Foreign Currency Debt and Disagreement
APPENDIX

FC Debt and Disagreement

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A Extensions

A.1 Extension with a Strategic Central Bank

In the baseline model, we have assumed that the exchange rate depends only on the exogenous fundamentals θ. We now introduce a central bank that makes a devaluation decision in order to maximize agents' welfare.

A.1.1 The central bank's objective

We assume that the utility function of the agents is of the form

$$U_i = R(S, S^*) - d_i$$

where $R(S, S^*) = -\frac{X}{2}(S - S^*)^2$ and $d_i = S(1 - m_i) + m_i(1 + r)$ are total debt repayments in period 2, expressed in domestic currency, with $0 \leq m_i \leq 1$ the share of debt that is expressed in peso. S^* is the shadow exchange rate, that is, the exchange rate that maximizes the first term. We can think of $R(S, S^*)$ as the trade income of the country, which depends on the terms of trade, and hence on the nominal exchange rate in the presence of nominal rigidities. X controls for the relative weight of trade income as compared to the costs of debt, d_i. For $S^* = 3/2$, a CB that would maximize $R(S, S^*)$ would be indifferent between $S = 1$ (defending the currency) and $S = 2$ (devaluation).

The objective of the central bank (CB) is to set S in order to maximize the sum of the individual utilities $W = \int_0^1 U_i di$, taking M and r as given. Defining the aggregate share of peso debt as $M = \int_0^1 m_i di$, we obtain the central bank's objective function:

$$W(M, S^*, r, S) = R(S, S^*) - (1 - M)S - M(1 + r) \tag{A.1}$$

A.1.2 The central bank's policy rule

In period 2, the central bank observes the shadow exchange rate S^*, the interest rate r and the share of peso debt M, and chooses $S = 1$ or $S = 2$, in order to maximize W.

The central bank devalues the currency if and only if $\Delta W < 0$, where $\Delta W = W(M, S^*, r, 1) - W(M, S^*, r, 2)$, which endogenously implies the devaluation rule:

$$\theta \leq M \tag{A.2}$$

where $\theta = 1 - X\left(S^* - \frac{3}{2}\right)$. θ corresponds to the "fundamentals". It is a function of the shadow exchange rate S^* and of the weight of trade income relative to the debt repayments X. Here, it can be interpreted as the income loss incurred with a devaluation. The share of peso debt M is the financial gain from a devaluation, as the difference in unit cost is 1. As a result, when the shadow terms of trade S^* are high enough, it is optimal to devalue the currency. Moreover, when M is high, only a small fraction of domestic agents hold debt denominated in foreign currency, which implies that a depreciation of the currency would not overly affect the country's total debt repayments.[1]

Namely, it is more likely to devalue when the endogenously determined share of peso debt M in the economy is relatively large. Intuitively, the devaluation decision not only depends on the state of the fundamentals, but also on the share of foreign currency debt.

A.1.3 Equilibrium

In this extended version of the model, payoffs become endogenous to the borrowers' actions and the problem becomes more complex. We thus need to delineate the set of equilibria that we consider.

Equilibrium concepts A *strategy* for agent i is a decision rule $m_i(x_i, \mu)$ that maps each realisation of x_i and μ to an action (i.e., to borrow in dollars or in pesos). An *equilibrium* is a profile of strategies –one for each borrower– such that a borrower's strategy maximizes her expected payoff conditional on the information available, when all the other borrowers follow the strategies in the profile. A *symmetric equilibrium* is an equilibrium such that all individual strategies are identical: $m_i(x_i, \mu) = m(x_i, \mu)$. In a symmetric equilibrium, two distinct individuals receiving the same private signal will choose the same action.

We look at monotone (or threshold) symmetric equilibria, that is, equilibria in which $m(x, \mu)$ is monotonic in x. A monotone equilibrium is such that, for any given realisation μ of the public signal, an agent borrows in pesos if and only if the realisation x of the private signal is less than a threshold $x^*(\mu)$. A monotone equilibrium is then identified by the threshold function $x^*(\mu)$ above which the agents borrow in dollars, just as in the baseline model.

[1] As in Chamon and Hausman (2002), the CB here does not try to expropriate investors to the benefit of domestic residents. The exchange rate policy has the main goal to make dollar debt safer, given that it has already been issued.

The difference with the baseline model is that it gives rise to strategic complementarities among domestic borrowers. If an individual domestic borrower expects other domestic borrowers to borrow in dollars, then her devaluation expectations will go down, increasing her incentive to borrow in dollars.

The share of peso debt Given the dollarization threshold $x^*(\mu)$, the share of peso debt $M(\theta, \mu)$ is still defined by Equation (6). Suppose that there exists a threshold $\theta^*(\mu)$ such that a devaluation occurs if and only if the state of the fundamentals is less than that threshold. This devaluation threshold is characterized by:

$$\theta^*(\mu) = M(\theta^*(\mu), \mu),$$

which, combined with Equation (7), amounts to

$$\theta^*(\mu) = \Phi\left(\epsilon^*(\theta^*(\mu), \mu)\right). \tag{A.3}$$

with $\sqrt{\beta}^{-1}\epsilon^*(\theta, \mu) = x^*(\mu) - \theta$, as before.

The indifference equation The indifference equation (5) now depends on the endogenous devaluation threshold $\theta^*(\mu)$:

$$Pr(\theta \leq \theta^*(\mu)|\mu) = Pr(\theta \leq \theta^*(\mu)|\mu, x^*(\mu))$$

This can be rewritten as

$$\Phi\left[\sqrt{\alpha}(\theta^*(\mu) - \mu)\right] = \Phi\left[\sqrt{\alpha+\beta}\left(\theta^*(\mu) - \frac{\alpha}{\alpha+\beta}\mu - \frac{\beta}{\alpha+\beta}\left(\theta + \sqrt{\beta}^{-1}\epsilon^*(\theta, \mu)\right)\right)\right] \tag{A.4}$$

Equilibrium characterization A monotone equilibrium is then identified by the threshold functions $\epsilon^*(\theta,\mu)$ and $\theta^*(\mu)$. Equations (A.3) and (A.4) jointly determine $\epsilon^*(\theta,\mu)$ and $\theta^*(\mu)$. After solving for $\epsilon^*(\theta,\mu)$, we can derive the share of peso debt $M(\theta,\mu)$ using Equation (7).

Equilibrium uniqueness Under common knowledge, a problem of indeterminacy arises because the existence of multiple equilibria does not allow to make any definitive prediction as to whether the currency is going to be devalued or not. However, in our framework, as domestic agents receive private signals, we depart from the assumption of common knowledge on the fundamentals and we can show below that the equilibrium is unique.

Equation (A.4) hold for all θ, including $\theta = \theta^*(\mu)$, which yields

$$\Phi\left[\sqrt{\alpha}(\theta^*(\mu)-\mu)\right] = \Phi\left[\sqrt{\alpha+\beta}\left(\theta^*(\mu) - \frac{\alpha}{\alpha+\beta}\mu - \frac{\beta}{\alpha+\beta}\left(\theta^*(\mu) + \sqrt{\beta}^{-1}\epsilon^*(\theta^*(\mu),\mu)\right)\right)\right]$$

which implicitly defines $\theta^*(\mu)$.

This equation can be rewritten as

$$G(\theta^*(\mu)) = g(\mu), \tag{A.5}$$

where $g(\mu) = \left(1-\sqrt{\frac{\alpha}{\alpha+\beta}}\right)\mu$ and $G(\theta) = \left(1-\sqrt{\frac{\alpha}{\alpha+\beta}}\right)\theta + \sqrt{\frac{\beta}{\alpha(\alpha+\beta)}}\Phi^{-1}(\theta)$.

To establish the existence and analyse the determinacy of the equilibrium, we need to look at the properties of the function G. For every $\mu \in \mathbb{R}$, $g(\mu)$ is a real constant. As long as $\beta > 0$, $G(\theta)$ is continuous and increasing in θ, with $\lim_{\theta\to 0} G(\theta) = -\infty$ and $\lim_{\theta\to 1} G(\theta) = +\infty$. Therefore, a unique solution $\theta^*(\mu) \in [0,1]$ exists for all $\mu \in \mathbb{R}$.[2]

[2]Note that, as is standard in the global games literature, dispersed information ($\beta > 0$) rules out multiple equilibria.

Then, for a given θ, and a given μ, the indifference equation (A.4) uniquely determines $\epsilon^*(\theta,\mu)$.

A.1.4 Proof of Proposition 2

Equations (A.3) and (A.4) jointly determine $\epsilon^*(\theta,\mu)$ and $\theta^*(\mu)$ and we have shown that this solution exists and is unique. We now determine the properties of this solution to establish Proposition 2.

By differentiating (A.4) with respect to μ, we obtain

$$\sqrt{\alpha}(\theta^{*\prime}(\mu)-1)=\sqrt{\alpha+\beta}\left(\theta^{*\prime}(\mu)-\frac{\alpha}{\alpha+\beta}-\frac{\beta}{\alpha+\beta}\sqrt{\beta}^{-1}\frac{\partial\epsilon^*(\theta,\mu)}{\partial\mu}\right)$$

Hence

$$\frac{\partial\epsilon^*(\theta,\mu)}{\partial\mu}=A+B\sqrt{\beta}\theta^{*\prime}(\mu) \tag{A.6}$$

with $B=\sqrt{\alpha+\beta}(\sqrt{\alpha+\beta}-\sqrt{\alpha})/\beta=1-A$.

By differentiating (A.3) with respect to μ, we obtain

$$\theta^{*\prime}(\mu)=\phi\left(\epsilon^*(\theta^*(\mu),\mu)\right)\left(\theta^{*\prime}(\mu)\frac{\partial\epsilon^*(\theta,\mu)}{\partial\theta}+\frac{\partial\epsilon^*(\theta,\mu)}{\partial\mu}\right)$$

Note that $\epsilon^*(\theta,\mu)=\sqrt{\beta}(x^*(\mu)-\theta)$, so that

$$\frac{\partial\epsilon^*(\theta,\mu)}{\partial\theta}=-\sqrt{\beta} \tag{A.7}$$

As a result,

$$\theta^{*\prime}(\mu)=\phi\left(\epsilon^*(\theta^*(\mu),\mu)\right)\left(-\theta^{*\prime}(\mu)\sqrt{\beta}+\frac{\partial\epsilon^*(\theta,\mu)}{\partial\mu}\right)$$

Hence

$$\theta^{*\prime}(\mu) = \frac{\phi\left(\epsilon^*(\theta^*(\mu),\mu)\right)}{1+\sqrt{\beta}\phi\left(\epsilon^*(\theta^*(\mu),\mu)\right)}$$

Replacing $\theta^{*\prime}(\mu)$ in (A.6), we obtain

$$\frac{\partial\epsilon^*(\theta,\mu)}{\partial\mu} = A + B.C(\mu)\frac{\partial\epsilon^*(\theta,\mu)}{\partial\mu}$$

with $C(\mu) = \frac{\sqrt{\beta}\phi(\epsilon^*(\theta^*(\mu),\mu))}{1+\sqrt{\beta}\phi(\epsilon^*(\theta^*(\mu),\mu))}$.

Therefore,

$$\frac{\partial\epsilon^*(\theta,\mu)}{\partial\mu} = A.Z(\mu) \tag{A.8}$$

with $Z(\mu) = \frac{1}{1-B.C(\mu)}$.

By noting that $\frac{\partial M(\theta,\mu)}{\partial\theta} = \phi\left(\epsilon^*(\theta,\mu)\right)\frac{\partial\epsilon^*(\theta,\mu)}{\partial\mu}$ and $\frac{\partial M(\theta,\mu)}{\partial\mu} = \phi\left(\epsilon^*(\theta,\mu)\right)\frac{\partial\epsilon^*(\theta,\mu)}{\partial\mu}$, Equations (A.7) and (A.8) yield the equations in Proposition 2.

As both B and $C(\mu)$ are strictly positive and lower than 1, then $Z(\mu) > 1$. Hence the proposition.

A.2 Extension with flexible exchange rate

In our model, we consider a fixed exchange rate regime. Our results do not hinge on that assumption. To illustrate this, consider a CB that sets the second-period exchange rate S flexibly to maximize $W(M,S^*,r,S)$, as defined in (A.1), taking M and r as given. The resulting optimal exchange rate is $S = S^* - (1-M)/X$. We define the fundamentals as $\theta = 1 - XS^*$, so that $S = (M-\theta)/X$.

We suppose that the signals foreigners and domestic borrowers receive on θ are the same as in the fixed exchange rate case, and we also consider monotone symmetric equilibria, where an agent borrows in pesos if and only if her private signal is less than a threshold $x^*(\mu)$. As a result, the share of peso borrowing M is a function of θ and μ, and $M(\theta,\mu)$ is defined by Equation (6).

The UIP condition implies that the peso interest rate r is equal to $E(S|\mu) - 1$, the expected depreciation conditional on foreigner information. Replacing S, we obtain

$$\frac{1}{X} E\left(M(\theta, \mu) - \theta | \mu\right) - 1 = r. \tag{A.9}$$

The domestic borrowers make their debt-denomination decisions based on their public and private signals μ and x_i. A domestic borrower receiving a signal $x_i = x^*(\mu)$ would be indifferent between peso and dollar debt if and only if:

$$\frac{1}{X} E\left(M(\theta, \mu) - \theta | \mu, x^*(\mu)\right) - 1 = r$$

which implies that, for $x_i = x^*(\mu)$, the domestic agent has exactly the same expectations as the foreigners:

$$E\left(M(\theta, \mu) - \theta | \mu, x^*(\mu)\right) = E\left(M(\theta, \mu) - \theta | \mu\right) \tag{A.10}$$

All borrowers with a signal $x_i < x^*(\mu)$ borrow in pesos and all borrowers with a signal $x_i > x^*(\mu)$ borrow in dollars. The functions $x^*(\mu)$ and $M(\theta, \mu)$ are jointly defined by Equations (6) and (A.10). We already see here that the structure of the problem is the same as in the fixed exchange rate case.

After substituting for $M(\theta, \mu)$ using (6), we can see that $x^*(\mu)$ is implicitly defined by

$$E\left(\Phi(\sqrt{\beta}(x^*(\mu) - \theta)) - \theta | \mu, x^*(\mu)\right) = E\left(\Phi(\sqrt{\beta}(x^*(\mu) - \theta)) - \theta | \mu\right) \tag{A.11}$$

After solving for $x^*(\mu)$, we can derive the share of peso debt $M(\theta, \mu)$.

The following lemma provides the solution for $x^*(\mu)$:

LEMMA 1. *We can show:*

$$x^*(\mu) = \mu. \tag{A.12}$$

Proof. Using the conditional distributions of θ:

$$\theta|\mu \sim N\left(\mu, \sqrt{\alpha}^{-1}\right)$$

and

$$\theta|\mu, x^*(\mu) \sim N\left(\frac{\alpha}{\alpha+\beta}\mu + \frac{\beta}{\alpha+\beta}x^*(\mu), \sqrt{\alpha+\beta}^{-1}\right),$$

and the expression $E\left(\Phi(\alpha_0 + \alpha_1\epsilon)\right) = \Phi\left(\frac{\alpha_0}{\sqrt{1+\alpha_1^2}}\right)$, Equation (A.11) can be rewritten as

$$\Phi\left(\sqrt{\tfrac{\alpha}{\alpha+2\beta}}\sqrt{\tfrac{\alpha\beta}{\alpha+\beta}}(x^*(\mu)-\mu)\right) = \Phi\left(\sqrt{\tfrac{\alpha\beta}{\alpha+\beta}}(x^*(\mu)-\mu)\right) + \tfrac{\alpha}{\alpha+\beta}(x^*(\mu)-\mu)$$

Consider the function $G(y) = \Phi\left(\sqrt{\frac{\alpha\beta}{\alpha+\beta}}y\right) - \Phi\left(\sqrt{\frac{\alpha}{\alpha+2\beta}}\sqrt{\frac{\alpha\beta}{\alpha+\beta}}y\right) + \frac{\alpha}{\alpha+\beta}y$. A solution for $x^*(\mu)-\mu$ satisfies $G(x^*(\mu)-\mu) = 0$. Notice that $x^*(\mu)-\mu = 0$ is a solution.

Besides, we can show that, because $0 < \sqrt{\frac{\alpha}{\alpha+2\beta}} < 1$, $\Phi\left(\sqrt{\frac{\alpha\beta}{\alpha+\beta}}y\right) > \Phi\left(\sqrt{\frac{\alpha}{\alpha+2\beta}}\sqrt{\frac{\alpha\beta}{\alpha+\beta}}y\right)$ for $y > 0$ and $\Phi\left(\sqrt{\frac{\alpha\beta}{\alpha+\beta}}y\right) < \Phi\left(\sqrt{\frac{\alpha}{\alpha+2\beta}}\sqrt{\frac{\alpha\beta}{\alpha+\beta}}y\right)$ for $y < 0$. as a result, $G(y) < 0$ for $y < 0$ and $G(y) > 0$ for $y > 0$, so that $G(y) = 0$ if and only if $y = 0$. As a result, $x^*(\mu) - \mu = 0$ is the unique solution to (A.11). □

The marginal borrower, i.e. the borrower that holds the same exchange rate expectations as the foreign investors, is the borrower whose private signal coincides with μ. This marginal signal moves one-for-one with μ.

The following proposition summarises the impacts of θ and μ on peso borrowing:

Proposition 1. We can show:

$$\frac{\partial M(\theta,\mu)}{\partial \theta} = -\sqrt{\beta}\phi(\epsilon^*(\theta,\mu)) < 0 \qquad \text{and} \qquad \frac{\partial M(\theta,\mu)}{\partial \mu} = \sqrt{\beta}\phi(\epsilon^*(\theta,\mu)) > 0$$

where $\sqrt{\beta}^{-1}\epsilon^*(\theta,\mu) = x^*(\mu) - \theta$.

Proof. We replace $x^*(\mu)$ with $\theta + \sqrt{\beta}^{-1}\epsilon^*(\theta,\mu)$ in (A.12) and differentiate with respect to μ. We then use (7), which relates M to ϵ^*. □

The predictions of a model with a flexible exchange rate are qualitatively similar to the model with a fixed exchange rate.

B Additional Tables

Table B.1. *Descriptive Statistics*

	(1) mean	sd	min	max
FC borrowing	92.01	20.29	0.00	100.00
Growth	1.01	0.97	-4.07	3.56
Reserves	14.25	10.32	0.05	51.06
Current account	0.05	1.55	-4.30	6.24
Gov. primary def.	0.18	2.75	-6.39	8.34
EMP	-0.18	4.17	-27.04	44.02
Pol. Risk	-0.25	1.78	-4.76	6.24
SD(EER)	2.22	6.48	0.00	148.74
XR Risk	-8.26	2.14	-10.00	0.00
$E_t(\Delta S_{t,t+1})$	0.85	2.08	-4.29	9.88
$E_t(\Delta S_{t,t+4})$	2.72	5.06	-6.40	29.87
$E_t(\Delta S_{t,t+8})$	4.21	7.48	-8.73	40.04
Observations	2019			

Note: The data cover 16 emerging market countries over the period Q1-1990 to Q4-2019. Foreign currency share is the share of private sector newly issued bonds denominated in foreign currency. $\Delta s_{t,t+h}$ is the log change in the nominal exchange rate vis-à-vis the US dollar. A higher value indicates a depreciation of the domestic currency. EMP is exchange market pressure.

Table B.2. *Pairwise correlations*

	(1) FC borrowing	Growth	Reserves	Current account	Gov. primary def.	EMP	Pol. Risk	SD(EER)	XR Risk	$E_t(\Delta S_{t,t+1})$	$E_t(\Delta S_{t,t+4})$	$E_t(\Delta S_{t,t+8})$
FC borrowing	1											
Growth	0.0347	1										
Reserves	-0.0198	0.152^{***}	1									
Current account	-0.0704^{*}	0.0380	0.453^{***}	1								
Gov. primary def.	0.0234	0.0915^{***}	-0.0591^{*}	0.0556^{*}	1							
EMP	0.0294	-0.334^{***}	-0.201^{***}	-0.159^{***}	-0.0639^{*}	1						
Pol. Risk	0.0264	-0.0499^{*}	-0.165^{***}	-0.248^{***}	-0.0587^{*}	0.0427	1					
SD(EER)	0.0315	-0.184^{***}	-0.146^{***}	-0.00110	0.0209	0.409^{***}	0.0552^{*}	1				
XR Risk	0.0707^{*}	-0.261^{***}	-0.398^{***}	-0.0927^{***}	0.0150	0.256^{***}	0.186^{***}	0.223^{***}	1			
$E_t(\Delta S_{t,t+1})$	0.0351	-0.174^{***}	-0.313^{***}	-0.113^{***}	-0.0591^{*}	-0.0974^{***}	0.194^{***}	0.0630^{*}	0.245^{***}	1		
$E_t(\Delta S_{t,t+4})$	0.0669^{*}	-0.183^{***}	-0.495^{***}	-0.173^{***}	-0.0261	0.0366	0.206^{***}	0.107^{***}	0.313^{***}	0.828^{***}	1	
$E_t(\Delta S_{t,t+8})$	0.0546	-0.160^{***}	-0.587^{***}	-0.186^{***}	0.0351	0.0299	0.197^{***}	0.118^{***}	0.239^{***}	0.685^{***}	0.951^{***}	1
Observations	2019											

t statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$
Note: * shows significance at the .01 level.

Table B.3. *First stage: predicting the exchange rate depreciation - 8, 4 and 1 quarters ahead*

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	$\Delta S_{t,t+8}$	$\Delta S_{t,t+4}$	$\Delta S_{t,t+1}$	$\Delta S_{t,t+8}$	$\Delta S_{t,t+4}$	$\Delta S_{t,t+1}$
$E_t(\Delta S_{t,t+8})$	0.364**			0.397**		
	(0.167)			(0.162)		
$E_t(\Delta S_{t,t+4})$		0.376**			0.309*	
		(0.155)			(0.172)	
$E_t(\Delta S_{t,t+1})$			-0.380**			-0.346**
			(0.154)			(0.154)
Growth				-6.895***	-5.140**	-1.245
				(1.959)	(2.012)	(0.809)
Reserves				-0.100	-0.088	-0.041
				(0.142)	(0.101)	(0.037)
Current account				-2.513***	-0.583	-0.136
				(0.774)	(0.572)	(0.273)
Gov. primary def.				-0.346	-0.121	0.036
				(0.401)	(0.248)	(0.110)
EMP				0.320	0.462***	0.465***
				(0.240)	(0.174)	(0.099)
Observations	744	787	795	744	787	795
R-squared	0.527	0.466	0.393	0.567	0.512	0.475
Time FE	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Note: The dependent variable is the log change of the nominal exchange rate vis-à-vis the US dollar; a higher value indicates a higher depreciation of the domestic currency.

Table B.4. *Explaining the propensity to borrow in foreign currency - Robustness*

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
VARIABLES	Baseline	1y hor.	2y hor.	3m hor.	Alt. signal	Alt. signal	Alt. dep. var.
$PC1(\widehat{\Delta S_t})$	-3.518**				-5.625***	-2.307*	-7.618***
	(1.374)				(2.168)	(1.382)	(2.065)
$\widehat{\Delta S_{t,t+8}}$		-0.310**					
		(0.140)					
$\widehat{\Delta S_{t,t+4}}$			-0.415**				
			(0.181)				
$\widehat{\Delta S_{t,t+1}}$				-0.663			
				(0.525)			
$PC1(E_t(\Delta S_t))$	1.189**						-1.048
	(0.600)						(1.093)
$E_t(\Delta S_{t,t+8})$		0.278**					
		(0.133)					
$E_t(\Delta S_{t,t+4})$			0.350*				
			(0.199)				
$E_t(\Delta S_{t,t+1})$				0.594			
				(0.436)			
$PC1(.exc.ret.)$					2.277*		
					(1.200)		
Rating						0.982*	
						(0.571)	
Pol. Risk	2.036	1.930	2.332	2.749**	2.113	2.842*	-10.701***
	(1.449)	(1.440)	(1.422)	(1.328)	(2.158)	(1.552)	(2.593)
XR Risk	-0.353	-0.371	-0.402	-0.488	-0.290	-0.508	1.009
	(0.425)	(0.410)	(0.420)	(0.386)	(0.732)	(0.461)	(0.861)
SD(EER)	1.730***	1.556***	1.561***	1.545***	2.312*	1.483***	-0.457
	(0.540)	(0.491)	(0.500)	(0.567)	(1.233)	(0.558)	(0.901)
Chin-Ito Index	-0.161	0.060	0.100	-0.229	-1.444	1.665	2.379
	(0.957)	(0.949)	(0.975)	(0.898)	(1.873)	(1.205)	(1.998)
Trade balance	4.893***	5.265***	5.663***	4.374***	4.311	4.848***	-2.839
	(1.370)	(1.442)	(1.461)	(1.312)	(3.260)	(1.416)	(2.963)
Current account	-4.592***	-5.685***	-6.043***	-4.158***	-4.121	-4.561***	2.729
	(1.480)	(1.777)	(1.761)	(1.425)	(3.251)	(1.534)	(2.962)
Reserves	-0.089	-0.114	-0.177	-0.094	-0.347	-0.077	-1.348***
	(0.180)	(0.189)	(0.194)	(0.167)	(0.285)	(0.184)	(0.288)
Observations	713	732	738	745	483	767	660
R-squared	0.286	0.277	0.268	0.264	0.289	0.267	0.630
Time FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors in parentheses
*** $p<0.01$, ** $p<0.05$, * $p<0.1$

Note: The dependent variable is the percentage of new debt obligations issued by the private sector denominated in foreign currency. $PC1(\widehat{\Delta s_t})$ is the first principal component of the fundamental-based predictions of exchange-rate depreciation $\{\widehat{\Delta s}_{t+h,t}\}_{h=1,4,8}$; a higher value indicates a higher predicted depreciation of the domestic currency. $PC1(E_t(\Delta s_t))$ is the first principal component of the consensus exchange rate depreciation forecasts $\{E_t(\Delta s_{t+h,t})\}_{h=1,4,8}$; a higher value indicates a higher predicted depreciation of the domestic currency. The regressions include time fixed effects and regional fixed effects. $PC1(For.prem.)$ is the first principal component of the exchange rate depreciation based on the forward premia on US dollar forward contracts at 1, 4 and 8-quarter maturities $\{f_{t+h} - s_t\}_{h=1,4,8}$; a higher value indicates a higher forward premium on the domestic currency. In column (7) the dependent variable is based on SDC bond data. The regressions include time fixed effects, regional fixed effects, and the same set of controls as in column (4) of Table 3.

Table B.5. *Explaining the propensity to borrow in foreign currency - Alternative samples*

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
VARIABLES	1992-2007	2008-2018	Excluding 2008-2009	Financially open	w/o Latin America	w/o Asia	w/o Other Regions
$PC1(\widehat{\Delta S_t})$	-3.950	-3.572*	-3.811**	-5.562***	-1.291	-3.324*	-4.339***
	(2.411)	(2.087)	(1.553)	(1.670)	(2.317)	(1.802)	(1.466)
$PC1(E_t(\Delta S_t))$	3.288***	0.371	1.152*	0.934	2.525**	1.231*	0.585
	(1.245)	(1.084)	(0.608)	(0.701)	(1.276)	(0.703)	(0.595)
Pol. Risk	2.336	-2.498	2.304	1.025	0.847	1.128	3.177**
	(2.337)	(2.633)	(1.477)	(2.010)	(2.755)	(1.993)	(1.476)
XR Risk	-1.045	0.066	-0.556	0.834	-0.605	-0.199	-0.164
	(0.809)	(0.616)	(0.452)	(0.657)	(0.973)	(0.576)	(0.439)
SD(EER)	1.631***	1.856	1.832***	1.345**	1.418	1.213**	1.581***
	(0.612)	(1.225)	(0.562)	(0.601)	(1.564)	(0.533)	(0.566)
Chin-Ito Index	1.212	-2.991	-0.263	1.155	-2.970	0.227	0.089
	(1.338)	(1.893)	(1.000)	(1.902)	(2.572)	(1.129)	(1.092)
Trade balance	2.832	5.368*	4.516***	0.910	6.237***	5.766	3.715***
	(1.765)	(3.233)	(1.403)	(1.309)	(2.181)	(4.456)	(1.143)
Current account	-2.897	-4.010	-4.440***	-0.692	-5.649**	-2.871	-3.811***
	(2.536)	(2.895)	(1.559)	(1.520)	(2.349)	(4.547)	(1.300)
Reserves	-0.037	-0.155	-0.120	-0.314	0.062	0.211	-0.259
	(0.379)	(0.275)	(0.189)	(0.250)	(0.263)	(0.316)	(0.193)
Observations	315	397	654	475	379	452	583
R-squared	0.398	0.270	0.280	0.323	0.376	0.387	0.273
Time FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Note: The dependent variable is the percentage of new debt obligations issued by the private sector denominated in foreign currency. $PC1(\widehat{\Delta s_t})$ is the first principal component of the fundamental-based predictions of exchange-rate depreciation $\{\widehat{\Delta s}_{t+h,t}\}_{h=1,4,8}$; a higher value indicates a higher predicted depreciation of the domestic currency. $PC1(E_t(\Delta s_t))$ is the first principal component of the consensus exchange rate depreciation forecasts $\{E_t(\Delta s_{t+h,t})\}_{h=1,4,8}$; a higher value indicates a higher predicted depreciation of the domestic currency. The regressions include time fixed effects and regional fixed effects. The regressions include time fixed effects, regional fixed effects, and the same set of controls as in column (4) of Table 3