial intermediaries, issuing abroad when carry-trade opportunities are favorable, especially when capital controls are high. Unlike the current study, neither paper considers any global factors that could influence firms' decisions. Moreover, both focus on the likelihood of issuing US dollar-denominated bonds versus not issuing or issuing in local currency, while we analyze the determinants of currency denomination conditional on the firm issuing debt.[11]

The literature on capital controls and macroprudential policies is vast, but only a few studies distinguish across types of capital flows, especially between bank lending and corporate bonds.[12] The recent literature, however, considers more disaggregated capital controls, and some studies focus on bond flows. For example, using country-level data, Ostry et al. (2012) find that controls on bond inflows reduce market borrowing in favor of bank lending. However, we are not aware of studies that examine the impact of capital controls on the currency composition of corporate bond issuances. Macroprudential policies have been found to have an impact on bank lending or on total credit, but these policies do not directly affect bond inflows. In contrast, Ahnert

[10] In a recent study, Gambacorta et al. (2020) examine the determinants of dollar borrowing by corporations in advanced countries.

[11] Allayannis et al. (2003) examine the currency denomination of debt for 327 of the largest companies in East Asia between 1996 and 1998. They empirically examine companies' decisions to issue debt in local, foreign or synthetic currency, i.e., hedged foreign currency, and find that the factors determining the currency denomination vary. They emphasize that natural and synthetic domestic debt are substitutes, while domestic and foreign currency debt are closer to complements.

[12] See Erten et al. (2021) and Rebucci and Ma (2019) for recent surveys of the literature. In a recent paper, Das et al. (2021) show that preemptive capital controls reduce exchange rate risk premia, which decreases the incentive to borrow in foreign currency.

et al. (2021) find that macroprudential FX regulations applied to the banking sector stimulate nonfinancial firms to use more foreign currency bonds.

The remainder of the paper is organized as follows. Section 2 develops the empirical approach and describes the data. Section 3 presents the main results on the determinants of foreign currency borrowing and the role of capital controls. Section 4 assesses the broader policy questions of the cost of capital controls and their impact on the resilience of firms in the face of exchange rate movements. Section 5 concludes.

2. Methodology and Data

This section starts by describing the econometric method. Then, it defines the key explanatory variables and the set of control variables and explains the motivations for their use. Our dependent variable is the share of issued bonds denominated in foreign currency, conditional on an issuance taking place in a given quarter. Hence, our focus is on firms with a positive demand for debt: we do not explain the decision to issue debt but the choice of the issuance currency.

2.1 Methodology

The dependent variable is a fractional variable: the share of bonds issued in foreign currency in a given quarter. Hence, we use a fractional logistic model. Formally, we estimate the following equation:

$$E\left(\{FX_{fijt}|F_{fit}, I_{jt}, L_{it}, G_t\}\right) = \Lambda\left[\alpha_{ji} + \beta_F F_{fit} + \beta_I I_{jt} + \beta_L L_{it} + \beta_G G_t\right] \quad (1)$$

where FX_{fijt} is the dependent variable, representing the share of issuance in foreign currency for a given firm *f* in country *i* and a given industry *j* in quarter *t*. $\Lambda(z) == exp(z)/[1 + exp(z)]$ is the logistic function, and $F_{fit}, I_{jt}, L_{it},$ and G_t are vectors of firm characteristics, industry controls, local macro controls, and global variables, e.g., the shadow Fed funds rate or the VIX. The

estimation is based on a quasi-maximum likelihood method based on the Bernoulli log-likelihood function. Since our dependent variable is a ratio, we weight our regression using the principal amounts so as to give more weight to firms that issue more debt.

We also control for country and industry time-invariant characteristics through country and industry fixed effects. The choice to use industry rather than firm fixed effects is due to the small number of issuances per firm over the sample period: many firms enter the sample only once while 42% of our baseline sample of firms issue bonds up to 3 times over the whole period (17% of firms appear only once, 13% only twice and 12% only three times). As we compare firms belonging to the same industry and control for a wide range of firm characteristics, our estimates are unlikely to be materially affected by a change in the population of firms tapping the market over time. We report robust standard errors clustered at the country level. All explanatory variables are lagged by one period, and marginal effects are reported. Using a graphical analysis, we also investigate marginal effects at various values of some key variables. This sheds light on potential nonlinear effects and is useful to assess interaction effects and systemic risk implications of our results.

Importantly, we extend equation (1) to explore the effect of capital controls and macroprudential policies. We are interested in both the direct effect of policies and their effects as potential mitigators of the influence of global factors. Interaction effects are not straightforward to derive in nonlinear models. Ai and Norton (2003) show that using the partial effect of the estimated interaction term is not a meaningful way to estimate the magnitude of an interaction effect in nonlinear models. Building on their work, Greene (2010) proposes graphical representations of interaction effects. We follow his approach.

2.2 Data Sources and Variable Definitions

Table 1 gives the description of our sample by country. Descriptive statistics are reported in Table 2 for the variables used in the baseline model and in Appendix A Table A.1 for the variables used in the robustness analysis. In this section, we describe our sources and define and explain the motivation for the use of each variable. A complete description of all variables and sources are given in Appendix C.

Bond issuances

We collect bond issuance data from the SDC Platinum database (Thomson Reuters). The data collection is based on the ultimate parent firm's nationality instead of the issuer's nationality, meaning that bonds issued by foreign subsidiaries are included in our sample. For instance, the branch of a Malaysian company issuing bonds abroad is considered in our analysis. However, this design ensures that a foreign firm's subsidiary located in Malaysia issuing bonds is not part of our sample of EME firms.

We observe the currency denomination of the bond, whether the bond is issued locally, the nationality of the issuer, the sector of activity of the issuer, the issuer's name, the amount issued; and the issuance date. Foreign currency bonds include mostly dollar bonds but also bonds denominated in yen, euros, and Swiss francs. Our final baseline sample contains 4697 bond issuances by 1647 firms between 2003 Q1 and 2017 Q4 and covers 16 EME countries. Table 1 reports the number of bonds issued and issuers by country.

The share of foreign currency debt issued is constructed as follows: when a company issues more than once in a given quarter and in two different currencies, we use the principal amounts as weights. If a company issues only once and fully in foreign (domestic) currency, its share of issuance in foreign currency is equal to 100% (0%). Table 2 reports descriptive statistics of the foreign currency share. On average, approximately 19.5 % of the bonds issued are in foreign currency. This is much larger if we focus on bonds issued in the international market.

Figure 1 depicts the percentage of bonds issued in foreign currency by country, distinguishing between the first and second halves of the sample period. As seen for several countries, there is a shift over time from local to foreign currency debt.

Global variables and country characteristics

To measure global liquidity, we use the VIX from the FRED platform of the St. Louis Fed and the shadow Fed funds rate (FFR) measured by Wu and Xia (2016) and available on their website.[13] Both variables are at daily frequency and averaged quarterly. The average shadow FFR is below zero, at -0.38%. This is not surprising, as our sample contains more quarters with relatively loose monetary policy conditions. In fact, the sample averages of the shadow FFR before and after 2010 are 2.5 and -1.57, respectively. The average VIX is 18.5. In the analysis, alternative measures of global financial conditions are used as well, and various additional or alternative macro variables are included as robustness checks.

We collect various country-level time-varying characteristics. Multiple data sources are used to collect these variables. Countries' three-month money market rates are obtained from Datastream to measure the domestic monetary policy stance and therefore the cost of domestic currency debt (local interest rate). Real GDP growth is computed as the growth rate of real GDP relative to the same period in the previous year: higher growth may be associated with less demand for foreign currency debt as firm quality improves and the domestic banking system becomes more dynamic. In our sample, GDP growth values are quite heterogeneous across but also within countries. Overall, GDP growth is on average 5.7% but ranges between -11% and 25%.

Further we include indicators of exchange rate and price stability: the rolling standard deviation of the nominal exchange rate and inflation, a dummy for pegged exchange rate regimes

[13] https://sites.google.com/site/jingcynthiawu/home/wu-xia-shadow-rates.

(following Shambaugh, 2015), and FX reserves over GDP. Higher exchange rate stability may induce moral hazard and higher demand of foreign currency. A greater volatility of exchange rates and prices hurts investments, trade, and firm profitability. It also exposes firms borrowing in foreign currency to unexpected rises in their debt burden. We also control for the level of inflation. A higher inflation level is predicted to have a negative effect on foreign currency borrowing through a higher probability of future depreciation of the local currency.

To measure the extent to which firms in a country hedge currency risk, we follow Mizen et al. (2012), using the BIS Triennal Survey to obtain a country's total amounts of foreign exchange derivatives, which include currency swaps, FX swaps, options, outright forwards and other derivatives. Missing quarters are interpolated using the BIS Semi-annual Survey and the amounts of foreign exchange derivatives in other currencies (all except the five biggest) as weights. The semiannual data are then linearly interpolated to obtain a measure of the depth of the derivatives market at quarterly frequency. Firms should be more willing to borrow in foreign currency if they can hedge the currency risk at a low cost.

We obtain real GDP per capita adjusted for purchasing power parity, scaled by 1000 for readability, the stock market capitalization to GDP and the regulatory quality index (ranging between -2.5 and 2.5) at annual frequency from the World Bank database. Less developed countries with less stringent financial regulations are expected to borrow more in foreign currency, as they have less developed financial markets.

Policy variables

Information on capital controls (CCs) on bond inflows is obtained from Fernandez et al. (2016). The index of controls on bond inflows can take three values: 0, 0.5 or 1. These three values are based on two subcategory dummy variables: one for the existence of controls on bonds purchased locally by nonresidents and one for controls on bonds sold or issued abroad by residents. Hence,

the index takes a value of 0 when no controls whatsoever are in place, 0.5 when one of them is in place and 1 when both types of controls are in place locally and abroad. Figure 2.1 plots the number of countries over the period 2003-2017 with bond controls on inflows and Figure 2.2 the number of years each country has had active capital controls. These figures combined show a sufficient variation over time and across countries to identify the effect of capital controls. Five countries out of 16 have capital controls only one third of the time and can be compared to the remaining 11 countries that have active capital controls throughout the sample period in a cross-sectional regression framework.

We also obtain from Ahnert et al. (2021) indices of macroprudential FX regulations, i.e., prudential regulations targeting the financial sector. Changes in FX regulations are coded as a +1 in case of additional or tightened restrictions, -1 when they are loosened or removed and 0 when no change occurs in a given quarter. For robustness, we also consider indices from Cerutti et al. (2017).[14]

Firm characteristics

To obtain firm characteristics and, in particular, balance-sheet data, we use three databases: Worldscope (Datastream – Thomson Reuters) and Capital IQ, which contain data only on (large) publicly listed companies, and Orbis (Bureau van Dijk), which contains data covering the last decade. Hence, our baseline sample is at the intersection of SDC Platinum, Worldscope, Capital IQ and Orbis. Unfortunately, there is no unique identifier to match firms across the latter data providers. We therefore match companies manually based on their names and industrial sectors. Balance-sheet information becomes public every year in reference to the previous year. We take this timing into account and use yearly values at every quarter to match the frequency of other variables. Based on a thorough review of the literature as well as on data availability, we select a

[14] A notable difference between the variables in Ahnert et al. (2021) and Cerutti et al. (2017) is that the former consider changes in FX regulations, while the latter assess whether FX regulations are in place.

range of firm characteristics to include as controls. First, we include firm size and book-to-market value as in Gozzi et al. (2015). Firm size is used to control for transparency and profitability and is measured as the log of total assets. The book-to-market value is defined as the difference in total assets and liabilities over market value and is used as a proxy for growth opportunities.

Following Demirguc-Kunt et al. (2015), we control for profitability using ROA, i.e., the ratio of profits before taxes and interest expenses over total assets and collateral measured by the share of tangible assets (PPE) over total assets. We also add cash measured by cash holdings and equivalents, as suggested in Bruno and Shin (2017). We expect healthier firms to have greater access to foreign investors who prefer to lend in foreign currency.

Another relevant characteristic is firm riskiness. We measure this with leverage, computed as the ratio of debt over total assets as in Becker and Ivashina (2014) and in Norden and van Kampen (2013). We also include a dummy indicating whether a firm is classified as high-yield in SDC Platinum. Jeanne (2000) shows that fragile entrepreneurs can borrow in foreign currency to signal that they are not fragile and obtain lower financing costs. In Aghion et al. (2004), riskier firms prefer to borrow in foreign currency due to moral hazard.[15]

Last, we build a dummy variable based on the correlation of firm income and exchange rate changes as a measure of trade intensity. A value of 1 indicates that firm income is positively correlated with a nominal exchange rate depreciation (respectively negatively correlated with a nominal exchange rate appreciation). The descriptive statistics of firm characteristics are reported in Table 2 for the sample used in section 3 and in Appendix A Tables A.2 and A.3 for the samples used in section 4.

[15] Foreign currency debt implies a lower interest rate in good times, but a much larger repayment in bad times; however, in bad times, firms default and only partially repay their debt.

3. Determinants of Foreign Currency Bond Issuance and the Role of Capital Controls

This section describes the determinants of foreign currency borrowing based on the methodology described above. We start by analyzing the impact of global-, national-, industry- and firm-level variables. We document that the rise of foreign currency indebtedness is chiefly driven by the stance of US monetary policy among the standard measures of global liquidity. Capital controls on bond inflows also play a key role. In subsection 3.2, we examine in more details the role of capital controls. We show that capital controls can fully offset the impact of expansionary US monetary policy and their effect is strongest at low levels of the US rate. Finally, we show that FX macroprudential policies increase foreign currency bond issuance, hence the importance of implementing them alongside capital controls.

3.1 The Role of Global Factors

We start by estimating equation (1) using all controls described earlier. Table 3 reports our estimates. All country- and firm-specific controls are included in each column but not reported for the sake of conciseness. Our specification explains a significant part of the variation in the data with an R^2 of around 60%. Full tables are shown in Appendix A. Each of column (1) to (7) considers an alternative indicator of the US monetary policy stance or of global volatility.

The stance of US monetary policy is found to be a robust factor affecting the decision to issue debt in foreign currency. The statistically significant coefficient of -0.068 in column (1) indicates that a decrease in the shadow FFR by one standard deviation raises issuances in foreign currency by 12 percentage points (1,8975*0,068). Figure A.1. in Appendix A shows that the

marginal effects of a decrease in the shadow FFR by one percentage point is somewhat higher at lower values of the shadow FFR, although the differences are not statistically significant.[16]

This finding is unaltered through the different specifications (columns (2) to (7)), where the shadow FFR is replaced by the 10-year Treasury constant maturity rate (2), the Treasury inflation-indexed long-term average yield (3) and the Fed funds rate (4). In column (5), the shadow FFR and VIX are replaced by a dummy taking the value of 1 from 2010 Q1 onwards and the conclusion is unchanged.

The effect of global uncertainty or risk aversion, as measured by VIX, is significant as well. An increase in the VIX by one standard deviation decreases the share of issuances in FX by 13,6 percentage point (7,4828*0,018) and this effect is relatively stable over different VIX values (see Figure A.2. in Appendix A). However, since VIX started declining significantly after 2012, which is posterior to the timing of the rise in foreign currency bond issuances in our sample countries we can conclude that US monetary policy has played a more significant and growing role in driving bond inflows post 2009. CGFS (2021) arrive to the same conclusion.

In columns (6) and (7), the VIX is replaced by the MOVE,[17] and a global uncertainty index taken from Baker et al. (2016). The coefficient on the MOVE variable is statistically significant, but the effect is smaller, while the coefficient on the global policy uncertainty index is marginally significant and small.

The other country characteristics included in the regressions that are statistically significant and robust across the different specifications are the local interest rate, derivatives market depth, real GDP per capita, regulatory quality, and financial market development (see Table A.4 in Appendix A). Overall, foreign currency indebtedness is less prevalent in more developed countries, in countries where borrowing in local currency is cheaper, and in countries

[16] Hence, we can treat the relationship between the FFR and FX issuance as linear and correctly interpret the marginal effect as the effect of a 1-percentage-point rise in the FFR.
[17] The 3-month MOVE index is based on the implied volatility for US Treasuries rather than that of US firm stocks.

where financial regulation is weak and currency hedging using financial instruments is less accessible. We find no robust effect of exchange rate instability or inflation.

As regards firm characteristics the significant variables are measures of firm profitability (return on assets), carry-trade incentives (cash holdings) and a measure of firm riskiness (high yield flag). All are positively associated with the share of foreign currency bonds as expected.

While the econometric specification focuses on the share of foreign currency debt, we can verify that increases in this share of foreign currency bonds come from increases in the amount in dollar bonds rather than from a decline in the amount domestic currency bonds. In Appendix B Table B.1, we show that changes in the US dollar rate also have a significant impact on the gross amount of foreign currency issuance. In Table B.2 we further assessed whether changes in US rates have any impact on the structure of firms' financing and find no significant shifts from loans to bonds or from debt to equity. Throughout our sample period the firms in our sample mainly finance themselves through bonds.

We ran several robustness checks. Our conclusions continue to hold if we cluster our standard errors by firm (Table B.3) if we exclude countries with less than 50 observations (Table B.4) and if we use yearly frequency data (Table B.5). Further, changes in other global currency rates (notably those of the euro and the Swiss franc) have effects comparable to changes in the US rate.[18] This is not surprising given that monetary policies in these regions are highly correlated with US monetary policy. For the yen and the pound, the results are less stable.

All in all, the main factor behind the increase in foreign currency exposure is a search-for-yield phenomenon. This is line with McCauley et al. (2015), who, using a different approach, argue that investors seeking higher-yield assets buy bonds in US dollars from non-US issuers. This can also be interpreted as evidence in favor of the gap-filling hypothesis proposed by Greenwood et al. (2010). This hypothesis is empirically tested in Lo Duca et al. (2016), who

[18] See Table A.5 in Appendix A.

analyze the relationship between corporate bond issuances in EMEs and Fed quantitative easing policies. They find that as the Fed removes assets from the markets, investors turn to EME companies to fill the gap.

3.2 Financial Stability Implications

Our findings hold for the average firm. To assess the financial stability implications of this result we refine our analysis by distinguishing firms based on three indicators of vulnerability to sudden stops: leverage, size, and trade intensity.[19] The financial stability implications of a higher exposure to foreign currency risk[20] will be less acute if foreign currency borrowing is concentrated among firms that are financially sound, firms with a natural hedge against currency risk, and larger firms that use derivatives instruments to hedge currency risk. Indeed, lower leverage, higher foreign currency revenues, and currency hedging using derivatives instruments allow firms to better withstand a sudden increase in the cost of borrowing in foreign currency if the domestic currency depreciates.

Therefore, we check how the marginal effects of the shadow FFR vary with firm leverage, firm size, and trade intensity. Figures 3 to 5 display our results. We find that the increase in foreign currency borrowing in response to a change in US monetary policy is driven by a wide range of firms along the leverage distribution. Indeed, in Figure 3 we see that firms with a leverage ratio as high as 1 standard deviation above the mean (35 percent) increase issuances of foreign currency bonds significantly in response to a decline in the shadow FFR. In Figure 4 we see that the effect of the shadow FFR is insignificant for firms with a size below the median. In Figure 5 changes in US monetary policy have a larger impact on domestic-oriented (low trade) firms which, by increasing foreign currency borrowing, increase their vulnerability to a possible

[19] Trade intensity is captured by a dummy variable taking the value of 1 indicating whether a firm has a positive correlation between its revenues and the nominal exchange rate.
[20] Essentially the risk of bankruptcy if US rates go up or if the dollar appreciates.

depreciation of the local currency. Consistent with the fact that export-oriented (high trade) firms may choose to match their foreign currency revenues with their foreign currency liabilities their response to changes in US monetary policy is not statistically significant.

All in all, the systemic risk implications of rising foreign currency debt in a context of low US dollar rates are significant as this evolution concerns firms with high leverage and firms with no natural hedge against currency risk.

3.3 The Role of Capital Controls

The activation of capital controls (CCs) also significantly curbs the propensity to borrow in foreign currency by around 15 percentage points, and this effect is quite stable across the different specifications. And economically large given that the mean of the dependent variable is about 20%.

In Table 4 we compare this baseline estimate (reported in column 1) with the estimate when including a time fixed effect and removing country fixed effects (column 2) and estimates using the continuous measure of CCs (column 3) and the conclusion is unchanged.[21] Comparing across countries yields higher points estimates (column 2). In column 3 an increase in the continuous index by 0.5 is associated with a 12% decrease in the share of foreign currency borrowing.

A follow-up and important question is whether beyond their direct effect, capital controls are effective in dampening the impact of a lower US interest rate. To address this question, we estimate the interaction effect between capital controls and the shadow FFR. Figure 6 plots the marginal effects of the shadow FFR with and without CCs on bond inflows. Clearly, the introduction of capital controls neutralizes the effect of US monetary policy.

[21] Estimates of the control variables are reported in Table A.6.

One corollary question is whether CCs can be actively used as a prudential tool. If so, CCs ought to be activated at times when US policy is softened such that their effect is concentrated at low levels of the Fed funds rate. This is what we observe in Figure 7, which reports the marginal effects of CCs on bond inflows (dummy) on the predicted probability of issuing in foreign currency at various levels of the shadow Fed funds rate. The effect of CCs is significant only at low levels of the shadow FFR.

3.4 Macroprudential Policies and Capital Controls

Next, we examine the impact of macroprudential policies targeting the financial sector, as such policies may be implemented simultaneously and therefore confound the effect of capital controls. Indeed, the majority of our sample countries introduce capital controls following the activation of macroprudential policies.[22] The results are reported in columns (4) to (6) of Table 4. As in Ahnert et al. (2021), we include the FX regulation variables for each quarter up to three quarters in the past (i.e., current and with up to three lags). We then compute the p-value of the joint significance F-test of the four estimates. The results are, however, similar when we directly pool the macroprudential variable over a year or use lagged macroprudential variables.

The positive marginal effects in column (4) confirm the findings of Ahnert et al. (2021) on the effect of macroprudential FX policies for the corporate sector. Controlling for these policies does not weaken the estimated effect of capital controls; on the contrary, the marginal effects associated with CCs are even larger. Further whether we control for time fixed effects only (column 5) or both time and country fixed effects the effect of CCs remains statistically and economically significant (column 6).

As a robustness check, in Table A.7 in Appendix A, we present the results using the macroprudential policies database of Cerutti et al. (2017) described earlier. Here the effect of

[22] Five countries only have capital controls (India, Malaysia, Mexico, Russia, and South Africa) and one country is only using macroprudential policies (Peru).

capital controls remains negative and significant statistically and economically but the effect of macroprudential policies is insignificant.

4. Capital Controls and Firms' Performance

While controls on capital inflows reduce foreign currency bond issuances, there are two broader policy questions. First, do capital controls strengthen the resilience of firms to currency movements? The impact of these controls could be limited if they are not sufficiently intense and broad based or if borrowers substitute bond finance with bank finance. The second issue is to weigh the costs and benefits of capital controls. Theory suggests that capital controls can drive up the cost of capital and curb investment by increasing uncertainty and reducing the availability of external finance.

In this section, we examine these two questions from two different perspectives. First, we analyze the impact of CCs on firms exchange rate risk, extending the framework of Adler and Dumas (1984). Second, we analyze the impact of CCs on real firm outcomes, including employment, capital expenditure, and sales.

4.1 Capital Controls and Firms' Stock Market Performance

Having documented the role of capital controls in shielding EM firms from excessive foreign currency borrowing in bond markets, we next assess their impact on firms' stock market valuations. Precisely, does the reduction in foreign currency borrowing translate into a significantly lower vulnerability of firms to exchange rate fluctuations? To measure the exchange rate vulnerability of firms, we use a two-step approach. We start by regressing the exchange rate on policy variables as well as other relevant country-specific controls and use the residual from this regression in the second-step regression. This two-step approach helps isolate the impact of

the exchange rate from that of policy variables on stock returns.[23] The estimates of the first-step OLS regression are presented in Table A.8 of Appendix A. We denote by $\widetilde{\Delta E}$ the residual variation of the nominal exchange rate against the USD (an increase is a depreciation of the local currency) cleansed of the potential effects of country-specific and policy variables. In a second step, we estimate the following equation:

$$r_{fit} = \alpha + \gamma_f + \beta_1 \widetilde{\Delta E}_{it} + \beta_2 CC_{it-1} + \beta_3 \widetilde{\Delta E}_{it} * CC_{it-1} + X_{fit}\beta_4 + \varepsilon_{fit} \quad (2)$$

where r_{fit} is the stock return and CC_{it-1} represents lagged capital controls. The vector of control variables *X* includes relevant firm characteristics and macro factors, liquidity factors, and global volatility measures that affect firm value through channels other than the exchange rate. Finally, γ_f denotes firm fixed effects.

The sign of β_1 is ambiguous. On the one hand an appreciation of the domestic currency could have a positive effect on the stock return of a domestic firm indebted in foreign currency through a reduction in its debt burden. This debt reduction implies a rise in ex post profits and net worth.[24] On the other hand an appreciation of the domestic currency is detrimental for exporters as it curbs competitiveness vis à vis foreign firms and hence pushes down foreign currency revenues. The coefficient of interest is β_3. It should be positive if capital controls curb the currency risk exposure of firms through a reduction of foreign currency liabilities.

The results are reported in Table 5. Column 1 presents the results for the full sample and columns (2) to (5) replicate the analysis splitting the sample by firm size and trade intensity using medians as thresholds. Because stock returns are not available for all firms, our sample is reduced

[23] Indeed, as documented in Ouyang and Guo (2019), capital controls and macroprudential policies can also affect the exchange rate itself.

[24] An appreciation of the domestic currency can also increase the dollar value of companies' collateral. Indeed, Bruno and Shin (2015) show that most of the assets of EME companies are priced in local currency.

to 696 firms and a total of 15918 quarterly observations. Descriptive statistics of the variables used are shown in Appendix A Table A.2 and estimates of the control variables are shown in Table A.9.

The results are broadly consistent with the hypothesis that a domestic currency depreciation heightens the debt burden of firms, as it hurts firm value: a currency 1 percent depreciation causes a 0.98 percent fall in stock returns (column 1). This effect is significant statistically and economically across firm size (columns 2 and 3).

The fact that exchange rate risk is lower for large firms is consistent with previous evidence that decisions to hedge currency risk using derivatives is positively related to firm size.[25] Nonetheless the resilience of larger firms to a currency depreciation is only partial. In line with our results, Alfaro et al. (2019) find that a currency appreciation has a positive effect on the sales growth of the more highly levered large firms.

Exporters are more negatively impacted by a depreciation (column 4) than non-exporters (column 5). While perhaps counterintuitive this result is not surprising in this context for two reasons. First, between 2008 and 2019 the ratio of dollar denominated debt to exports in emerging markets has skyrocketed from 8 percent to 20 percent in China, from 24 percent to 70 percent in South Asia, and from 70 percent to 106 percent in Latin America.[26] And second, exporters are more indebted than non-exporters, therefore their dollar revenues are insufficient to shield them from the negative effect of a depreciation.

$\hat{\beta}_3$ is positive and statistically significant: the presence of capital controls plays a role of dampening the vulnerability of firms to exchange rate fluctuations through reducing foreign currency liabilities. In contrast, we find that macroprudential FX policies exacerbate the negative

[25] There is strong empirical evidence that larger firms are more likely to engage in hedging strategies than smaller ones due to the fixed costs of hedging and scale economies. There is also evidence that large firms pass through a portion of currency changes to customers and use both operational and financial hedges. According to Batram et al. (2010), financial hedging and FX derivatives decrease firm exposure by 40%.
[26] These data are from Forni and Turner (2021).

effect of a currency depreciation consistent with the fact that they induce non-financial corporates to hold higher foreign currency liabilities.[27] Last, given that several countries in our sample introduce both policies simultaneously, we ran a model not controlling for macroprudential policies and our results are unchanged (see Table B.7).

4.2 Real Effects of Capital Controls

The recent literature has provided evidence of adverse effects of capital controls. Andreasen (2017) finds that controls on bond inflows increase corporate bond spreads. Alfaro et al. (2017) document falling stock returns and investment expenditures of firms following capital control events in Brazil. Interestingly, they find that capital controls disproportionately affect small, non-exporting firms, especially those more dependent on external finance. We revisit this question with a larger sample of firms and countries. In addition to CAPX, we consider the impact of capital controls on net debt, the variation in cash holdings, the variation in the interest coverage ratio, employment growth, and sales growth. Appendix A Table A.3 reports descriptive statistics of the variables used in this section. Since real outcome variables are slow moving, we estimate the impact of cumulated capital controls over the past 3 years on these outcomes using the following regression:

$$FV_{fit} = \alpha + \gamma_f + \delta_t + \beta_1 cumCC_{it-1} + X_{fit}\beta_2 + \varepsilon_{fit} \quad (3)$$

FV_{fit} is one of six outcome variables considered, and the vector X_{fit} contains relevant country and firm time-varying characteristics based on our reading of the literature. The specification is estimated at annual frequency, and we include both firm and time fixed effects (γ_f and δ_t). Then,

[27] This result contrasts with that of Ahnert et al. (2021). However, their results are also not significant when they consider as their dependent variable a proxy for corporate stock returns, which we focus on in our paper.

we reestimate this equation by distinguishing between small and large firms, firms with high and low dependence on external finance and firms being exporters or not (high or low-trade firms).[28]

Table 6 reports $\hat{\beta}_1$ for all specifications.[29] In the full sample, we find no economically or statistically significant effect of capital controls on net debt, cash growth, CAPX, sales growth, or the interest coverage ratio. In contrast, employment growth declines on average in the full sample by 1.456 percentage points with the activation of capital controls. This effect on employment growth is economically large and is chiefly driven by firms with a high dependence on external finance, firms belonging to the high end of the size distribution, and domestic-oriented firms. Larger firms being more impacted by capital controls is consistent with the fact that they tap foreign capital more, as a result, they are more adversely affected by the erection of barriers to foreign capital inflows. During our sample period these firms also had a lower capacity to substitute toward other forms of funding, like syndicated loans, as foreign banks repatriated massively their credit activity to their domestic market (Giannetti and Laeven, 2012). In line with Alfaro et al. (2017), domestic-oriented firms are particularly adversely impacted as they also experience a decline in cash growth, an increase in debt, and a decline in investment and sales growth. A comparison with sample means shows that these effects are statistically and economically significant.

5. Conclusion

The destabilizing role of foreign currency borrowing in EMEs has stimulated the growth of a large literature, with most of the empirical literature analyzing bank loans. Given the growing role of market financing in EMEs, this paper focuses on corporate bond borrowing. This is of

[28] We define low-leverage companies as those in the first two quantiles of the distribution, while high-leverage firms are those in the last two quantiles. For size and dependence on external finance, we use the same approach based on the amount of total assets. We measure external dependence with the measure proposed in Rajan and Zingales (1998): capital expenditures minus cash flow from operations divided by capital expenditures.
[29] In the Appendix Tables A.10 to A.13, we also report the full specifications including the control variables.

interest because the incentives to borrow in foreign currency from bond markets may differ from the incentives to take out bank loans. Moreover, foreign bond flows appear more sensitive to changes in global risk appetite and financial conditions than foreign bank lending.[30] The effects of policies may also differ for different types of borrowing. This paper emphasizes the latter policy dimension.

In this paper, we provide the first evidence that the currency composition of bond flows to EMEs is sensitive to changes in global interest rates. This result implies that if a US monetary tightening decreases capital flows to EMEs, this is amplified by a larger foreign currency exposure for firms. However, this effect can be dampened or eliminated by capital controls. We find that controls on bonds issued purchased by nonresidents are particularly effective in reducing foreign currency issuance. We also show that controls on bond inflows are effective in reducing the vulnerability of firms to exchange rate fluctuations.

With the growing popularity of EME corporate bonds, capital controls may also be used in combination with macroprudential policies. The results in this paper and in Ahnert et al. (2021) show that firms may circumvent tighter FX regulations for financial intermediaries by issuing more bonds. Our results show that controls on bond inflows help neutralize this effect.

Our results show that capital controls have more impact when US monetary policy is expansionary. However, is it desirable to actively use capital controls as prudential tools? This is not a conclusion that can be drawn from our analysis, and a welfare analysis of capital controls goes beyond the objectives of this paper. While capital controls can contribute to financial stability by reducing foreign currency exposure, they also have costs. In our sample, we show that they limit firm-level employment growth. Notice also that the available evidence is that capital controls are not countercyclical (Fernandez et al., 2016) and do not appear to influence financial variables or GDP growth (Klein, 2012), which suggests that policymakers have not

[30] See Carney (2019) for a recent discussion.

systematically used capital controls on prudential grounds. This is an important issue for further research.

References

Acharya, Viral, Stephen G. Cecchetti, José De Gregorio, Sebnem Kalemli- Ozcan, Philip R. Lane, and Ugo Panizza (2015) "Corporate Debt in Emerging Economies: A Threat to Financial Stability?" Committee International Economic Policy and Reform, Brookings Institution.

Adler, Michael and Bernard Dumas (1984) "Exposure to Currency Risk: Definition and Measurement," *Financial Management*, Vol. 13, 41-50.

Aghion, Philippe, Philippe Bacchetta, and Abhijit Banerjee (2004) "A Corporate Balance-Sheet Approach to Currency Crises," *Journal of Economic Theory*, Vol. 119, 6-30.

Ahnert, Toni, Kristin Forbes, Christian Friedrich, and Dennis Reinhardt (2021) "Macroprudential-FX Regulations: Shifting the Snowbanks of FX Vulnerability?" *Journal of Financial Economics*, Vol. 140, 145-74.

Ai, Chunrong and Edward C. Norton (2003) "Interaction terms in logit and probit models," *Economics letters*, Vol. 80, 123-129.

Alfaro, Laura, Anusha Chari, and Fabio Kanczuk (2017) "The real effects of capital controls: Firm-level evidence from a policy experiment," *Journal of International Economics*, Vol. 108(C), 191-210.

Alfaro, Laura, Gonzalo Asis, Anusha Chari, and Ugo Panizza (2019), "Corporate Debt, Firm Size, and Financial Fragility in Emerging Markets," *Journal of International Economics*, Vol. 118, 1–19.

Allayannis, George, Gregory W. Brown, and Leora F. Klapper (2003) "Capital structure and financial risk: Evidence from foreign debt use in East Asia," *The Journal of Finance*, Vol. 58, 2667-2710.

Andreasen, Eugenia, Martin Schindler, and Patricio Valenzuela (2017) "Capital Controls and the Cost of Debt," IMF Working Paper WP/17/135.

Avdjiev, Stefan and Galina Hale (2018) "US Monetary Policy and Fluctuations in International Bank Lending," Federal Reserve Bank of San Francisco Working Paper 2018-02.

Ayala, Diana, Milan Nedeljkovic, and Christian Saborowski (2017) "What Slice of the Pie? The Corporate Bond Market Boom in Emerging Economies," *Journal of Financial Stability*, Vol. 30, 16-35.

Baker, Scott R, Nicholas Bloom, and Steven J Davis (2016) "Measuring Economic Policy Uncertainty," *The Quarterly Journal of Economics*, Vol. 131, 1593-1636.

Batram S., Brown G., and Mirton B (2010) "Resolving the Exposure Puzzle: The Many Facts of Echange Rate Exposure," *Journal of Financial Economics* 95, 148-173.

Becker, Bo and Victoria Ivashina (2014) "Cyclicality of Credit Supply: Firm Level Evidence," *Journal of Monetary Economics* 62, 76-93.

Bräuning, Falk and Victoria Ivashina (2020) "US Monetary Policy and Emerging Market Credit Cycles," *Journal of Monetary Economics* 112, 57-76.

Bruno, Valentina and Hyun Song Shin (2015) "Cross-Border Banking and Global Liquidity," *The Review of Financial Studies*, Vol. 82(2), 535-564.

Bruno, Valentina and Hyun Song Shin (2017) "Global Dollar Credit and Carry Trades: A Firm-level Analysis," *The Review of Financial Studies*, Vol. 30, 703-749.

Caballero, Julian, Ugo Panizza, and Andrew Powell (2015) "The second wave of global liquidity: Why are firms acting like financial intermediaries?" CEPR Discussion Papers 10926.

Calomiris, Charles W., Mauricio Larrain, Sergio L. Schmuckler, and Tomas Williams (2019) "Search for Yield in Large International Corporate Bonds: Investor Behavior and Firm Responses," NBER Working Paper No. 25979.

Carney Mark (2019), "The Growing Challenges for Monetary Policy in the current International Monetary and Financial System," Speech given at the Jackson Hole Symposium, August.

Cerutti, Eugenio, Stijn Claessens, and Luc Laeven (2017) "The Use and Effectiveness of Macroprudential Policies: New Evidence," *Journal of Financial Stability*, Vol. 28, 203-224.

Cerutti, Eugenio and Gee Hee Hong (2018) "Portfolio Inflows Eclipsing Banking Inflows: Alternative Facts?" IMF Working Paper WP/18/29.

CGFS - Committee on the Global Financial System (2021), "Changing patterns of capital flows," CGFS Papers No.66, BIS.

Chang, Roberto, Andrés Fernández, and Adam Gulan (2017) "Bond Finance, Bank Credit, and Aggregate Fluctuations in an Open Economy," *Journal of Monetary Economics*, Vol. 85, 90-109.

Chow, Julian T.S. (2015) "Stress Testing Corporate Balance Sheets in Emerging Economies," IMF Working Paper WP/15/216.

Chui, Michael, Ingo Fender, and Vladyslav Sushko (2014) "Risks Related to EME Corporate Balance Sheets: The Role of Leverage and Currency Mismatch," *BIS Quarterly Review, September*, 35-47.

Chui, Michael, Emese Kuruc, and Philip Turner (2016) "A New Dimension to Currency Mismatches in the Emerging Markets: Non-financial Companies," BIS Working Paper 550.

Das, Mitali, Gita Gopinath, and Şebnem Kalemli-Özcan (2021) "Preemptive Policies and Risk-Off Shocks in Emerging Markets," NBER Working Paper No. 29615.

Demirguc-Kunt, Asli, Maria Soledad Martinez-Peria and Thierry Tressel (2015) "The Impact of the Global Financial Crisis on Firms Capital Structure," *Development Research.*

Dincer, Nergiz, Barry Eichengreen, and Petra Geraats (2022), "Trends in Monetary Policy Transparency: Further Updates," *International Journal of Central Banking*, forthcoming.

Erten, Bilge, Korinek, Anton, and José Antonio Ocampo (2021), "Capital Controls: Theory and Evidence," *Journal of Economic Literature,* Vol. 59, 45-89.

Fernández, Andrés, Michael W. Klein, Alessandro Rebucci, Martin Schindler, and Martín Uribe (2016) "Capital Control Measures: A New Dataset," *IMF Economic Review*, Vol. 64, 548-574.

Feyen, Erik, Swati Ghosh, Katie Kibuuka, and Subika Farazi (2015) “Global Liquidity and External Bond Issuance in Emerging Markets and Developing Economies,” Policy Research Working Paper 7363, World Bank.

Forni, Lorenzo, and Turner, Philip (2021) “Global Liquidity and Dollar Debts of Emerging Market Corporates,” VoX EU Column, 15 January.

Gambacorta, Leonardo, Sergio Mayordomo, and Jose-Maria Serena Garralda (2020), “Dollar Borrowing, Firm-Characteristics, and FX-Hedged Funding Opportunities,” CEPR Discussion Paper No. 14419.

Giannetti, Mariassunta and Laeven, Luc (2012) "The flight home effect: Evidence from the syndicated loan market during financial crises," *Journal of Financial Economics*, vol. 104(1), 23-43.

Gozzi, Juan Carlos, Ross Levine, Maria Soledad Martinez Peria, and Sergio L Schmukler (2015) “How Firms Use Corporate Bond Markets under Financial Globalization,” *Journal of Banking and Finance*, Vol. 58, 532-551.

Greene, William (2010) “Testing hypotheses about interaction terms in nonlinear models,” *Economics Letters*, Vol. 107, 291-296.

Greenwood, Robin, Samuel Hanson, and Jeremy C. Stein (2010) “A Gap-Filling Theory of Corporate Debt Maturity Choice,” *The Journal of Finance*, Vol. 65, 993-1028.

Ilzetzki, Ethan, Carmen M. Reinhart, and Kenneth S. Rogoff (2017) “Exchange Arrangements Entering the 21st Century: Which Anchor Will Hold?” Technical report, National Bureau of Economic Research.

International Monetary Fund (2015) “Corporate Leverage in Emerging Markets-A Concern?” *Global Financial Stability Report*, Ch. 3, 83-114.

Jeanne Olivier (2000) “Foreign currency debt and the global financial architecture,” *European Economic Review*, Vol. 44, 719-727.

Jiang, Zhengyang, Arvind Krishnamurthy, and Hanno Lustig (2019) “Dollar Safety and the Global Financial Cycle,” Stanford GSB Working paper.

Klein, Michael W. (2012) “Capital Controls: Gates Versus Walls,” NBER Working Paper No. 18526.

Krugman, Paul (1999) “Balance Sheets, the Transfer Problem, and Financial Crises,” *International Tax and Public Finance*, Vol. 6, pp. 459-472.

Liao, Gordon Y. (2019) “Credit Migration and Covered Interest Rate Parity,” Mimeo, Federal Reserve Board.

Lo Duca, Marco, Nicoletti, Giulio, and Vidal Martínez, Ariadna (2016) “Global corporate bond issuance: What role for US quantitative easing?” *Journal of International Money and Finance*, Vol. 60(C), 114-150.

Maggiori, Matteo, Brent Neiman, and Jesse Schreger (2018) “International Currencies and Capital Allocation,” NBER Working Paper 24673.

McCauley, Robert N., Patrick McGuire, and Vladyslav Sushko (2015) “Global Dollar Credit: Links to US Monetary Policy and Leverage,” *Economic Policy*, Vol. 30, 187-229.

Mizen, Paul, Franck Packer, Eli Remolona, and Serafeim Tsoukas (2012) “Why Do Firms Issue Abroad? Lessons from Onshore and Offshore Corporae Bond Finance in Asian Emerging Markets,” BIS Working Paper 401.

Norden, Lars and Stefan van Kampen (2013) “Corporate Leverage and the Collateral Channel,” *Journal of Banking & Finance*, Vol. 37, 5062-5072.

Ostry, Jonathan D., Atish R. Ghosh, Marcos Chamon, and Mahvash S. Qureshi (2012) “Tools for Managing Financial-Stability Risks from Capital Inflows," *Journal of International Economics*, Vol. 88, 407-421.

Ostry, Jonathan D., Atish R. Ghosh, Karl Habermeier, Luc Laeven, Marcos Chamon, Mahvash S. Qureshi, and Annamaria Kokenyne (2011) “Managing Capital Inflows: What Tools to Use?,” IMF Staff Discussion Note SDN/11/06.

Ouyang, A. Y., & Guo, S. (2019). Macro-prudential policies, the global financial cycle and the real exchange rate. *Journal of International Money and Finance*, *96*, 147-167.

Papke, Leslie E. and Jeffrey M. Wooldridge (2008) “Panel Data Methods for Fractional Response Variables with an Application to Test Pass Rates,” *Journal of Econometrics*, Vol. 145, 121-133.

Rajan, Raghuram G. and Luigi Zingales (1998) “Financial Dependence and Growth.” *American Economic Review* 88(3). 559–586.

Ramalho, Esmeralda A., Joaquim J.S. Ramalho, and José M.R. Murteira (2011) “Alternative Estimating and Testing Empirical Strategies for Fractional Regression Models,” *Journal of Economic Surveys*, Vol. 25, 19-68.

Rebucci, Alessandro, and Chang Ma (2019), “Capital Controls: A Survey of the New Literature,” NBER Working Paper No. 26558.

Shin, Hyun Song (2014) “The Second Phase of Global Liquidity and Its Impact on Emerging Economies," in *Volatile Capital Flows in Korea*: Springer, 247-257.

Wu, Jing Cynthia and Fan Dora Xia (2016) “Measuring the Macroeconomic Impact of Monetary Policy at the Zero Lower Bound," *Journal of Money, Credit and Banking*, Vol. 48, 253-291.

Table 1: Final sample: Number of bond issuances and firms per country

Country	Issuances	Firms	Period
Argentina	27	13	2006Q4-2017Q2
Brazil	426	137	2008Q1-2017Q4
Chile	115	34	2003Q1-2015Q2
China	2004	771	2005Q1-2017Q4
Colombia	11	4	2008Q1-2017Q1
India	573	208	2003Q1-2017Q4
Indonesia	94	56	2003Q2-2017Q4
Malaysia	294	101	2003Q1 -2017Q4
Mexico	256	66	2003Q1-2017Q3
Peru	32	13	2003Q1-2014Q4
Philippines	112	22	2003Q1-2017Q4
Poland	18	12	2005Q3-2017Q2
Russia	159	53	2003Q4-2017Q4
South Africa	40	25	2004Q1-2015Q4
Thailand	534	123	2003Q1-2017Q4
Turkey	14	9	2004Q3-2014Q4
Total	4697	1647	2003Q1-2017Q4

Table 2: Descriptive statistics of key variables in baseline

Variable	Mean	SD	Median	Min	Max
Dependent variable					
Foreign currency issuances (%)	0.1959	0.3932	0	0	1
Firm-specific variables					
High-yield flag	0.08814	0.2835	0	0	1
Leverage: debt over total assets (%)	20.780	14.088	19.924	0	105.48
Size: log of total assets	1.9032	2.2416	1.6724	-6.0649	11.147
Cash: log of cash or equivalent	-0.6310	2.3568	-0.7100	-11.870	9.2714
Book-to-market value	0.9466	1.8521	0.6213	-77.746	32.668
Profitability: ROA	1484.8	2177.5	16.540	-448.18	8618
Collaterals: Tangible assets/total assets (%)	33.436	24.509	30.709	0	98.048
Income exchange rate correlation	0.6566	0.4749	1	0	1
Global variables					
Shadow FED funds rate	-0.3833	1.8975	-0.9836	-2.9220	5.1945
VIX	18.491	7.4828	16.211	10.944	58.588
World GDP growth rate	1.4355	1.3760	1.6677	-2.8533	3.1144
Country-specific & policy variables					
Capital controls (CC) on bond inflows	0.8797	0.3253	1	0	1
Real GDP growth (%)	5.7332	3.3222	6.8000	-10.934	15.295
Real Effective Exchange Rate volatility	0.05846	0.02723	0.05083	0.02005	0.2538
Local interest rate	4.9624	2.7767	4.5120	0.05342	27.343
Pegged exchange rate regime (dummy)	0.2627	0.4402	0	0	1
Inflation volatility	1.5998	1.0639	1.4435	0.3164	21.036
CPI inflation (year-on-year)	3.9081	3.7346	2.5178	-3.0292	42.438
Derivatives market depth (mios USD)	33.583	26.718	29.928	0.1962	101.53
Real GDP per capita PPP (1000 USD)	12.723	5.2392	12.692	2.7128	28.683
Regulatory quality index	-0.05088	0.3930	-0.2408	-1.0743	1.5385
Reserves/GDP (%)	28.458	11.409	29.934	5.5432	53.067
Stock market capitalisation to GDP (%)	64.708	30.861	62.050	6.5320	256.20

Table 3: The impact of global financial conditions

Share of FX bond issuances (%)	Baseline	10Y gov. yield	LT gov. average yield	FED funds rate	Post-crisis dummy	MOVE	Global uncertainty
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
ShadowFFR/Alt variable	-0.068**	-0.092	-0.115*	-0.074*	0.244*	-0.065**	-0.076***
	(0.027)	(0.062)	(0.059)	(0.039)	(0.127)	(0.028)	(0.028)
VIX/Alt variable	-0.018**	-0.019**	-0.016**	-0.020**		-0.006***	-0.002*
	(0.008)	(0.008)	(0.007)	(0.008)		(0.002)	(0.001)
CC on bond inflows (dummy)	-0.153***	-0.149*	-0.154**	-0.147**	-0.202**	-0.147***	-0.183**
	(0.056)	(0.079)	(0.075)	(0.067)	(0.092)	(0.057)	(0.075)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country/Firms controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	4697	4697	4697	4697	4697	4697	4697
Pseudo R^2	0.581	0.578	0.578	0.579	0.573	0.581	0.579

Notes: The table shows the marginal effects (all variables evaluated at their means) obtained from a fractional logistic regression with robust standard errors clustered at the country level in parentheses. All variables are lagged. The stars indicate the statistical significance as follow: $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$. The dependent variable is the share of issuances denominated in foreign currency (%). The shadow FED funds rate is from Wu and Xia (2016). VIX is an index of implied volatility of the U.S. S&P500. In columns (2) to (4), shadow FFR is replaced by, the 10-Year treasury constant maturity rate (2), the treasury inflation-indexed long-term average yield (3) and the FED funds rate (4). In (5), both shadow FFR and VIX are replaced by a dummy taking the value of 1 for 2010Q1 onwards. In columns (6) to (8), VIX is replaced by, respectively, the MOVE, a global uncertainty index and the VIX for emerging markets. Capital controls (CC) on bond inflows is a dummy variable taking the value 1 when any type of restrictions on bond inflows is in place. We also control for various country- and firm-specific variables described in the text. The full table with all controls is available in Appendix A, Table A.4.

Table 4: The impact of capital controls and macroprudential policies

Share of FX bond issuances (%)	CC as dummy		CC as index	Adding macroprudential policies		
	(1)	(2)	(3)	(4)	(5)	(6)
Shadow FED funds rate	-0.068**		-0.070***	-0.067***		
	(0.027)		(0.027)	(0.015)		
VIX	-0.018**		-0.018**	-0.012**		
	(0.008)		(0.008)	(0.006)		
Capital Controls	-0.153***	-0.368***	-0.244**	-0.201**	-0.481***	-0.128**
	(0.056)	(0.141)	(0.109)	(0.081)	(0.130)	(0.065)
FX regulations (t to t-3)				4.317**	4.374 **	4.236
p-value				0.024	0.087	0.317
Country FE	Yes	No	Yes	Yes	No	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Quarter FE	No	Yes	No	No	Yes	Yes
Country/Firms controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	4697	4697	4697	3194	3194	3194
Pseudo R^2	0.581	0.506	0.582	0.582	0.474	0.614

Notes: The table shows the marginal effects (all variables evaluated at their means) obtained from a fractional logistic regression with robust standard errors clustered at the country level in parentheses. All variables are lagged. The stars indicate the statistical significance as follow: $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$. The dependent variable is the share of issuances denominated in foreign currency (%). The shadow FED funds rate is from Wu and Xia (2016). VIX is an index of implied volatility of the U.S. S&P500. Capital controls (CC) variables are from Fernandez et al. (2016). The dummy CC on bond inflows take the value 1 when there are CC on bond inflows. The continuous CC on bond inflows can take three values, 0 for no controls, 0.5 with controls either abroad or locally and 1 for both abroad and locally. It is entered as a continuous variable. FX regulation are macroprudential policy variables from Ahnert et al. (2021), taking the value of 1 in every quarter macroprudential policies increase, -1 when they decrease and 0 when they do not change. All baseline controls are included as well in the regressions. The full table with all controls is available in appendix A, Table A.6.

Table 5: Stock returns, exchange rate fluctuations and capital controls - Two-step OLS approach

Stock returns	All	Firms > median	Firms < median	High-trade firms	Low-trade firms
	(1)	(2)	(3)	(4)	(5)
$\widetilde{\Delta ER}$	-98.512**	-86.013**	-142.084***	-108.861**	-68.840
	(37.834)	(33.113)	(40.128)	(37.342)	(44.704)
CC (y-1)	7.642*	6.795	9.718	8.665*	3.874
	(3.790)	(4.339)	(6.130)	(4.407)	(4.003)
CCx$\widetilde{\Delta ER}$	175.801**	172.326**	192.136**	159.767*	152.318***
	(64.261)	(60.398)	(72.164)	(80.981)	(49.831)
Cum. FX regulations (q to q-3)	0.787	0.482	0.036	1.237	-0.074
	(1.528)	(1.788)	(1.167)	(1.059)	(2.326)
Cum. FX reg x $\widetilde{\Delta ER}$	-79.398**	-85.706**	-35.453	-47.231*	-103.894**
	(32.223)	(33.790)	(23.506)	(25.725)	(36.182)
Constant	11.475	24.772	27.245	15.028	24.184
	(10.051)	(14.559)	(21.533)	(11.210)	(26.939)
Firm FE	Yes	Yes	Yes	Yes	Yes
Observations	15551	11683	3868	8784	6767
Number of firms	694	585	380	452	309
R-squared	0.074	0.087	0.059	0.056	0.141

Notes: The table shows the estimates OLS regression with robust standard errors clustered at the country level in parentheses and all variables are lagged. ***$p < 0.01$, **$p < 0.05$, *$p < 0.1$. The dependent variable is either stock returns at country-level based on the MSCI index or stock returns at the firm level directly. Size of firms are defined regarding the median, where the size is measured with total assets. High and low trade firms are defined based on the correlation between income and exchange rate. Δ ER is instrumented using the residuals from the first-step regression (Table A.8), where change in trade-weighted exchange rate is regressed on macroprudential policy and country variables. An increase in the ER is an appreciation of the local currency. Capital controls (CC) on bond inflows are from Fernandez et al. (2016), taking the value of 1 in case of controls both abroad and locally, 0.5 if one type of controls is in place, 0 otherwise. They are included as the sum of CC over the current and last three years or over the last three years. FX regulation are macroprudential policy variables from Ahnert et al. (2021), taking the value of 1 every quarter macroprudential policies increase, -1 when they decrease and 0 when they do not change. They are included as the sum of the variable over four quarters. Further controls are included as well in the regressions.The full table with all controls is available in appendix A, Table A.9.

Table 6: $\hat{\beta}_1$ of OLS regressions of various firm-level variables on cumulated capital controls

	Net debt	Cash growth	Δ Int. cov.	Emp. growth	CAPX	Sales growth
	(1)	(2)	(3)	(4)	(5)	(6)
Full sample	-0.002	-0.389	0.415	-1.393**	-0.000	0.005
	(0.004)	(1.321)	(0.854)	(0.675)	(0.005)	(0.005)
High FinancialDep	0.000	0.124	-0.234	-2.127**	-0.003	0.010
	(0.005)	(1.848)	(0.807)	(0.939)	(0.006)	(0.007)
Low FinancialDep	0.002	-2.282	-0.327	-1.459	0.001	-0.007
	(0.007)	(2.919)	(2.934)	(1.359)	(0.008)	(0.011)
Firms>median	0.001	-3.511**	-0.164	-2.501***	0.007	0.006
	(0.006)	(1.641)	(0.948)	(0.936)	(0.007)	(0.007)
Firms<median	0.008	2.098	3.212*	-0.975	-0.005	-0.004
	(0.006)	(2.724)	(1.850)	(1.398)	(0.008)	(0.009)
High-trade firms	0.001	-1.094	-0.496	-0.684	0.005	0.007
	(0.004)	(2.024)	(1.218)	(1.072)	(0.007)	(0.007)
Low-trade firms	0.016**	-6.010**	0.053	-3.590***	-0.016*	-0.027**
	(0.007)	(2.342)	(2.232)	(1.299)	(0.009)	(0.011)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes

Notes: The table shows the estimates obtained from a linear regression with robust standard errors clustered at the firm level in parentheses and $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.11$. The dependent variables are net debt ($= (Current + Noncurrentliabilities - cash)/totalassets$), growth in cash holdings, change in interest rate coverage ($= EBIT/InterestExpenses$), the growth rate of the number of employees, CAPX ($= (FixedAssets_t - FixedAssets_{t-1} + Depreciation_t)/FixedAssets_t$) and sales growth. Other controls at the country and firm level are also included and full tables can be found in the Appendix (Tables A.10-A.13).

Figure 1: Percentage of bonds issued in foreign currency by country and period

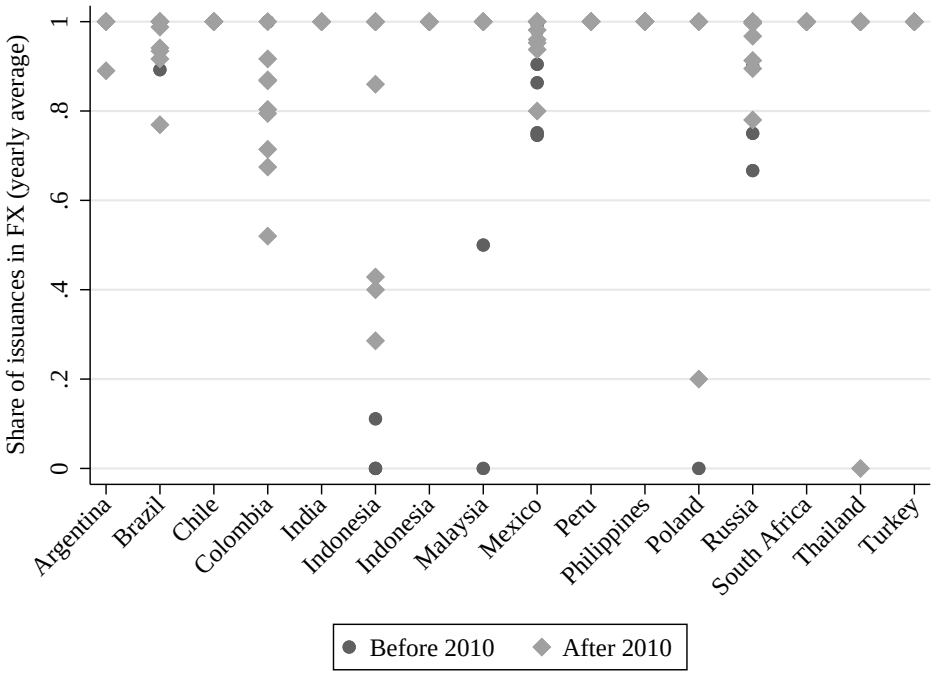
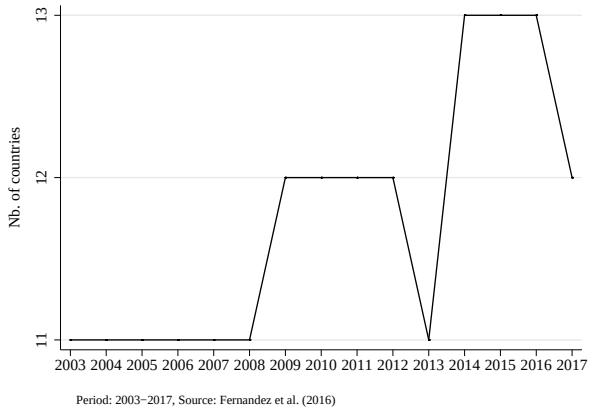


Figure 2: Number of countries with bond controls on inflows over time (left) and number of years with bond controls on inflows by country (right)



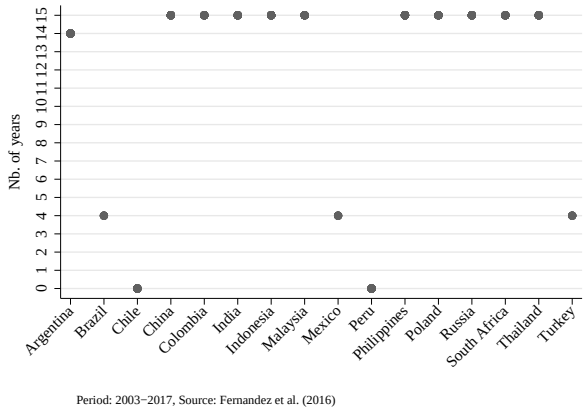
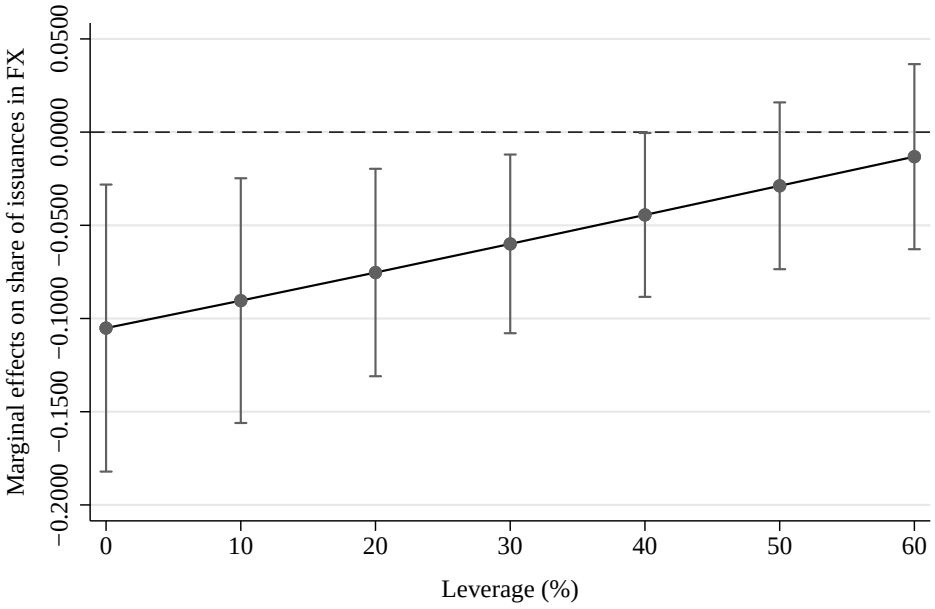
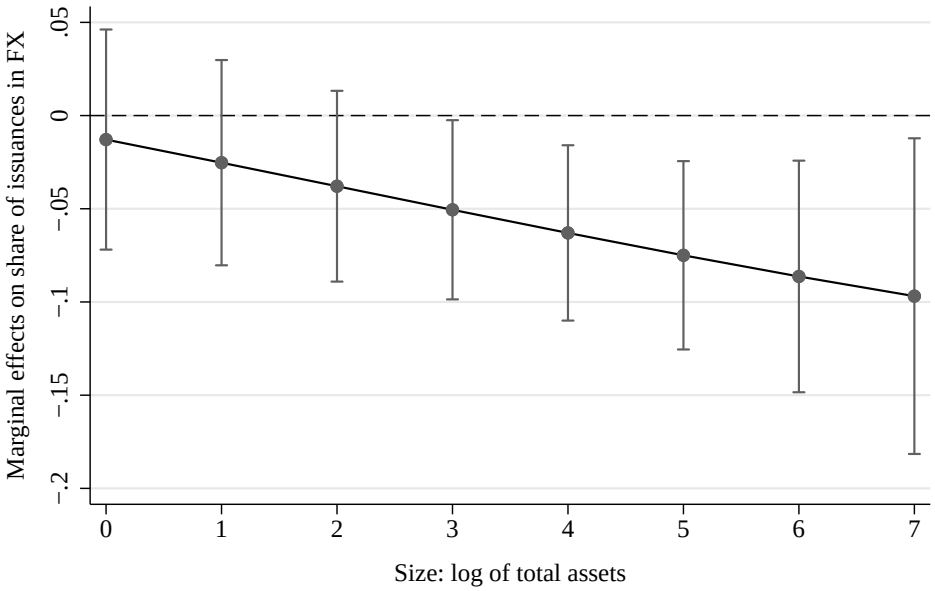


Figure 3: Marginal effects of shadow FFR on probability of issuing in foreign currency across various leverage levels



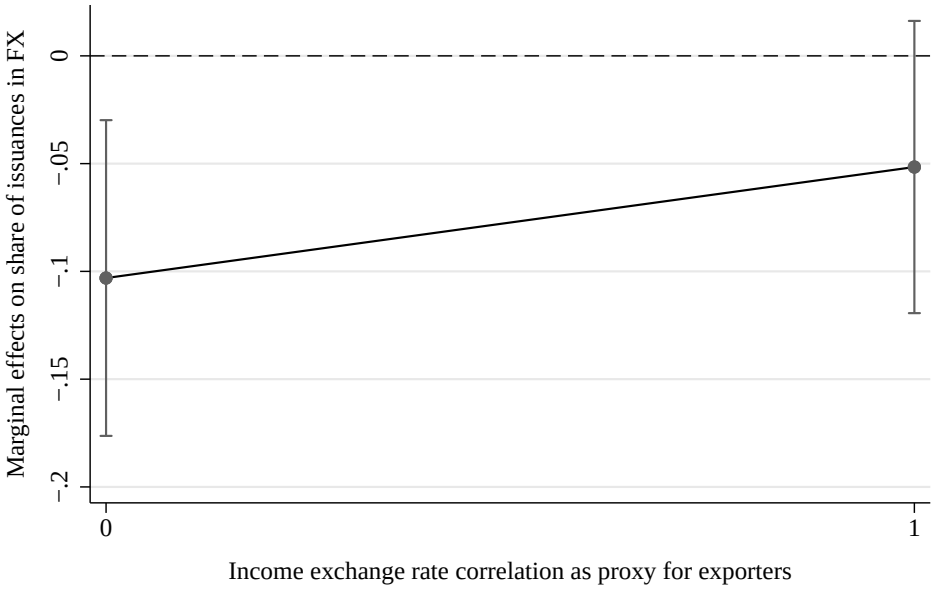
Note: 95% confidence intervals, other control variables evaluated at their means

Figure 4: Marginal effects of shadow FFR on probability of issuing in foreign currency across firm size



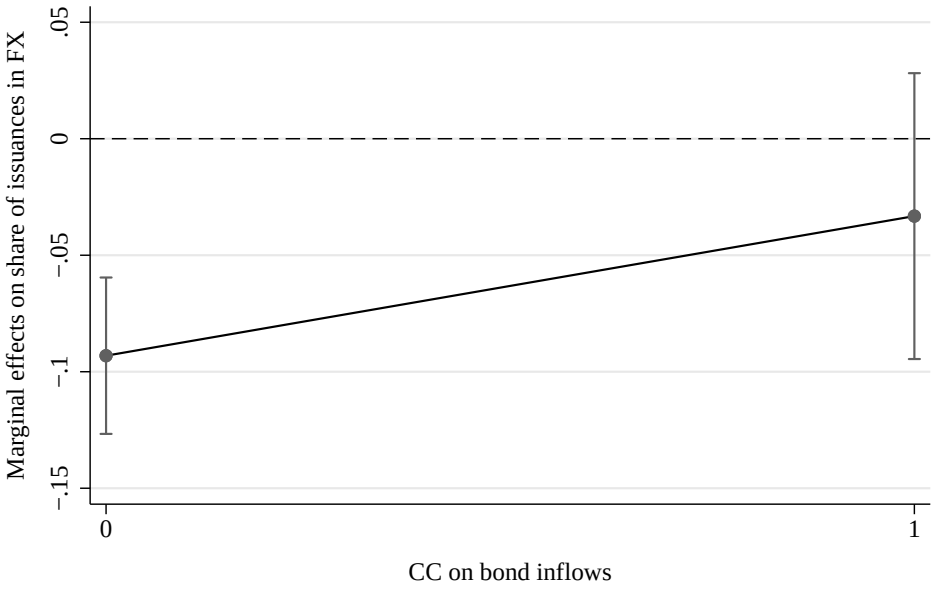
Note: 95% confidence intervals, other control variables evaluated at their means

Figure 5: Marginal effects of shadow FFR on probability of issuing in foreign currency at high or low trade intensity



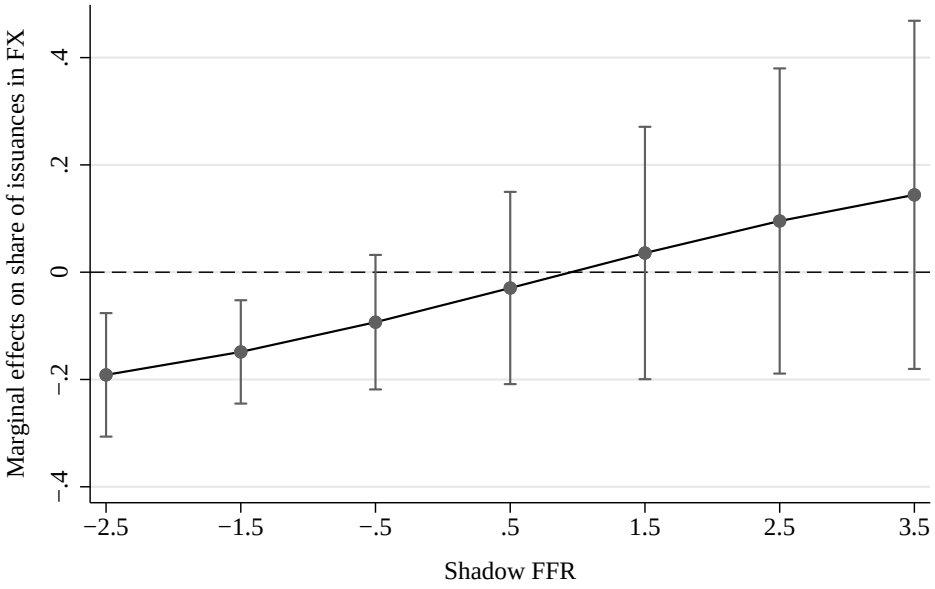
Note: 95% confidence intervals, other control variables evaluated at their means

Figure 6: Marginal effects of shadow FFR with or without bond inflows capital controls



Note: 95% confidence intervals, other control variables evaluated at their means

Figure 7: Marginal effects of CC on bond inflows for various values of shadow FFR



Note: 95% confidence intervals, other control variables evaluated at their means

Appendix A: Additional Tables and Figures

Table A.1: Descriptive statistics of others variables, in baseline sample

Variable	Mean	SD	Median	Min	Max
Global variables					
FED funds rate (%)	0.6677	1.2443	0.1543	0.07222	5.2546
10-year government bond yield (%)	2.7071	0.8562	2.4967	1.5633	5.0700
Inflation-index long-term (>10years) Treasury yield (%)	1.1540	0.7577	0.9300	-0.09000	2.8600
MOVE: Volatility index based on 3M US Treas. options	84.552	24.232	79.215	54.220	182.01
Glob econ. policy uncertainty index, PPP adj.	128.54	35.779	122.12	58.567	242.23
Post-crisis dummy	0.7767	0.4165	1	0	1
EA overnight index average rate (%)	0.6334	1.2303	0.1319	-0.3582	4.2527
UK sterling overnight index average rate (%)	1.1275	1.6114	0.4560	0.2112	5.8614
Japan unsecured interbank overnight interest rate (%)	0.09293	0.1287	0.07400	-0.05433	0.5140
Swiss 3-Month London Interbank Offered Rate (%)	0.1325	0.9077	0.02084	-0.7946	2.8231
Country-specific & policy variables					
CC on bond inflows	0.7984	0.3469	1	0	1
Log of bond principal amount in USD	5.6334	1.3955	5.7038	-0.6931	10.463
Log of bond principal amount all currencies	4.7528	1.4609	4.7871	-5.8091	11.227
Dummy for bonds (1) vs. loan (0)	0.9338	0.2487	1	0	1
Dummy for debt (1) vs. equity (0)	0.9187	0.2734	1	0	1
Transparency index (higher is more)	6.0837	3.5257	6.5000	1.5000	13
FX regulation (q)	-0.008453	0.1741	0	-1	1
FX regulation (q-1)	-0.001879	0.1734	0	-1	1
FX regulation (q-2)	-0.005009	0.2048	0	-1	1
FX regulation (q-3)	0.004696	0.1830	0	-1	1
Macroprudential policy - liability side	0.2585	0.4378	0	0	1
Macroprudential policy - asset side	0.4105	0.4920	0	0	1

Table A.2: Descriptive statistics of others variables, in exchange rate analysis

Variable	Mean	SD	Median	Min	Max
Global variables					
VIX	20.198	9.2283	17.482	11.035	58.588
Country-specific & policy variables					
Δ trade-weighted ER	-0.5223	3.8844	-0.1662	-23.844	13.361
CC (y-1 to y-3)	1.7303	1.1940	2	0	3
CC (y to y-3)	2.3154	1.5640	2.5000	0	4
Cum. FX regulations (q to q-3)	0.09387	0.4981	0	-2	3
Short-term interest rate (%)	6.7301	5.5122	5.4955	0.05342	52.265
Real GDP growth (%)	4.9090	3.5090	5.0334	-13.936	15.882
CPI inflation (y/y) (%)	5.9108	5.7228	4.2871	-3.0292	47.467
Real GDP per capita	14.712	7.6827	14.449	3.0564	48.024
Rule of law	-0.1167	0.5730	-0.2302	-1.1264	1.4331
Firm-specific variables					
Stock returns	1.6909	18.851	1.1352	-63.258	65.870
Leverage: debt over total assets (%	18.596	14.975	16.607	0	73.665
Size: log of total assets	22.703	2.4661	22.606	14.423	30.046
Cash: log of cash or equivalent	20.006	2.5985	19.930	9.9523	27.838
Book-to-market value	0.9040	0.8070	0.6879	-0.8521	8.0635
Profitability: ROA	383.99	1767.5	6.3600	-15365	14336
ROE using net income	35.228	23.999	35.127	0	89.091
Collaterals: Tangible assets/total assets (%)	0.8920	4.6232	0.01280	-56.740	32.061
Firm Beta	-0.05258	3.0866	-0.07293	-22.730	70.379
EBIT/Assets	144.54	2194.8	1.6469	-2127.4	71070.5
Sales growth	0.1471	0.6230	0.1309	-8.2064	25.224

Table A.3: Descriptive statistics of others variables, in the analysis of real effects of CC on firms

Variable	Mean	SD	Median	Min	Max
Firm-specific variables					
Interest rate coverage (scaled by 1000)	0.5678	37.171	0.003459	-11.758	5335.4
Interest rate coverage (change)	-0.9203	46.280	-0.07372	-767.09	780.76
Net worth (Total Assets/Total Liab.)	0.3575	0.2092	0.3557	-0.7632	0.9669
Tangibility (Tangible Assets/Total Assets.)	0.5523	0.2317	0.5780	0.0000	0.9732
EBITDA over assets	0.09962	0.07556	0.09146	-0.2858	0.3954
Cash: log of cash or equivalent	10.806	69.767	7.4621	-279.48	343.81
Employement growth (%)	6.2308	22.781	2.3366	-106.61	152.90
CAPX	0.1133	0.2352	0.1039	-1.1733	1.1271
Sales growth (%)	0.1184	0.3124	0.09390	-1.3747	2.3468
Net debt	0.4917	0.2192	0.4999	-0.1755	1.7864
Cash or equivalent growth	10.806	69.767	7.4621	-279.48	343.81
Size: log of total assets	22.322	2.5547	21.909	6.7412	32.578
Leverage: debt over total assets (%)	19.722	15.418	17.409	0	147.43
Country-specific & policy variables					
Local interest rate	5.5412	3.5798	4.7301	0.2074	58.467
CC (y-1 to y-3)	2.3158	1.0083	3	0	3
Real GDP growth (%)	5.8411	3.3598	6.3421	-7.8899	22.928
Real GDP per capital	13.050	5.8038	13.271	2.9552	49.958
Inflation volatility	1.8839	2.7714	1.4889	0.3347	55.022
Real Effective Exchange Rate	4.6142	0.1385	4.5957	3.9404	4.8526

Table A.4: The impact of global financial conditions

Share of FX bond issuances (%)	Baseline	10Y gov. yield	LT gov. average yield	FED funds rate	Post-crisis dummy	MOVE	Global uncertainty
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
ShadowFFR/Alt variable	-0.068**	-0.092	-0.115*	-0.074*	0.244*	-0.065**	-0.076***
	(0.027)	(0.062)	(0.059)	(0.039)	(0.127)	(0.028)	(0.028)
VIX/Alt variable	-0.018**	-0.019**	-0.016**	-0.020**		-0.006***	-0.002*
	(0.008)	(0.008)	(0.007)	(0.008)		(0.002)	(0.001)
CC on bond inflows (dummy)	-0.153***	-0.149*	-0.154**	-0.147**	-0.202**	-0.147***	-0.183**
	(0.056)	(0.079)	(0.075)	(0.067)	(0.092)	(0.057)	(0.075)
Fixed ER dummy	-0.142***	-0.038	-0.035	-0.100**	-0.105	-0.094	-0.243***
	(0.050)	(0.083)	(0.079)	(0.051)	(0.067)	(0.066)	(0.065)
Inflation volatility	-0.049	-0.038	-0.033	-0.048	-0.051	-0.026	-0.066
	(0.046)	(0.056)	(0.058)	(0.050)	(0.048)	(0.059)	(0.048)
CPI inflation (yoy)	-0.026*	-0.025	-0.025	-0.027*	-0.030	-0.023	-0.026*
	(0.015)	(0.017)	(0.017)	(0.017)	(0.019)	(0.017)	(0.015)
Local interest rate	0.054**	0.056**	0.054**	0.056**	0.041*	0.046**	0.041**
	(0.022)	(0.025)	(0.027)	(0.023)	(0.025)	(0.022)	(0.021)
REER volatility	3.004*	2.459	2.309	2.413	1.794	1.470	4.323**
	(1.583)	(1.830)	(1.887)	(1.669)	(1.446)	(1.578)	(1.809)
Real GDP growth	-0.003	-0.007	-0.009*	-0.003	-0.005	-0.008	0.011
	(0.006)	(0.005)	(0.005)	(0.007)	(0.008)	(0.006)	(0.011)
Real GDP/capita	-0.103**	-0.083*	-0.080*	-0.083**	-0.085*	-0.120**	-0.069
	(0.044)	(0.046)	(0.042)	(0.039)	(0.049)	(0.051)	(0.043)
Derivatives market depth	0.006*	0.005*	0.005*	0.006*	0.008***	0.005	0.009***
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Regulatory quality	0.755**	0.783*	0.781*	0.801**	0.863*	0.654*	0.778**
	(0.353)	(0.409)	(0.415)	(0.377)	(0.493)	(0.397)	(0.357)
FX reserves/GDP	-0.002	0.007	0.005	0.006	0.007	-0.011	0.005
	(0.008)	(0.008)	(0.008)	(0.007)	(0.008)	(0.009)	(0.008)
Stock market cap. to GDP	-0.006**	-0.006**	-0.005*	-0.008***	-0.010***	-0.004	-0.010***
	(0.003)	(0.003)	(0.003)	(0.002)	(0.002)	(0.003)	(0.002)
World GDP growth	-0.027	-0.043	-0.049*	-0.021	-0.008	-0.028	-0.004
	(0.021)	(0.026)	(0.027)	(0.020)	(0.017)	(0.021)	(0.016)
Trade dummy	0.077	0.065	0.065	0.070	0.067	0.079	0.078
	(0.049)	(0.050)	(0.050)	(0.050)	(0.049)	(0.050)	(0.049)
High-yield flag	0.596***	0.593***	0.595***	0.593***	0.588***	0.592***	0.593***
	(0.027)	(0.026)	(0.026)	(0.028)	(0.027)	(0.027)	(0.026)
Leverage	-0.002	-0.001	-0.001	-0.002	-0.001	-0.002	-0.002
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
Size	-0.027	-0.033	-0.035	-0.029	-0.031	-0.035	-0.022
	(0.076)	(0.075)	(0.074)	(0.078)	(0.074)	(0.076)	(0.076)
Cash	0.147*	0.148*	0.148*	0.148*	0.141*	0.148*	0.139*
	(0.080)	(0.078)	(0.078)	(0.080)	(0.078)	(0.079)	(0.078)
Book-to-market	-0.004	-0.001	-0.001	-0.004	-0.002	-0.002	-0.004
	(0.006)	(0.004)	(0.005)	(0.006)	(0.005)	(0.005)	(0.006)
ROA (scaled by 1000)	0.000*	0.000**	0.000***	0.000**	0.000***	0.000**	0.000**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Collaterals	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	4697	4697	4697	4697	4697	4697	4697
Pseudo R^2	0.581	0.578	0.578	0.579	0.573	0.581	0.579

Notes: The table shows the marginal effects (all variables evaluated at their means) obtained from a fractional logistic regression with robust standard errors clustered at the country level in parentheses. All variables are lagged. The stars indicate the statistical significance as follow: $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$. The dependent variable is the share of issuances denominated in foreign currency (%). The shadow FED funds rate is from Wu and Xia (2016). VIX is an index of implied volatility of the U.S. S&P500. In columns (2) to (4), shadow FFR is replaced by, the 10-Year treasury constant maturity rate (2), the treasury inflation-indexed long-term average yield (3) and the FED funds rate (4). In (5), both shadow FFR and VIX are replaced by a dummy taking the value of 1 for 2010Q1 onwards. In columns (6) to (7), VIX is replaced by, respectively, the MOVE and a global uncertainty index. Capital controls (CC) on bond inflows is a dummy variable taking the value 1 when any type of restrictions on bond inflows is in place. Other control variables are: a fixed exchange rate dummy (de facto classification) taking the value of 1 for pegged exchange rate; inflation volatility which is the standard deviation of CPI inflation over a 16-quarter rolling window; CPI inflation in year-on-year growth; the local money market rate (or T-bill); real effective exchange rate (REER) volatility as its standard deviation over a 16-quarter rolling average; real GDP year-on-year growth; real GDP per capita that is adjusted for PPP and scaled by 1000; derivatives market depth to proxy for the derivatives market liquidity; regulatory quality index; the ratio of a country's foreign currency reserves over GDP; stock market capitalization to GDP; world GDP year-on-year growth; a trade dummy taking value one if a company's income is correlated with exchange rate; a high yield flag dummy for issuances considered highly leveraged; debt over assets (leverage); log total assets (size); the log of cash and equivalent; return on assets (profitability); book to market value; collateral measured as the share of tangible assets over total assets; ROA using net income. Descriptive statistics can be found in Table 1 and detailed descriptions of all variables are available in Appendix C.

Table A.5: Impact of other interest rates - Predicted probabilities

	Shadow FFR	FFR	EONIA (EU)	SONIA (UK)	TONAR (JP)	3M LIBOR (CH)
	(1)	(2)	(3)	(4)	(5)	(6)
Int. rate=-0.5	0.510***	0.595***	0.656***	0.611***	0.885***	0.577***
	(0.030)	(0.057)	(0.067)	(0.043)	(0.073)	(0.068)
Int. rate=0	0.477***	0.559***	0.596***	0.656***	0.605***	0.531***
	(0.031)	(0.043)	(0.047)	(0.052)	(0.038)	(0.035)
Int. rate=1	0.410***	0.485***	0.470***	0.516***	0.058	0.437***
	(0.044)	(0.030)	(0.038)	(0.032)	(0.061)	(0.078)
Int. rate=2	0.346***	0.412***	0.348***	0.420***	0.002	0.348**
	(0.062)	(0.053)	(0.079)	(0.046)	(0.006)	(0.152)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Country/Firms controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	4697	4697	4697	4697	4697	4697
Pseudo R^2	0.581	0.579	0.580	0.581	0.579	0.577

Notes: The table shows the predicted probabilities of issuing bonds in foreign currency for different values of interest rates and with all variables evaluated at their means. There are obtained from a fractional logistic regression with robust standard errors clustered at the country level in parentheses. All variables are lagged. The stars indicate the statistical significance as follow: $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$. The dependent variable is the share of issuances denominated in foreign currency (%).

Table A.6: The impact of capital controls and macroprudential policies

Share of FX bond issuances (%)	CC as dummy		CC as index	Adding macroprudential policies		
	(1)	(2)	(3)	(4)	(5)	(6)
Shadow FED funds rate	-0.068**		-0.070***	-0.067***		
	(0.027)		(0.027)	(0.015)		
VIX	-0.018**		-0.018**	-0.012**		
	(0.008)		(0.008)	(0.006)		
Capital Controls	-0.153***	-0.368***	-0.244**	-0.201**	-0.481***	-0.128**
	(0.056)	(0.141)	(0.109)	(0.081)	(0.130)	(0.065)
FX regulations (t to t-3)				4.317**	4.374*	4.236
p-value				(0.024)	(0.087)	(0.317)
Real GDP growth	-0.003	0.001	0.001	0.005	-0.003	0.006
	(0.006)	(0.012)	(0.006)	(0.005)	(0.016)	(0.011)
REER volatility	3.004*	0.815	2.936*	2.513	1.396	-1.232
	(1.583)	(1.978)	(1.647)	(1.893)	(2.736)	(2.741)
Local interest rate	0.054**	-0.015	0.059***	0.033**	-0.026	0.031**
	(0.022)	(0.025)	(0.022)	(0.015)	(0.030)	(0.015)
Fixed ER dummy	-0.142***	-0.146**	-0.139***	-0.141***	-0.213***	-0.022
	(0.050)	(0.063)	(0.049)	(0.046)	(0.082)	(0.087)
Inflation volatility	-0.049	0.110**	-0.053	-0.073**	0.133**	-0.004
	(0.046)	(0.044)	(0.046)	(0.031)	(0.058)	(0.048)
CPI inflation (yoy)	-0.026*	0.016	-0.028*	-0.013	0.021	-0.015
	(0.015)	(0.017)	(0.016)	(0.016)	(0.022)	(0.015)
Derivatives market depth	0.006*	0.004	0.006*	-0.000	0.005	-0.005*
	(0.003)	(0.003)	(0.003)	(0.003)	(0.004)	(0.003)
Real GDP/capita	-0.103**	-0.016*	-0.111**	-0.061	-0.021*	-0.080
	(0.044)	(0.010)	(0.043)	(0.044)	(0.011)	(0.056)
Regulatory quality	0.755**	0.403*	0.747**	0.420	0.405	-0.231
	(0.353)	(0.241)	(0.380)	(0.292)	(0.301)	(0.373)
FX reserves	-0.002	-0.007	-0.003	0.003	-0.008	0.001
	(0.008)	(0.005)	(0.008)	(0.012)	(0.007)	(0.011)
High-yield flag	0.596***	0.806***	0.596***	0.407***	0.733***	0.387***
	(0.027)	(0.032)	(0.027)	(0.027)	(0.045)	(0.025)
Leverage	-0.002	-0.004	-0.002	-0.006**	-0.008***	-0.006**
	(0.004)	(0.002)	(0.004)	(0.002)	(0.003)	(0.002)
Size	-0.027	0.022	-0.029	0.003	0.046	-0.022
	(0.076)	(0.040)	(0.076)	(0.050)	(0.042)	(0.055)
Cash	0.147*	0.045	0.149*	0.054	0.018	0.077
	(0.080)	(0.040)	(0.079)	(0.043)	(0.037)	(0.054)
Book-to-market	-0.004	0.011	-0.004	0.026**	0.034**	0.021**
	(0.006)	(0.010)	(0.006)	(0.010)	(0.014)	(0.008)
ROA	0.020*	-0.005	0.021*	-0.015	-0.022*	-0.027**
	(0.011)	(0.011)	(0.011)	(0.011)	(0.012)	(0.011)
Collaterals	-0.001	-0.001	-0.001	0.001	-0.001	0.002
	(0.003)	(0.001)	(0.003)	(0.002)	(0.002)	(0.002)
Stock market cap. to GDP	-0.006**	-0.001	-0.006*	-0.006**	0.000	-0.000
	(0.003)	(0.002)	(0.003)	(0.003)	(0.002)	(0.004)
Trade dummy	0.077	0.070**	0.073	-0.007	0.041	-0.029
	(0.049)	(0.032)	(0.049)	(0.039)	(0.050)	(0.052)
Country FE	Yes	No	Yes	Yes	No	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Quarter FE	No	Yes	No	No	Yes	Yes
Observations	4697	4697	4697	3194	3194	3194
Pseudo R^2	0.581	0.506	0.582	0.582	0.474	0.614

Notes: The table shows the marginal effects (all variables evaluated at their means) obtained from a fractional logistic regression with robust standard errors clustered at the country level in parentheses. All variables are lagged. The stars indicate the statistical significance as follow: $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$. The dependent variable is the share of issuances denominated in foreign currency (%). The shadow FED funds rate is from Wu and Xia (2016). VIX is an index of implied volatility of the U.S. S&P500. The dummy for capital controls (CC) on bond inflows is from Fernandez et al. (2016) and takes the value 1 when there are any type of CC on bond inflows. FX regulation are macroprudential policy variables from Ahnert et al. (2021), taking the value of 1 in every quarter macroprudential policies increase, -1 when they decrease and 0 when they do not change. Descriptive statistics are available in Table 1 and A.1 and detailed descriptions can be found in Appendix C.

Table A.7: Impact of macroprudential policies from Cerutti et al. (2017)

Share of FX bond issuances (%)	Liability side			Asset side		
	(1)	(2)	(3)	(4)	(5)	(6)
Shadow FED funds rate	-0.064**			-0.069**		
	(0.027)			(0.028)		
VIX	-0.018**			-0.017**		
	(0.008)			(0.008)		
CC on bond inflows (dummy)	-0.162***	-0.104	-0.341**	-0.132*	-0.098	-0.330**
	(0.054)	(0.082)	(0.143)	(0.071)	(0.083)	(0.147)
Macroprudential policy	-0.151	-0.098	-0.153	-0.240**	0.079	-0.124
	(0.144)	(0.176)	(0.096)	(0.095)	(0.153)	(0.078)
Fixed ER dummy	-0.191***	-0.054	-0.153**	-0.079	-0.052	-0.105
	(0.049)	(0.116)	(0.063)	(0.063)	(0.120)	(0.084)
Inflation volatility	-0.054	0.013	0.077*	-0.052	0.021	0.082*
	(0.044)	(0.067)	(0.045)	(0.046)	(0.072)	(0.044)
CPI inflation (yoy)	-0.026*	-0.007	0.016	-0.028*	-0.006	0.013
	(0.014)	(0.014)	(0.016)	(0.016)	(0.015)	(0.017)
Local interest rate	0.051***	0.030*	-0.005	0.052***	0.031*	-0.007
	(0.019)	(0.016)	(0.029)	(0.020)	(0.016)	(0.029)
REER volatility	3.162**	0.013	1.996	1.866	-0.005	1.673
	(1.514)	(2.784)	(2.354)	(2.023)	(2.770)	(2.321)
Real GDP growth	-0.003	0.010	0.005	-0.003	0.010	0.004
	(0.006)	(0.014)	(0.011)	(0.006)	(0.015)	(0.011)
Real GDP/capita	-0.100**	-0.081	-0.014	-0.100**	-0.082	-0.014
	(0.048)	(0.080)	(0.010)	(0.043)	(0.081)	(0.010)
Derivatives market depth	0.007**	-0.003	0.003	0.008***	-0.005	0.004
	(0.003)	(0.004)	(0.003)	(0.003)	(0.006)	(0.003)
Regulatory quality	0.729**	0.204	0.401*	0.628*	0.202	0.400*
	(0.342)	(0.513)	(0.238)	(0.359)	(0.493)	(0.236)
FX reserves	-0.004	-0.015	-0.005	-0.006	-0.014	-0.007
	(0.008)	(0.013)	(0.006)	(0.009)	(0.013)	(0.005)
Stock market cap. to GDP	-0.006*	-0.001	-0.001	-0.006**	-0.001	-0.001
	(0.003)	(0.006)	(0.002)	(0.003)	(0.006)	(0.002)
World GDP growth	-0.029	3.990***	1.600*	-0.029	4.093***	1.439*
	(0.022)	(0.768)	(0.825)	(0.020)	(0.930)	(0.850)
Trade dummy	0.079	0.057	0.070**	0.084*	0.055	0.072**
	(0.049)	(0.049)	(0.032)	(0.049)	(0.050)	(0.031)
High-yield flag	0.597***	0.618***	0.805***	0.597***	0.619***	0.804***
	(0.029)	(0.021)	(0.032)	(0.027)	(0.022)	(0.032)
Leverage	-0.002	-0.003	-0.003	-0.001	-0.003	-0.003
	(0.004)	(0.003)	(0.002)	(0.004)	(0.003)	(0.002)
Size	-0.028	-0.043	0.015	-0.023	-0.044	0.016
	(0.077)	(0.075)	(0.041)	(0.075)	(0.075)	(0.041)
Cash	0.146*	0.152*	0.048	0.143*	0.152*	0.049
	(0.079)	(0.080)	(0.041)	(0.079)	(0.080)	(0.040)
Book-to-market	-0.003	0.004	0.012	-0.004	0.004	0.012
	(0.006)	(0.009)	(0.010)	(0.005)	(0.009)	(0.010)
ROA (scaled by 1000)	0.021*	0.003	-0.005	0.020*	0.003	-0.007
	(0.011)	(0.013)	(0.011)	(0.010)	(0.013)	(0.011)
Collaterals	-0.001	0.001	-0.001	-0.001	0.001	-0.001
	(0.003)	(0.003)	(0.001)	(0.003)	(0.003)	(0.001)
Country FE	Yes	Yes	No	Yes	Yes	No
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Quarter FE	No	Yes	Yes	No	Yes	Yes
Country/Firms controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	4697	4697	4697	4697	4697	4697
Pseudo R^2	0.581	0.624	0.508	0.582	0.624	0.508

Notes: The table shows the marginal effects (all variables evaluated at their means) obtained from a fractional logistic regression with robust standard errors clustered at the country level in parentheses. All variables are lagged. The stars indicate the statistical significance as follow: $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$. The dependent variable is the share of issuances denominated in foreign currency (%). The shadow FED funds rate is from Wu and Xia (2016). VIX is an index of implied volatility of the U.S. S&P500. The dummy for capital controls (CC) on bond inflows is from Fernandez et al. (2016) and take the value 1 when there are any types of CC. Macroprudential policy variables from Cerutti et al. (2017); asset side macroprudential policy is a dummy variable taking the value 1 if limits on FX currency loans are in place in a given year and liability side policy is a dummy variable taking the value 1 if FX or/and countercyclical reserve requirements are in place in a given year. Descriptive statistics are available in Table 1 and A.1. and detailed descriptions of all variables can be found in Appendix C.

Table A.8: First-step: Linear regressions of Δ exchange rate on various country variables, including capital controls and macroprudential policy variables

Δ ER	(1)
CC (y-1 to y-3)	0.002
	(0.003)
Cum. FX regulations (q to q-3)	-0.006*
	(0.003)
Short-term int. rate	-0.001**
	(0.001)
Real GDP growth	-0.001
	(0.001)
Inflation (y/y)	-0.001
	(0.001)
Real GDP/capita	0.004**
	(0.002)
Rule of law	0.008
	(0.019)
FX Reserves/GDP	-0.140***
	(0.037)
Regulatory quality	-0.046***
	(0.015)
Stock market cap. to GDP	0.000***
	(0.000)
Constant	-0.043
	(0.028)
Quarter FE	Yes
Country FE	Yes
Observations	717
Number of countries	17
R-squared	0.476

Notes: The table shows the estimates obtained from a linear regression with robust standard errors clustered at the country level in parentheses and $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$. As dependent variable, we use Δ, i.e. a (log) change in the nominal exchange rate against USD with an increase being a depreciation. CC (y-1 to y-3) stands for cumulated capital controls over the years, with CC being a dummy for the presence of CC. Cum. FX regulations represent the cumulated FX regulations between current and 3 quarters in the past. Short-term interest is the 3-month interest rate. Real GDP growth is the change in real GDP relative to the same period the previous year. Inflation is the year-on-year growth rate of the quarterly CPI. Real GDP per capita are adjusted for PPP and rescaled by 1000 and rule of law is an index of institution's quality (higher value for greater quality). RX reserves/GDP are the share of foreign reserves over GDP, regulatory quality is a index with higher value for better quality and stock market capitalisation to GDP. Descriptive statistics are available in table A.2. and detailed descriptions of all variables can be found in Appendix C.

Table A.9: Second-step: Stock returns, exchange rate fluctuations and capital controls

Stock returns	All	Firms > median	Firms < median	High-trade firms	Low-trade firms
	(1)	(2)	(3)	(4)	(5)
$\widetilde{\Delta ER}$	-98.512**	-86.013**	-142.084***	-108.861**	-68.840
	(37.834)	(33.113)	(40.128)	(37.342)	(44.704)
CC (y-1)	7.642*	6.795	9.718	8.665*	3.874
	(3.790)	(4.339)	(6.130)	(4.407)	(4.003)
CCx$\widetilde{\Delta ER}$	175.801**	172.326**	192.136**	159.767*	152.318***
	(64.261)	(60.398)	(72.164)	(80.981)	(49.831)
Cum. FX regulations (q to q-3)	0.787	0.482	0.036	1.237	-0.074
	(1.528)	(1.788)	(1.167)	(1.059)	(2.326)
Cum. FX reg x $\widetilde{\Delta ER}$	-79.398**	-85.706**	-35.453	-47.231*	-103.894**
	(32.223)	(33.790)	(23.506)	(25.725)	(36.182)
VIX	0.021	0.014	0.040	-0.106	0.188***
	(0.085)	(0.103)	(0.087)	(0.070)	(0.062)
Short-term int. rate	-0.824	-1.091	-0.008	-0.926	-0.674
	(0.856)	(0.882)	(0.820)	(0.812)	(0.930)
Real GDP growth	-0.632*	-0.719**	-0.105	-0.974***	-0.044
	(0.311)	(0.308)	(0.577)	(0.166)	(0.466)
Inflation (y/y)	-0.944	-0.854	-1.435	-0.271	-2.370***
	(0.775)	(0.717)	(0.971)	(0.581)	(0.754)
Real GDP/capita	-0.452	-0.513	0.452	-1.043*	0.027
	(0.542)	(0.534)	(0.768)	(0.551)	(0.473)
Rule of law	-1.343	-2.042	0.197	2.347	-3.531
	(6.159)	(7.596)	(8.269)	(6.351)	(6.125)
Leverage	-0.040	-0.014	-0.058	-0.032	-0.023
	(0.024)	(0.018)	(0.070)	(0.030)	(0.042)
Size	0.111	-0.448	-1.678	0.314	-1.054
	(0.395)	(0.496)	(1.098)	(0.416)	(1.338)
Cash	-0.174	-0.039	-0.207	-0.117	0.136
	(0.207)	(0.252)	(0.390)	(0.193)	(0.467)
Book-to-market	2.977***	3.356***	3.359***	3.054***	2.812***
	(0.235)	(0.530)	(0.484)	(0.570)	(0.639)
ROA (scaled by 1000)	-0.000	-0.001***	-0.001**	0.000	-0.001
	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)
Collaterals	0.012	-0.002	0.048	0.019	0.004
	(0.026)	(0.033)	(0.060)	(0.030)	(0.045)
ROE (scaled by 1000)	0.132	0.042	0.258*	-0.090	0.268
	(0.138)	(0.160)	(0.146)	(0.072)	(0.214)
Beta	0.057	-0.009	0.323	0.104	0.174
	(0.176)	(0.240)	(0.192)	(0.242)	(0.147)
EBIT/Total assets	0.000	0.000	1.464	-0.000	0.003
	(0.000)	(0.000)	(1.918)	(0.000)	(0.002)
Sales growth	0.845	1.185	1.642	0.504	2.114
	(0.707)	(1.155)	(1.258)	(0.309)	(1.340)
Constant	11.475	24.772	27.245	15.028	24.184
	(10.051)	(14.559)	(21.533)	(11.210)	(26.939)
Firm FE	Yes	Yes	Yes	Yes	Yes
Observations	15551	11683	3868	8784	6767
Number of firms	694	585	380	452	309
R-squared	0.074	0.087	0.059	0.056	0.141

Notes: The table shows the estimates OLS regression with robust standard errors clustered at the country level in parentheses and all variables are lagged. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$. The dependent variable is stock returns at the firm level. Size of firms are defined regarding the median, where the size is measured with total assets. High and low trade firms are defined based on the correlation between income and exchange rate. Δ ER is instrumented using the residuals from the first-step regression (Table A.5), where change in exchange rate is regressed on macroprudential policy and country variables. An increase in the ER is a depreciation of the local currency. Capital controls (CC) on bond inflows are from Fernandez et al. (2016), taking the value of 1 in case of controls both abroad and locally, 0.5 if one type of controls is in place, 0 otherwise. They are included as the sum of CC over the current and last three years or over the last three years. FX regulation are macroprudential policy variables from Ahnert et al. (2021), taking the value of 1 every quarter macroprudential policies increase, -1 when they decrease and 0 when they do not change. They are included as the sum of the variable over four quarters. Further controls are included as well in the regressions. Descriptive statistics are available in table A.8. and detailed descriptions of all variables can be found in Appendix C.

Table A.10: Linear regressions of various firm-level variables on cumulated capital controls

	Net debt	Cash growth	Δ Int. cov.	Emp. growth	CAPX	Sales growth
	(1)	(2)	(3)	(4)	(5)	(6)
CC(y-1toy-3)	-0.002	-0.389	0.415	-1.393**	-0.000	0.005
	(0.004)	(1.321)	(0.854)	(0.675)	(0.005)	(0.005)
Real annual GDP growth	-0.002***	0.321	-0.878***	0.214	-0.001	-0.001
	(0.001)	(0.303)	(0.291)	(0.146)	(0.001)	(0.001)
Real GDP/capita	-0.003***	-0.656**	-0.300*	-0.214	-0.003**	-0.004***
	(0.001)	(0.294)	(0.155)	(0.147)	(0.001)	(0.001)
Inflation volatility	-0.001*	0.544	0.099	0.128	0.002**	0.002
	(0.001)	(0.349)	(0.156)	(0.167)	(0.001)	(0.002)
REER annual average	-0.078***	19.609***	-4.297	2.553	-0.106***	-0.097***
	(0.021)	(7.589)	(4.462)	(3.467)	(0.026)	(0.033)
ST int. rate annual average	0.003***	-0.235	-0.089	-0.423***	-0.003***	-0.005***
	(0.001)	(0.302)	(0.211)	(0.145)	(0.001)	(0.001)
Size	0.007***	-5.293***	-0.032	-1.107***	0.001	-0.014***
	(0.002)	(0.599)	(0.296)	(0.240)	(0.002)	(0.003)
Leverage	0.002***	-0.416***	-0.043	0.002	0.000	0.000
	(0.000)	(0.074)	(0.042)	(0.026)	(0.000)	(0.000)
Interest coverage (scaled by 1000)	-0.000	0.004		0.004***	0.000	0.000***
	(0.000)	(0.002)		(0.001)	(0.000)	(0.000)
Net worth	-0.458***	-13.372**	-9.155**	2.709	0.088***	0.027
	(0.018)	(6.187)	(3.918)	(2.282)	(0.019)	(0.025)
Tangibility	0.152***	31.081***	7.142*	-9.574***	-0.463***	-0.058**
	(0.017)	(6.468)	(3.737)	(2.291)	(0.023)	(0.027)
EBITDA/Assets	-0.328***	71.506***	-45.761***	22.638***	0.504***	-0.223***
	(0.027)	(11.725)	(8.188)	(4.729)	(0.039)	(0.057)
Cash flow		-2.952***				
		(0.144)				
CAPX		4.994				
		(3.037)				
Constant	0.820***	55.844	30.832	33.522**	0.830***	1.089***
	(0.098)	(38.414)	(23.366)	(16.872)	(0.127)	(0.164)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	22376	20278	21877	14358	22389	22373
Number of firms	3394	3323	3350	2744	3401	3405
R-squared	0.304	0.070	0.006	0.028	0.145	0.067

Notes: The table shows the estimates obtained from a linear regression with robust standard errors clustered at the firm level in parentheses and $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.11$. The dependent variables are net debt ($= (Current + Noncurrentliabilities - cash)/totalassets$), growth in cash holdings, change in interest rate coverage ($= EBIT/InterestExpenses$), the growth rate of the number of employees, CAPX ($= (FixedAssets_t - FixedAssets_{t-1} + Depreciation_t)/FixedAssets_t$) and sales growth. Descriptive statistics are available in table A.3. and detailed descriptions of all variables can be found in Appendix C.

Table A.11: Linear regressions of various firm-level variables on cumulated capital controls

	Firms with high external financial dependency						Firms with low external financial dependency					
	Net debt (1)	Cash growth (2)	Δ Int. cov. (3)	Emp. growth (4)	CAPX (5)	Sales growth (6)	Net debt (7)	Cash growth (8)	Δ Int. cov. (9)	Emp. growth (10)	CAPX (11)	Sales growth (12)
CC(y-1toy-3)	0.000	0.124	-0.234	-2.127**	-0.003	0.010	0.002	-2.282	-0.327	-1.459	0.001	-0.007
	(0.005)	(1.848)	(0.807)	(0.939)	(0.006)	(0.007)	(0.007)	(2.919)	(2.934)	(1.359)	(0.008)	(0.011)
Real annual GDP growth	-0.002**	0.196	-0.336	0.451**	-0.002	-0.002	0.000	-0.163	-1.136	-0.028	0.002	-0.002
	(0.001)	(0.395)	(0.291)	(0.192)	(0.001)	(0.002)	(0.001)	(0.663)	(0.811)	(0.278)	(0.002)	(0.002)
Real GDP/capita	-0.003**	-0.801**	-0.145	-0.183	-0.004***	-0.004***	-0.005	0.618	-0.980	0.384	-0.004	-0.003
	(0.001)	(0.373)	(0.162)	(0.186)	(0.001)	(0.002)	(0.004)	(1.543)	(0.848)	(0.693)	(0.005)	(0.005)
Inflation volatility	-0.003***	1.059**	0.388*	0.030	0.006***	0.007***	-0.000	0.187	-0.099	0.132	-0.000	-0.002
	(0.001)	(0.511)	(0.203)	(0.218)	(0.002)	(0.002)	(0.001)	(0.511)	(0.384)	(0.301)	(0.001)	(0.002)
REER annual average	-0.091***	22.639**	-3.225	4.476	-0.118***	-0.113***	-0.037	15.505	-24.216	6.287	0.043	-0.016
	(0.023)	(9.244)	(4.563)	(4.282)	(0.031)	(0.041)	(0.040)	(19.005)	(15.573)	(8.419)	(0.051)	(0.067)
ST int. rate annual average	0.003***	-0.554	-0.083	-0.501***	-0.004***	-0.006***	0.000	0.638	0.024	-0.354	-0.002	-0.001
	(0.001)	(0.382)	(0.186)	(0.177)	(0.001)	(0.002)	(0.001)	(0.650)	(0.618)	(0.252)	(0.002)	(0.002)
Size	0.008***	-6.073***	-0.031	-0.893***	0.001	-0.014***	0.005	-19.251***	-2.617	-3.233*	-0.029**	-0.060***
	(0.002)	(0.700)	(0.299)	(0.264)	(0.002)	(0.003)	(0.006)	(4.140)	(1.959)	(1.814)	(0.013)	(0.016)
Leverage	0.002***	-0.445***	-0.040	0.001	0.000	0.000	0.002***	-0.365*	-0.191	-0.096	0.000	0.001
	(0.000)	(0.087)	(0.048)	(0.031)	(0.000)	(0.000)	(0.000)	(0.200)	(0.173)	(0.059)	(0.000)	(0.001)
Interest coverage (scaled by 1000)	-0.000	0.005***		0.001***	0.000	0.000***	-0.000	-0.010		0.078	-0.000	0.000
	(0.000)	(0.002)		(0.000)	(0.000)	(0.000)	(0.000)	(0.033)		(0.076)	(0.000)	(0.000)
Net worth	-0.443***	-11.990*	-8.566**	-0.374	0.080***	0.032	-0.396***	-21.446	-17.708	4.936	0.113***	-0.002
	(0.020)	(7.264)	(4.329)	(2.798)	(0.022)	(0.031)	(0.036)	(17.637)	(17.512)	(4.557)	(0.038)	(0.059)
Tangibility	0.153***	25.907***	3.054	-11.639***	-0.481***	-0.080**	0.208***	113.685***	25.880	-13.536**	-0.678***	0.122
	(0.019)	(8.196)	(3.379)	(3.000)	(0.027)	(0.033)	(0.040)	(19.522)	(17.898)	(6.198)	(0.068)	(0.089)
EBITDA/Assets	-0.358***	83.576***	-45.396***	30.050***	0.585***	-0.191***	-0.148***	56.540**	-79.479***	7.407	0.270***	-0.258**
	(0.033)	(14.718)	(8.030)	(6.061)	(0.046)	(0.073)	(0.049)	(28.673)	(23.821)	(9.682)	(0.094)	(0.120)
Cash flow		-3.385***						-2.369***				
		(0.168)						(0.317)				
CAPX		3.253						-2.469				
		(3.472)						(7.961)				
Constant	0.838***	66.437	27.240	26.689	0.916***	1.214***	0.598***	339.961***	187.527**	60.783	0.943***	1.661***
	(0.107)	(46.576)	(23.113)	(20.700)	(0.153)	(0.199)	(0.224)	(123.916)	(73.449)	(52.980)	(0.358)	(0.478)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	17819	16028	17471	11564	17819	17751	4557	4250	4406	2794	4570	4622
Number of firms	3221	3139	3174	2508	3223	3223	1320	1264	1306	989	1329	1335
R-squared	0.288	0.087	0.005	0.033	0.158	0.075	0.266	0.062	0.010	0.025	0.134	0.055

Notes: The table shows the estimates obtained from a linear regression with robust standard errors clustered at the firm level in parentheses and $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.11$. The dependent variables are net debt (= $(Current+Noncurrentliabilities-cash)/totalassets$), growth in cash holdings, change in interest rate coverage (= $EBIT/InterestExpenses$), the growth rate of the number of employees, CAPX (= $(FixedAssets_t - FixedAssets_{t-1} + Depreciation_t)/FixedAssets_t$) and sales growth. Descriptive statistics are available in table A.3. and detailed descriptions of all variables can be found in Appendix C.

Table A.12: Linear regressions of various firm-level variables on cumulated capital controls

	Firms larger than median size						Firms smaller than median size					
	Net debt (1)	Cash growth (2)	Δ Int. cov. (3)	Emp. growth (4)	CAPX (5)	Sales growth (6)	Net debt (7)	Cash growth (8)	Δ Int. cov. (9)	Emp. growth (10)	CAPX (11)	Sales growth (12)
CC(y-1toy-3)	0.001	-3.511**	-0.164	-2.501***	0.007	0.006	0.008	2.098	3.212*	-0.975	-0.005	-0.004
	(0.006)	(1.641)	(0.948)	(0.936)	(0.007)	(0.007)	(0.006)	(2.724)	(1.850)	(1.398)	(0.008)	(0.009)
Real annual GDP growth	0.000	0.054	-0.777**	0.014	-0.000	-0.003**	-0.003***	0.659	-1.080*	0.555*	0.002	0.000
	(0.001)	(0.375)	(0.320)	(0.172)	(0.001)	(0.002)	(0.001)	(0.577)	(0.592)	(0.300)	(0.002)	(0.002)
Real GDP/capita	-0.003*	-0.864**	-0.174	-0.473**	-0.002	-0.004**	-0.003	-1.372**	-0.418	-0.098	-0.001	-0.004
	(0.002)	(0.390)	(0.176)	(0.231)	(0.002)	(0.002)	(0.002)	(0.680)	(0.388)	(0.341)	(0.003)	(0.003)
Inflation volatility	-0.001	0.854*	0.161	-0.063	0.002	0.005**	-0.000	-0.457	-0.127	0.166	0.002	-0.002
	(0.001)	(0.479)	(0.182)	(0.194)	(0.002)	(0.002)	(0.001)	(0.510)	(0.274)	(0.300)	(0.002)	(0.002)
REER annual average	-0.028	24.538***	-4.992	4.065	-0.124***	-0.146***	-0.138***	26.899*	-0.491	11.337	-0.070	-0.050
	(0.028)	(9.110)	(4.568)	(3.909)	(0.033)	(0.042)	(0.035)	(15.031)	(10.055)	(8.040)	(0.044)	(0.061)
ST int. rate annual average	0.002**	-0.161	-0.140	-0.467***	-0.002	-0.006***	0.001	0.122	0.047	0.032	-0.003*	-0.003
	(0.001)	(0.379)	(0.320)	(0.163)	(0.001)	(0.002)	(0.001)	(0.597)	(0.390)	(0.322)	(0.002)	(0.002)
Size	0.009***	-3.374***	-0.276	-0.878**	0.006	-0.007*	0.017***	-20.454***	-0.923	-5.541***	-0.054***	-0.066***
	(0.003)	(0.869)	(0.437)	(0.394)	(0.004)	(0.004)	(0.005)	(2.424)	(1.347)	(1.112)	(0.008)	(0.011)
Leverage	0.001***	-0.290***	-0.107*	-0.002	0.000	0.000	0.001***	-0.376***	0.011	0.011	0.000	0.001*
	(0.000)	(0.100)	(0.059)	(0.035)	(0.000)	(0.000)	(0.000)	(0.120)	(0.074)	(0.052)	(0.000)	(0.001)
Interest coverage (scaled by 1000)	-0.000	0.005**		0.004***	0.000	0.000***	0.000	-0.087		0.122*	-0.000	0.000
	(0.000)	(0.002)		(0.000)	(0.000)	(0.000)	(0.000)	(0.058)		(0.067)	(0.000)	(0.000)
Net worth	-0.464***	-0.450	-9.992	2.965	0.100***	0.021	-0.421***	-14.779	-6.862	5.958	0.081***	0.027
	(0.026)	(9.037)	(6.492)	(3.143)	(0.029)	(0.032)	(0.030)	(10.148)	(6.302)	(3.821)	(0.028)	(0.044)
Tangibility	0.184***	38.123***	6.763	-5.195	-0.497***	-0.073*	0.180***	30.573**	11.388	-10.321**	-0.612***	-0.070
	(0.028)	(9.518)	(5.017)	(3.163)	(0.037)	(0.038)	(0.022)	(11.936)	(7.738)	(4.873)	(0.037)	(0.050)
EBITDA/Assets	-0.305***	47.003***	-45.583***	10.449*	0.429***	-0.387***	-0.292***	81.300***	-58.498***	28.589***	0.482***	-0.235**
	(0.036)	(15.565)	(10.373)	(5.774)	(0.055)	(0.071)	(0.039)	(20.090)	(15.154)	(8.470)	(0.060)	(0.095)
Cash flow		-2.505***						-4.194***				
		(0.211)						(0.235)				
CAPX		-0.579						7.736				
		(4.093)						(4.879)				
Constant	0.512***	-12.868	40.915	25.356	0.746***	1.178***	0.884***	319.962***	23.058	74.148*	1.817***	1.947***
	(0.124)	(47.798)	(25.661)	(20.263)	(0.178)	(0.220)	(0.181)	(87.127)	(53.513)	(38.464)	(0.254)	(0.348)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	12296	11420	11948	8551	12202	12272	10080	8858	9929	5807	10187	10101
Number of firms	2322	2259	2280	1886	2311	2323	2069	1959	2051	1496	2086	2071
R-squared	0.305	0.057	0.008	0.020	0.145	0.085	0.251	0.108	0.006	0.041	0.155	0.057

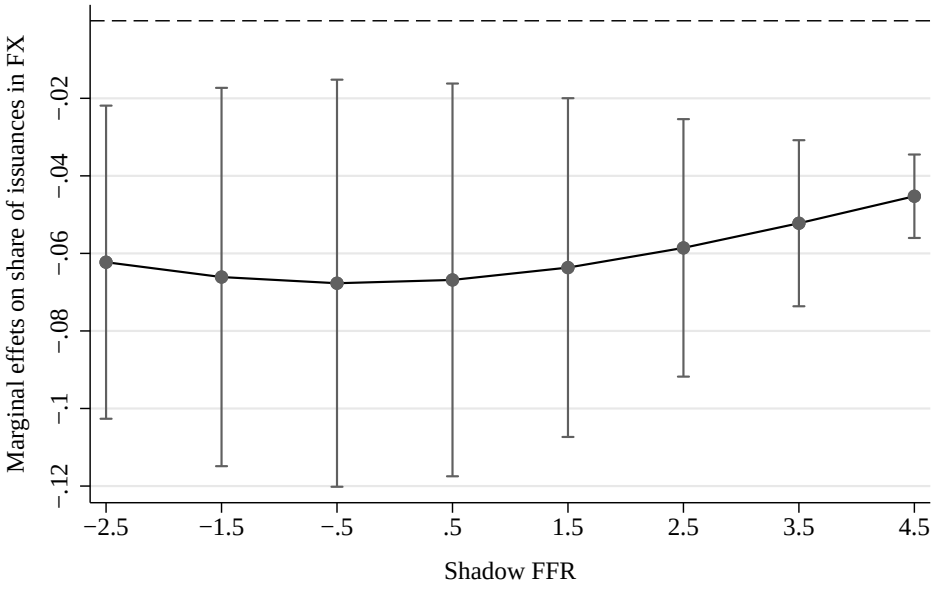
Notes: The table shows the estimates obtained from a linear regression with robust standard errors clustered at the firm level in parentheses and $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.11$. The dependent variables are net debt (= $(Current+Noncurrentliabilities-cash)/totalassets$), growth in cash holdings, change in interest rate coverage (= $EBIT/InterestExpenses$), the growth rate of the number of employees, CAPX (= $(FixedAssets_t - FixedAssets_{t-1} + Depreciation_t)/FixedAssets_t$) and sales growth. Descriptive statistics are available in table A.3. and detailed descriptions of all variables can be found in Appendix C.

Table A.13: Linear regressions of various firm-level variables on cumulated capital controls

	High-trade firms						Low-trade firms					
	Net debt (1)	Cash growth (2)	Δ Int. cov. (3)	Emp. growth (4)	CAPX (5)	Sales growth (6)	Net debt (7)	Cash growth (8)	Δ Int. cov. (9)	Emp. growth (10)	CAPX (11)	Sales growth (12)
CC(y-1toy-3)	0.001	-1.094	-0.496	-0.684	0.005	0.007	0.016**	-6.010**	0.053	-3.590***	-0.016*	-0.027**
	(0.004)	(2.024)	(1.218)	(1.072)	(0.007)	(0.007)	(0.007)	(2.342)	(2.232)	(1.299)	(0.009)	(0.011)
Real annual GDP growth	-0.001	0.616	-0.514	-0.011	-0.001	-0.003*	-0.000	-0.376	-1.500***	0.267	0.001	-0.003
	(0.001)	(0.406)	(0.406)	(0.197)	(0.001)	(0.002)	(0.001)	(0.548)	(0.575)	(0.243)	(0.002)	(0.002)
Real GDP/capita	-0.006***	-0.930**	-0.075	0.003	-0.000	-0.002	-0.002	-0.054	-0.527	-0.657	-0.006**	0.001
	(0.001)	(0.445)	(0.243)	(0.217)	(0.002)	(0.002)	(0.003)	(0.756)	(0.460)	(0.502)	(0.003)	(0.004)
Inflation volatility	-0.001	-0.466	-0.174	0.246	0.001	-0.001	-0.002	1.648**	0.556**	-0.317	0.001	0.005
	(0.001)	(0.406)	(0.194)	(0.231)	(0.001)	(0.002)	(0.001)	(0.751)	(0.259)	(0.256)	(0.002)	(0.003)
REER annual average	0.003	7.819	-12.544**	-3.678	-0.134***	-0.205***	-0.124***	23.953	6.289	6.194	-0.019	-0.059
	(0.027)	(10.426)	(6.375)	(5.122)	(0.035)	(0.046)	(0.046)	(15.047)	(9.775)	(7.052)	(0.058)	(0.074)
ST int. rate annual average	0.001	-0.042	0.022	-0.709***	-0.003**	-0.006***	0.003**	-0.677	-0.528	0.351	-0.002	-0.003
	(0.001)	(0.422)	(0.275)	(0.193)	(0.001)	(0.002)	(0.001)	(0.699)	(0.508)	(0.248)	(0.002)	(0.003)
Size	0.005*	-6.090***	0.303	-1.436***	-0.000	-0.012***	0.013***	-9.414***	-2.019*	-2.016***	-0.011*	-0.031***
	(0.002)	(1.079)	(0.453)	(0.419)	(0.003)	(0.004)	(0.004)	(1.525)	(1.086)	(0.552)	(0.006)	(0.007)
Leverage	0.001***	-0.557***	-0.131*	-0.013	0.000	0.000	0.001***	-0.183	0.015	-0.026	-0.000	0.000
	(0.000)	(0.115)	(0.070)	(0.038)	(0.000)	(0.000)	(0.000)	(0.131)	(0.073)	(0.055)	(0.000)	(0.001)
Interest coverage (scaled by 1000)	-0.000	-0.092		0.048	-0.000*	-0.000	-0.000	0.006***		0.004***	0.000	0.000***
	(0.000)	(0.087)		(0.048)	(0.000)	(0.000)	(0.000)	(0.001)		(0.001)	(0.000)	(0.000)
Net worth	-0.437***	-18.927*	-9.354	3.145	0.073**	0.054	-0.447***	-1.901	-8.265	6.206	0.110***	0.029
	(0.022)	(10.202)	(7.114)	(3.578)	(0.028)	(0.037)	(0.038)	(9.997)	(6.701)	(4.543)	(0.031)	(0.045)
Tangibility	0.161***	52.768***	6.054	-9.411**	-0.514***	-0.075*	0.168***	38.373***	8.455	-11.615**	-0.576***	-0.007
	(0.026)	(11.926)	(5.419)	(3.888)	(0.039)	(0.045)	(0.034)	(13.290)	(10.747)	(5.368)	(0.041)	(0.059)
EBITDA/Assets	-0.296***	57.592***	-58.878***	23.255***	0.489***	-0.139*	-0.339***	78.883***	-47.191***	8.425	0.449***	-0.268**
	(0.035)	(16.721)	(11.187)	(6.514)	(0.057)	(0.075)	(0.048)	(20.246)	(16.056)	(8.921)	(0.066)	(0.113)
Cash flow		-3.208***						-2.670***				
		(0.205)						(0.276)				
CAPX		2.993						-0.596				
		(4.628)						(5.449)				
Constant	0.520***	132.182**	64.089**	67.292***	0.980***	1.557***	0.851***	119.560	32.261	46.125	0.817***	1.282***
	(0.127)	(55.017)	(31.519)	(25.472)	(0.179)	(0.229)	(0.191)	(75.172)	(60.545)	(34.554)	(0.272)	(0.351)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	10807	9944	10573	6631	10824	10854	7186	6768	7003	4698	7167	7157
Number of firms	1836	1786	1819	1400	1846	1847	1102	1083	1082	943	1102	1105
R-squared	0.298	0.069	0.007	0.035	0.161	0.086	0.275	0.068	0.005	0.030	0.154	0.070

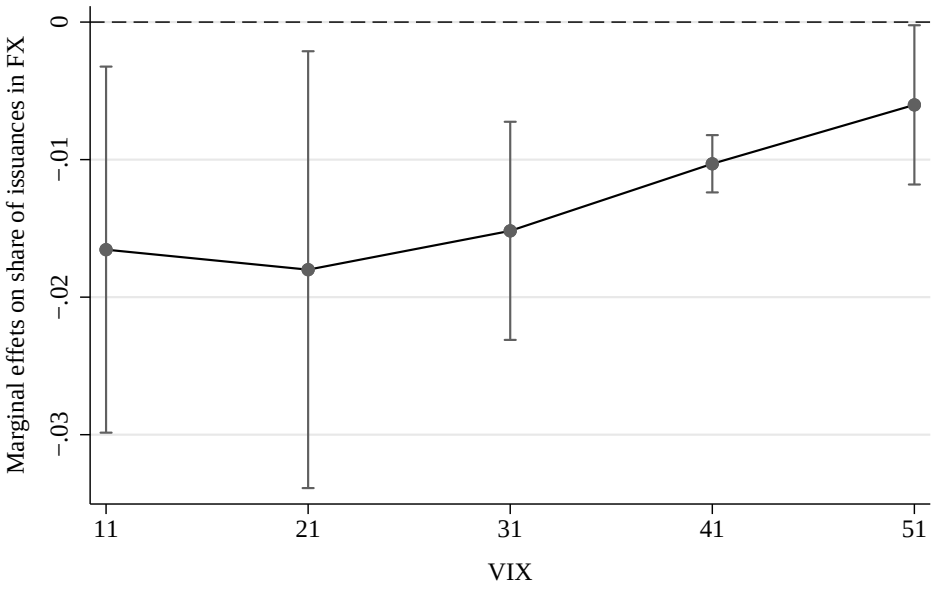
Notes: The table shows the estimates obtained from a linear regression with robust standard errors clustered at the firm level in parentheses and $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.11$. The dependent variables are net debt (= $(Current+Noncurrentliabilities-cash)/totalassets$), growth in cash holdings, change in interest rate coverage (= $EBIT/InterestExpenses$), the growth rate of the number of employees, CAPX (= $(FixedAssets_t - FixedAssets_{t-1} + Depreciation_t)/FixedAssets_t$) and sales growth. Descriptive statistics are available in table A.3. and detailed descriptions of all variables can be found in Appendix C.

Figure A.1: Marginal effects of shadow FFR for different values of shadow FFR



Note: 95% confidence intervals, other control variables evaluated at their means

Figure A.2: Marginal effects of VIX for different values of the VIX



Note: 95% confidence intervals, other control variables evaluated at their means

Appendix B: Additional results requested for revision

Table B.1: Using amounts of bonds issuances as dependent variables - OLS regressions

	Amounts of foreign currency issuances	Total amounts of issuances
	(1)	(2)
Shadow FED funds rate	-0.070**	-0.028
	(0.031)	(0.019)
VIX	-0.022*	-0.015***
	(0.011)	(0.005)
CC on bond inflows (dummy)	-0.202	0.035
	(0.143)	(0.125)
Country FE	Yes	Yes
Industry FE	Yes	Yes
Country/Firms controls	Yes	Yes
Observations	674	4697
Pseudo R^2		

Notes: The table shows the estimates obtained from a linear regression with robust standard errors clustered at the country level in parentheses and $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$. As dependent variables we use the logarithm of the total amount of corporate bonds issuances in foreign currency (column (1)) and in all currencies (column (2)). The shadow FED funds rate is from Wu and Xia (2016). VIX is an index of implied volatility of the U.S. S&P500. Capital controls (CC) on bond inflows is a dummy variable taking the value 1 when any type of restrictions on bond inflows is in place. We also control for various country- and firm-specific variables as in the baseline.

Table B.2: Dummies for bonds vs. loans and debt vs. equity as dependent variables - Logisitic regressions

	Dummy bonds vs. loans	Dummy debt vs equity
	(1)	(2)
Shadow FED funds rate	-0.003	-0.010
	(0.003)	(0.008)
VIX	0.000	0.002
	(0.001)	(0.003)
CC on bond inflows (dummy)	0.037**	0.068***
	(0.017)	(0.024)
Country FE	Yes	Yes
Industry FE	Yes	Yes
Country/Firms controls	Yes	Yes
Observations	4697	4609
Pseudo R^2	0.266	0.207

Notes: The table shows the marginal effects (all variables evaluated at their means) obtained from a logistic regression with robust standard errors clustered at the country level in parentheses. All variables are lagged. The stars indicate the statistical significance as follow: $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$. The dependent variable, bonds vs. loans (column (1)), is a dummy taking the value 1 when a bond issuance is taking place and 0 when a loan is contracted. The dependent variable, debt vs. equity (column (2)), is a dummy taking the value 1 when a bond issuance or a loan is taking place and 0 when an equity is issued. Capital controls (CC) on bond inflows is a dummy variable taking the value 1 when any type of restrictions on bond inflows is in place. We also control for various country- and firm-specific variables as in the baseline.

Table B.3: Clustering by firm instead of country - The impact of global financial conditions

Share of FX bond issuances (%)	Global factors	With CC
	(1)	(2)
ShadowFFR/Alt variable	-0.068**	-0.037**
	(0.027)	(0.016)
VIX/Alt variable	-0.019***	-0.013***
	(0.006)	(0.004)
CC on bond inflows (dummy)		-0.287***
		(0.092)
Country FE	Yes	No
Industry FE	Yes	No
Country/Firms controls	Yes	Yes
Observations	4697	4697
Pseudo R^2	0.580	0.424

Notes: The table shows the marginal effects (all variables evaluated at their means) obtained from a fractional logistic regression with robust standard errors clustered at the firm level in parentheses. All variables are lagged. The stars indicate the statistical significance as follow: ***$p < 0.01$, **$p < 0.05$, *$p < 0.1$. The dependent variable is the share of issuances denominated in foreign currency (%). The shadow FED funds rate is from Wu and Xia (2016). VIX is an index of implied volatility of the U.S. S&P500. Capital controls (CC) on bond inflows is a dummy variable taking the value 1 when any type of restrictions on bond inflows is in place. We also control for various country- and firm-specific variables as in the baseline.

Table B.4: Dropping countries with less than 50 observations - The impact of global financial conditions

Share of FX bond issuances (%)	Baseline	10Y gov. yield	LT gov. average yield	FED funds rate	Post-crisis dummy	MOVE	Global uncertainty
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
ShadowFFR/Alt variable	-0.073***	-0.106*	-0.129**	-0.078**	0.246**	-0.072**	-0.083***
	(0.028)	(0.064)	(0.062)	(0.039)	(0.122)	(0.029)	(0.029)
VIX/Alt variable	-0.019**	-0.020**	-0.016**	-0.020**		-0.007***	-0.003**
	(0.008)	(0.008)	(0.008)	(0.008)		(0.002)	(0.001)
CC on bond inflows (dummy)	-0.144**	-0.139	-0.145*	-0.139*	-0.202**	-0.134**	-0.181**
	(0.062)	(0.087)	(0.083)	(0.076)	(0.101)	(0.064)	(0.077)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country/Firms controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	4555	4555	4555	4555	4555	4555	4555
Pseudo R^2	0.572	0.568	0.568	0.569	0.563	0.572	0.569

Notes: The table shows the marginal effects (all variables evaluated at their means) obtained from a fractional logistic regression with robust standard errors clustered at the firm level in parentheses. All variables are lagged. The stars indicate the statistical significance as follow: $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$. The dependent variable is the share of issuances denominated in foreign currency (%) but we excluded countries that have less then 50 bond issuances over the sample. These are Argentina, Colombia, Peru, Poland, South Africa and Turkey. The shadow FED funds rate is from Wu and Xia (2016). VIX is an index of implied volatility of the U.S. S&P500. In columns (2) to (4), shadow FFR is replaced by, the 10-Year treasury constant maturity rate (2), the treasury inflation-indexed long-term average yield (3) and the FED funds rate (4). In (5), both shadow FFR and VIX are replaced by a dummy taking the value of 1 for 2010Q1 onwards. In columns (6) to (7), VIX is replaced by, respectively, the MOVE and a global uncertainty index. Capital controls (CC) on bond inflows is a dummy variable taking the value 1 when any type of restrictions on bond inflows is in place. We also control for various country- and firm-specific variables as in the baseline.

Table B.5: Yearly frequency - The impact of global financial conditions

Share of FX bond issuances (%)	Baseline	10Y gov. yield	LT gov. average yield	FED funds rate	Post-crisis dummy	MOVE	Global uncertainty
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
ShadowFFR/Alt variable	-0.026	-0.199***	-0.174**	-0.080	0.197	-0.026	-0.023
	(0.044)	(0.073)	(0.071)	(0.053)	(0.153)	(0.044)	(0.030)
VIX/Alt variable	-0.005	-0.003	-0.001	-0.005		-0.002	0.005***
	(0.005)	(0.005)	(0.005)	(0.006)		(0.002)	(0.002)
CC on bond inflows (dummy)	-0.148*	-0.139**	-0.130**	-0.164***	-0.156**	-0.148**	-0.118**
	(0.079)	(0.054)	(0.057)	(0.060)	(0.072)	(0.075)	(0.048)
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country/Firms controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3310	3310	3310	3310	3310	3310	3310
Pseudo R^2	0.556	0.560	0.560	0.558	0.556	0.555	0.561

Notes: The table shows the marginal effects (all variables evaluated at their means) obtained from a fractional logistic regression with robust standard errors clustered at the firm level in parentheses. All variables are lagged. The stars indicate the statistical significance as follow: $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$. The dependent variable is the share of issuances denominated in foreign currency (%). The frequency is annual. The shadow FED funds rate is from Wu and Xia (2016). VIX is an index of implied volatility of the U.S. S&P500. In columns (2) to (4), shadow FFR is replaced by, the 10-Year treasury constant maturity rate (2), the treasury inflation-indexed long-term average yield (3) and the FED funds rate (4). In (5), both shadow FFR and VIX are replaced by a dummy taking the value of 1 for 2010Q1 onwards. In columns (6) to (7), VIX is replaced by, respectively, the MOVE and a global uncertainty index. Capital controls (CC) on bond inflows is a dummy variable taking the value 1 when any type of restrictions on bond inflows is in place. We also control for various country- and firm-specific variables as in the baseline.

Table B.6: Second-step: Adding cumulative capital controls

Stock returns	All	Firms > median	Firms < median	High-trade firms	Low-trade firms
	(1)	(2)	(3)	(4)	(5)
$\widetilde{\Delta ER}$	-19.251	-10.634	-61.226***	-26.676	11.234
	(27.233)	(31.442)	(20.564)	(24.492)	(31.487)
CC (y-1 to y-3)	1.146	1.335	2.254	2.331*	-1.026
	(1.266)	(1.483)	(2.355)	(1.320)	(1.201)
CCx$\widetilde{\Delta ER}$	-4.785	-2.166	-5.099	-3.090	-14.394
	(13.602)	(14.914)	(11.473)	(13.253)	(14.397)
Cum. FX regulations (q to q-3)	1.220	0.466	2.729**	1.654**	0.392
	(1.054)	(1.101)	(0.982)	(0.766)	(1.480)
Cum. FX reg x $\widetilde{\Delta ER}$	-73.196**	-73.550**	-44.807*	-46.991**	-90.047***
	(27.052)	(28.812)	(23.934)	(18.482)	(29.813)
Constant	6.047	16.404	11.496	11.399*	0.095
	(6.974)	(9.745)	(19.257)	(5.756)	(19.523)
Quarter FE	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes
Observations	15551	11683	3868	8784	6767
Number of firms	694	585	380	452	309
R-squared	0.293	0.310	0.264	0.286	0.337

Notes: The table shows the estimates OLS regression with robust standard errors clustered at the country level in parentheses and all variables are lagged. ***$p < 0.01$, **$p < 0.05$, *$p < 0.1$. The dependent variable is either stock returns at country-level based on the MSCI index or stock returns at the firm level directly. Size of firms are defined regarding the median, where the size is measured with total assets. High and low trade firms are defined based on the correlation between income and exchange rate.$\widetilde{\Delta} ER$ is instrumented using the residuals from the first-step regression (Table A.8), where change in exchange rate is regressed on macroprudential policy and country variables. An increase in the ER is an depreciation of the local currency. Capital controls (CC) on bond inflows are from Fernandez et al. (2016), taking the value of 1 in case of controls both abroad and locally, 0.5 if one type of controls is in place, 0 otherwise. They are included as the sum of CC over the current and last three years or over the last three years. FX regulation are macroprudential policy variables from Ahnert et al. (2021), taking the value of 1 every quarter macroprudential policies increase, -1 when they decrease and 0 when they do not change. They are included as the sum of the variable over four quarters. We also control for various country- and firm-specific variables as in the baseline.

Table B.7: Second-step: Removing both cumulative capital controls and cumulative macroprudential policy variables

Stock returns	All	Firms > median	Firms < median	High-trade firms	Low-trade firms
	(1)	(2)	(3)	(4)	(5)
$\widetilde{\Delta ER}$	-101.342**	-89.364**	-143.535***	-110.188***	-71.641
	(39.375)	(35.759)	(39.944)	(37.127)	(49.726)
CC (y-1)	7.000*	6.121	9.487	8.039*	3.361
	(3.628)	(4.173)	(6.123)	(4.187)	(3.955)
CCx$\widetilde{\Delta ER}$	178.974**	176.597**	193.146**	161.733*	154.791**
	(65.383)	(62.049)	(72.603)	(81.117)	(54.030)
Constant	10.241	22.717	26.700	15.591	18.705
	(10.327)	(14.491)	(21.079)	(10.934)	(24.592)
Country FE	Yes	Yes	Yes	Yes	Yes
Observations	15551	11683	3868	8784	6767
Number of firms	694	585	380	452	309
R-squared	0.071	0.082	0.059	0.054	0.134

Notes: The table shows the estimates OLS regression with robust standard errors clustered at the country level in parentheses and all variables are lagged. ***$p < 0.01$, **$p < 0.05$, *$p < 0.1$. The dependent variable is either stock returns at country-level based on the MSCI index or stock returns at the firm level directly. Size of firms are defined regarding the median, where the size is measured with total assets. High and low trade firms are defined based on the correlation between income and exchange rate. Δ ER is instrumented using the residuals from the first-step regression (Table A.8), where change in trade-weighted exchange rate is regressed on macroprudential policy and country variables. An increase in the ER is an appreciation of the local currency. Capital controls (CC) on bond inflows are from Fernandez et al. (2016), taking the value of 1 in case of controls both abroad and locally, 0.5 if one type of controls is in place, 0 otherwise. They are included as the sum of CC over the current and last three years or over the last three years. FX regulation are macroprudential policy variables from Ahnert et al. (2021), taking the value of 1 every quarter macroprudential policies increase, -1 when they decrease and 0 when they do not change. They are included as the sum of the variable over four quarters. We also control for various country- and firm-specific variables as in the baseline.

Appendix C: Description of variables

Firm variables

Variable	Description	Source
Share of foreign currency issuances (%)	Use corporate bond issuances data to compute the share of issuances denominated in foreign currency by taking the ratio of issuances in foreign currency over issuances in domestic currency, given a company is issuing. Quarterly average of daily date of issuances: if a company issues more than once in a given quarter, we use principal amounts as weights.	SDC (Thomson Reuters)
High-yield flag	Dummy variable provided together with other information on bond issuances: take the value of 1 if the deal is indicated as highly leveraged. Quarterly average of daily date of issuances: if a company issues more than once in a given quarter, we use principal amounts as weights and round it to the closest integer (0 or 1).	SDC (Thomson Reuters)
Trade dummy	Dummy variable built on the correlation between income (EBIT) and nominal exchange rate against USD. A correlation coefficient is computed over 10 years. If the correlation is positive, it means that there is a positive correlation between income and a depreciation or between lower income and an appreciation. This is flagged a value of 1 (high-trade). If the correlation is 0 or negative, it is flagged as a value of 0 (low-trade).	Orbis/Worldscope and own computations.
Leverage	Ratio of long-term debt over total assets. Long-term debt is defined as the sum of bank loans, debentures & convertible debt, lease liabilities, and other long-term interest bearing debt, yearly frequency.	Orbis/Worldscope
Size	Log of total assets, the sum of total current assets and fixed assets, yearly frequency.	Orbis/Worldscope

Cash or equivalent / cash growth	Regroup all immediate negotiable medium of exchange or instrument normally accepted by banks for deposits and immediate credit to a customer account - it also represents funds that can be used to pays current invoices - plus short term investments that can be realized on short notice, take the logarithm, yearly frequency. Cash growth is computed as the log difference of the cash or equivalent variable.	Orbis/Worldscope
Book-to-market value	Ratio of book equity (the difference between total assets and total liabilities) over the market capitalization of the company, yearly frequency.	Orbis/Worldscope
Return on assets (ROA)	Ratio of net income after preferred dividend requirement over total assets, yearly frequency.	Orbis/Worldscope
Collateral: Ratio of tangible assets over total assets	Used as proxy for the companies capital structure or collaterals. Computed as the ratio of tangible assets - also called net property, plant and equipment, which is obtained after having deducted the historical cost and revaluation of properties, the accumulated depreciation, amortization and depletion over total assets, yearly frequency.	Orbis/Worldscope
Firms stock returns	Quarterly average of firm daily stock returns.	Datastream
Return on equity (ROE)	Net income per equity (obtained by dividing net income by shareholders equity). Yearly frequency.	Orbis/Worldscope
Firm beta	Obtained from averaging at quarterly frequency the estimated β of a CAPM model regression at daily frequency. Formally, we estimate the following: $\Delta S_i = \alpha + \beta_i * \Delta M + \epsilon$, with ΔS_i the change in the firm stock price and ΔM the change in the market price.	Orbis/Worldscope and own computations
Net debt	= Current Assets + Non-Current Liabilities Cash)/Total Assets. Annual frequency.	Orbis/Worldscope and own computations
External financial dependency	= (Capital Expenditures Operating Cash Flow)/Capital Expenditures, with Capital Expenditures = Net Acquisition of Tangible Assets + Depreciation. Annual frequency	Orbis/Worldscope and own computations

Interest rate coverage	= EBIT/Interest Expenses. The change in interest coverage is computed as the difference between two years. Annual frequency.	Orbis/Worldscope and own computations
Employment growth	Computed as the growth in the number of employees in a company between two years. Annual frequency.	Orbis/Worldscope and own computations
CAPX	= (Fixed Assets at t Fixed Assets at t-1 + Depreciation at t)/Fixed Assets at t. Annual frequency	Orbis/Worldscope and own computations
Sales or sales growth	Total amount of sales with growth being computed as the growth in the amount of sales in a company between two years. Annual frequency.	Orbis/Worldscope and own computations
Net worth	= Total Assets Total Liabilities. Annual frequency.	Orbis/Worldscope and own computations
Tangibility	= Tangible Assets/Total Assets. Annual frequency.	Orbis/Worldscope and own computations
EBITDA over Assets	= EBITDA/Total Assets. Annual frequency.	Orbis/Worldscope and own computations
EBIT	Earning Before Interest and Taxes in USD. Annual frequency.	Orbis/Worldscope and own computations
Cash flow	Operating cash flow. Annual frequency.	Orbis/Worldscope and own computations

Country variables

Variable	Description	Source
Controls on bond inflows (continuous or dummy)	Index variable: takes values 0, 0.5 or 1, with 1 meaning a higher degree of controls. It is based on two dummy variables described below: local controls and controls abroad. As a dummy, it takes only two values: 0 when no controls at all (value = 0), 1 otherwise (values = 0.5 or 1). At annual frequency.	Fernandez et al. (2016)
Controls on local bond inflows	Dummy variable: it takes the value of 1 when controls on bonds purchased locally by non-residents are in place, 0 otherwise. At annual frequency	Fernandez et al. (2016)
Controls on bond inflows abroad	Dummy variable: it takes the value of 1 when controls on bonds sold or issued abroad by residents are in place, 0 otherwise. At annual frequency.	Fernandez et al. (2016)
Controls on total bond flows	Index variable: takes values 0, 0.25, 0.5, 0.75 and 1, with high meaning a higher degree of CC. The index is built based on indices for CC on bond inflows and outflows. As a dummy, takes value 0, when no controls at all (value = 0) and 1 otherwise (values >0). At annual frequency.	Fernandez et al. (2016)
Controls on bond outflows	Index variable: it takes value 0, 0.5 or 1, with 1 meaning higher degree of controls. Build similarly to controls on bond inflows. As a dummy, it takes only two values: 0 when no controls at all (value = 0), 1 otherwise. At annual frequency.	Fernandez et al. (2016)
Exchange rate pegged dummy	Based on Shambaugh (2015) methodology: the variable takes the value 1 if the exchange rate is pegged, 0 otherwise.	Shambaughs website
Trade-weighted ER	Trade-weighted nominal exchange rate, quarterly average from daily frequency. Change is computed as the log-difference.	BIS
REER annual average and volatility	Broad real effective exchange rate index from the BIS averaged at annual frequency. REER volatility is the standard error of REER over a 16 quarter rolling window, quarterly frequency.	BIS and own calculations

Short-term interest rates /Interest rates differential /Annual average of ST interest rate	Difference between domestic 3-month money market interest rate or equivalent and the U.S. 3-month LIBOR interest rate. Quarterly average of business day differences. Description of each countrys interest rate: · Argentina: LEBAC 3-month interest rate · Brazil: 3-month implied interest rate based on government bonds computed by Thomson Reuters · China: 3-month interbank rate · Colombia: 90-day colombian certificate of deposit rate. · India: 3-month MIBOR · Indonesia: 3-month interbank rate · Malaysia: 3-month interbank rate, KLIBOR - Kuala Lumpur Interbank Offered Rate · Mexico: Cetes 91-day rate · Philippines: 91-day treasury bill rate · Peru: 3-month interbank offered interest rate · Poland: Warswaw 3-month interbank rate (WIBOR) · Russian Federation: 3-month interbank rate, 31 to 90 days. · Saudi Arabia: 3-month interbank rate · South Africa: 3-month interbank rate - Jibar · Thailand: 3-month interbank rate (BIBOR) · Turkey - 3-month interbank rate	Datastream
Real GDP growth	Growth of real GDP based on expenditures approach, not seasonally adjusted for most countries, quarterly and annual frequency.	IMF/IFS
CPI inflation and volatility	Inflation is computed as the year-on-year change in the country CPI. percentage of inflation relative to the same period the year before. Inflation volatility is the standard error of CPI inflation over a 16 quarter rolling window, quarterly frequency.	IMF/IFS

Derivatives market depth (in bios USD)	Use of BIS Triennal Survey to obtain a countrys total amounts of foreign exchange derivatives, including currency swaps, FX swaps, options, outright forwards and other derivatives. Missing quarters are interpolated using the BIS semi-annual Survey and the amounts of foreign exchange derivatives in other currency (all except five biggest) as weights.	BIS
Real GDP per capita PPP (/1000)	PPP adjusted GDP is GDP converted to international dollars using purchasing power parity rates. An international dollar has the same purchasing power over GDP as the U.S. dollar has in the United States. GDP at purchasers prices is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. Data are in constant 2011 international dollars, annual frequency.	World Bank
Regulatory quality index	Regulatory quality captures perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development. Estimate gives the countrys score on the aggregate indicator, in units of a standard normal distribution, i.e. ranging from approximately -2.5 to 2.5. Annual frequency.	World bank: World governance indicators
Rule of law index	Rule of Law captures perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence. Estimate gives the country's score on the aggregate indicator, in units of a standard normal distribution, i.e. ranging from approximately -2.5 to 2.5. Annual frequency.	World bank: World governance indicators

Macroprudential FX regulations total	Variable measuring a tightening as a +1 and a reduction or removal as a -1 of macroprudential FX regulations. A quarter with no change in FX regulations is entered as a 0. It is based on two sub-variables, distinguishing between the asset and liability side described below. At quarterly frequency. The cumulated measure is built as the sum of the index over the current and last three quarters.	Ahnert et al. (2021)
Macroprudential FX regulation asset side	Variable measuring a tightening as a +1 and a reduction or removal as a -1 of macroprudential FX regulations targeting the FX assets of domestic banks. These could be broadly defined as restricting FX lending to domestic firms and households. A quarter with no change is entered as a 0. At quarterly frequency. The cumulated measure is built as the sum of the index over the current and last three quarters.	Ahnert et al. (2018)
Macroprudential FX regulation liability side	Variable measuring a tightening as a +1 and a reduction or removal as a -1 of macroprudential FX regulations targeting the FX liabilities of domestic banks. These could be broadly defined as focusing on the funding decisions of banks (FX reserves requirements and FX liquidity requirements). A quarter with no change is entered as a 0. At quarterly frequency. The cumulated measure is built as the sum of the index over the current and last three quarters.	Ahnert et al. (2018)
Limits on foreign currency loans (asset-side)	Macroprudential variable defined as limits on FX currency loans being in place in a given year. Dummy variable taking the value of 1 when the tool is enforced, 0 otherwise. Annual frequency.	Cerutti et al. (2017)
FX reserves requirements (liability-side)	Macroprudential variable defined as FX or/and countercyclical reserve requirements being in place in a given year. Dummy variable taking the value of 1 when the tool is enforced. Annual frequency.	Cerutti et al. (2017)

Country stock returns	Based on MSCI index computed using various constituents lists covering generally approximately 85% of the free float-adjusted market capitalization in each country, available at daily frequency. Returns computed as the log change in the quarterly average of the index.	Datastream.
Stock market capitalization to GDP	Market capitalization of listed domestic companies as a percentage of GDP. The market capitalization is coumputed as the share price times the numer of shares outstanding (including their several classes) for listed domestic companies. Investment funds, unit trusts and companies whose only business goal is to hold shares of other listed companies are excluded. Data are end of year values	World Federation of Exchanges databases (World Bank)

Global variables

Variable	**Description**	**Source**
Shadow FED funds rate	Official FED funds rate when above zero and interest rate reflecting the FED monetary policy based on Wu and Xia (2016) methodology, quarterly average.	Wu and Xia (2016)
VIX	Chicago Board Options Exchange (CBOE) index of the S&P500 implied volatility: measures market expectation of near term volatility conveyed by stock index option prices, quarterly average of business days.	FRED, Federal Reserve Bank of St. Louis
10-year U.S. government bond yields	10-year treasury constant maturity rate for the U.S., quarterly average of business days	FRED, Federal Reserve Bank of St. Louis
LT gov. average yield	Treasury inflation-indexed long-term average yield: Averages of business days. Based on the unweighted average bid yields for all treasury inflation-indexed securities with remaining terms to maturity of more than 10 years.	FRED, Federal Reserve Bank of St. Louis
FED funds rate	Effective Federal funds rate: interest rate at which depository institutions trade federal funds with each other overnight, quarterly average of business days	FRED, Federal Reserve Bank of St. Louis

Post-crisis dummy	Dummy variable with value of 1 for 2010 Q1 onwards.	Own computations.
MOVE	MOVE stands for Merrill lynch Option Volatility Estimate and is a yield curve weighted index of the normalized implied volatility on 3-month. Treasury options which are weighted on the 2, 5, 10, and 30 year contracts, quarterly average of business days.	Datastream (Thomson Reuters)
Global economic policy uncertainty index	Global EPU is computed as the GDP-weighted average of monthly EPU index values for US, Canada, Brazil, Chile, UK, Germany, Italy, Spain, France, Netherlands, Russia, India, China, South Korea, Japan, Ireland, and Australia, using GDP data from the IMFs World Economic Outlook Database. Each national EPU index is renormalized to a mean of 100 from 1997 to 2015 before calculating the Global EPU index. Quarterly average of monthly values.	Baker et al. (2016)
VIX EME	CBOE Emerging Markets ETF Volatility Index: Exchange Traded Funds (ETFs) are shares of trusts that hold portfolios of stocks designed to closely track the price performance and yield of specific indices. Originally from the CBOE market statistics, quarterly average of business days.	FRED, Federal Reserve Bank of St. Louis
World GDP growth	Growth rate of GDP for the World in constant USD = 2010. Yearly frequency.	World bank