

# Coming to Terms: The Politics of Sovereign Bond Denomination \*

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## Abstract

As deepening international markets expand developing countries' access to bond-based sovereign debt, their governments confront the question of how to structure the terms of their bonds, especially whether they are in domestic or foreign currency. Governments with left economic ideologies strongly prefer borrowing in domestic currency, which offers monetary policy autonomy and insulation from the effects of currency depreciation. Yet the longstanding "original sin" expectation has been that investors will not accept developing country sovereign bonds in domestic currencies. Our new data on the terms of 240,000 primary bond issues by 131 countries (1990-2016) demonstrates that this expectation is incorrect: domestic currency sovereign bonds dominate. Even within this remarkable overall pattern, we demonstrate that left governments are consistently more likely to issue bonds in domestic currency, while right governments are not. Domestic politics underpins the unexpected diversity of developing country currencies at play in bond-based sovereign debt.

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# 1 Introduction

In the modern era of financial globalization, a wide swath of countries has an unprecedented ability to issue sovereign bonds on international capital markets. In 1990, 21 non-OECD countries issued bonds in international markets; this number grew to 44 by 1995. And, in 2010, 96 non-OECD governments issued international bonds. In our issue-level data on sovereign debt, we document over 240,000 bond issues by 131 countries between 1990 and 2016. What is more, developing country sovereign issuers are not simply passive takers of supply-side capital offerings. Governments make strategic choices over the timing and amount of their sovereign bond issues (Ballard-Rosa, Mosley and Wellhausen, 2019). Here, we argue that governments’ strategic choices extend further, including over the terms of those bonds. Bond terms including currency of issuance, maturity, and yield (interest rate) provide governments an opportunity to trade off between flexibility and costs, offering an ideological “release valve” that allows governments to act consistently with their policy preferences.<sup>1</sup> When it comes to sovereign bonds, market pressures do not generate left governments that act indistinguishably from right governments. Rather, left governments in developing countries systematically choose domestic-denominated over foreign currency-denominated debt.

That any developing country government, much less a left government, can find supply-side creditors willing to accept terms including domestic denomination is radically opposite from long-standing expectations. Developing countries certainly have not been rationed out of private financing from global markets (Bunte, 2019; Mosley, 2003; Tomz, 2007). Yet the expectation has been that investors’ concern about currency risk is so great that developing country sovereigns must issue debt in foreign currencies, outside of their control, in order to find investors. Eichengreen and Hausmann (2005) famously attributed this constraint to the “original sin” of being a developing country. At the extreme, “original sin” implies that demand for domestic-denominated debt from developing countries is effectively zero. Even in a milder form, “original sin” implies that the other bond terms necessary to compensate investors for domestic denomination would be so onerous as to deter most (if not all) governments from agreeing to them.

The recent empirical record starkly conflicts with “original sin” expectations. Our issue-level data makes the trend clear: 56% of non-OECD sovereign debt issued in 1990 was domestic

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<sup>1</sup>Data availability limits us to consider denomination alongside maturity and yield. Other non-financial terms include the bond’s governing law and exchange listing (Chamon, Schumacher and Trebesch, 2018; Bradley, De Lira Salvatierra and Gulati, 2016).

currency-denominated, reaching 82% in 1995 and 92% in 2010. Countries including Brazil, Colombia, Venezuela, and Bolivia have in recent years refinanced outstanding foreign-currency debt to denominate in their own currencies. Although contrary to “original sin,” the prevalence of domestic denomination makes sense in the context of a broadened global investor base, increased efforts to create domestic markets for government debt, and the professionalization of developing country debt management offices (DMOs) responsible for issuance.

Nevertheless, it would be a mistake to interpret the trend toward domestic denomination as evidence that the decision to denominate in domestic currency is now costless, uncontested, or foregone. For example, a fierce debate raged in India in mid-2019, after the Indian government proposed issuing the country’s first-ever non-rupee-denominated sovereign bonds. Current and past policymakers clashed over the proposal in a plethora of prominent opinion pieces in India’s major newspapers, putting the government on the defensive.<sup>2</sup> Even today, policymakers disagree, sometimes vehemently, on debt denomination choices.

Our central claim is that domestic politics was and continues to be a key determinant of the terms that sovereigns choose when issuing debt. Indeed, despite their apparent lack of bargaining power vis-a-vis official creditors (Stone, 2011), developing country governments often interact with multilateral financial institutions and individual donor governments in ways that reflect domestic considerations (Bunte, 2019; Copelovitch, 2010). They may use conditional lending to tie their political rivals’ hands; avoid external financing conditions that threaten their political survival; and use foreign aid revenues as a means of domestic credit-claiming (Cruz and Schneider, 2017; Vreeland, 2003). We suggest that the same pattern holds in the realm of private sector sovereign bonds: domestic political preferences shape the outcomes of governments’ interactions with creditors.

Specifically, domestic debt denomination requires costly trade-offs that encapsulate classic ideological differences over economic policy. For their part, left governments especially prefer domestic denomination, because domestic denomination offloads currency risk onto investors. This frees the government from worry about the implications of currency depreciation or exchange rate volatility for the government’s capacity to repay its obligations. The trade-off is that investors

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<sup>2</sup>We thank Vashishtha Doshi for discussions and for sharing a collection of such pieces, from sources including the Times of India, Telegraph India, The Hindu Business Line, Business Standard, The Economic Times, Mumbai Mirror, Business Today, and LiveMint.

require compensation for taking on currency risk, even in the context of deep and risk-tolerant financial markets. Thus, we expect that a government that chooses domestic denomination also agrees to other, less favorable terms.

In contrast, in line with their traditional economic policy preferences, right governments especially appreciate the external hands-tying constraints that foreign denomination puts on the actions of future leaders. This preference implies that right governments are less interested in incurring costs on other bond terms in order to make the choice to issue in domestic currency. This is not to say that right governments consistently look a gift horse in the mouth: the boom in domestic denomination implies that governments of varying stripes have found the price of domestic denomination acceptable. Our point is that the changing marketplace does not mean that right governments have reversed their preferences. Nor does it mean that those preferences no longer influence outcomes.

We test these expectations using monthly data compiled from issue-level information for all non-OECD sovereign issuers, covering 1990 to 2016. First, we confirm that domestic denomination carries costs: accounting for macroeconomic fundamentals, governments that issue more domestic-denominated debt in a given month also face significantly shorter average maturities.<sup>3</sup> Second, we find strong support for our expectation of a significant and positive association between left governments and domestic denomination. Consistent with previous work (Ballard-Rosa, Mosley and Wellhausen, 2019), we find no evidence that left governments issue more debt in general than their centrist or right counterparts; ideology matters for *how* governments issue sovereign bonds, not *how much* they issue. Third, we find support for the implication that left governments should be more likely to issue domestic-denominated debt when they have an increased capacity to do so: in the presence of politically independent central banks or credibly fixed exchange rates that blunt investors' concerns over currency risk. In contrast, left governments are less likely to enact their partisan preferences for domestic denomination when currency risks are high: if the country has a history of inflation crises or is facing a currency crisis. We further demonstrate that partisan effects are meaningful throughout the time period – even in a market clearly accepting of domestic-

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<sup>3</sup>Debt instruments with shorter maturities typically present less risk to investors, as they need only worry about government ability and willingness to repay over the term of the issue. Shorter maturities, however, heighten risks for borrowing governments, as governments must more frequently return to capital markets to rollover their debt. Longer time to maturity of debt insulates governments from market-based pressures.

denominated debt, left and right governments persist in taking advantage of that opportunity at different rates. We confirm the robustness of our results to issues of potential selection bias utilizing a Heckman selection design, as well as with particular attention to accounting for the secular growth in domestic denomination over the period.

In the next section, we use our issue-level data to illustrate the trend in currency denomination and situate it within broader changes in the global economy. We then develop our argument that domestic partisanship is a key, and enduring, determinant of currency denomination choices. We present supportive descriptive statistics, regression results, and robustness tests. We conclude by discussing broader implications for the politics of sovereign borrowing in the developing world. Though economic globalization has in many ways constrained governments' ability to act on their partisan preferences, it has certainly not foreclosed the ability to issue domestic-denominated sovereign debt – despite stark, long-standing expectations to the contrary. The upshot is that a great variety of developing country currencies are relevant in sovereign debt markets. This reality challenges another prominent expectation that only a very small number of vehicle currencies matter in the global political economy.

## 2 Trends in Developing Country Sovereign Debt

While bond-based financing is not the only source of credit on which governments rely (Blommestein and Horman, 2007; Kaplan and Thomsson, 2016; Gelpern, 2018), bond issuance on international markets is a very common form of financing for many developing countries, including many that previously were able to borrow only from official sources such as bilateral creditors or regional development banks (Bunte, 2019; Zeitz, 2019). Observers see this trend as reflecting a significant period of increased liquidity as well as the broader pattern of financialization (Presbitero et al., 2016; Brooks, Cunha and Mosley, 2015). Sovereign debt markets have widened and deepened as the investor base has grown; today, the investor base for many developing countries spans institutional investors, hedge funds, commercial banks, foreign central banks, sovereign wealth funds, and retail investors (Chwioroth, 2009; Datz, 2008).<sup>4</sup> This growth in potential creditors dovetails with contemporary professional investors' demand for a wide and diversified range of

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<sup>4</sup>On the implications of variation in the investor base for fiscal consolidation, see Rommerskirchen (2020).

investment instruments (Mosley, 2003). Moreover, many developing country governments have generated additional domestic demand for their debt instruments as a result of the privatization of their social security systems. Private or semi-private pension funds often prefer (and may be required) to hold their sovereign's debt (Betz and Pond, 2019).<sup>5</sup>

Governments have also taken actions to increase the quality of their offerings. In particular, the IMF, the World Bank and various regional development banks have encouraged the professionalization of national debt management offices (DMOs) responsible for issuing and managing government portfolios. Though DMO policies have not fully converged, many developing countries now grant DMOs autonomy from elected officials and prioritize hiring staff with private sector experience (Melecky, 2007, 2012; Sadeh and Rubinson, 2018; Sadeh and Porath, 2019). More professionalized DMOs are better able to liaise with private market actors, to analyze and time the supply-side dynamics of global markets, and to learn from the issuance choices of peer countries (Brooks, Cunha and Mosley, 2015). The correlation between these risk-mitigating actions and the growth of sovereign bond-based financing suggests that developing country governments have had success in abating concerns that they would prove unable or unwilling to repay debt obligations.

Still, the expansion of sovereign bond markets does not in itself suggest investors are any less worried about currency risk. Governments face the temptation to erode the real value of debts denominated in their currency, over which they have sovereign control (Ottonello and Perez, 2019). Domestic currencies often suffer instability and depreciation, especially in developing country contexts. Developing country governments, anxious to borrow and in weak strategic positions, therefore must address currency risk in order to access credit markets. Eichengreen and Hausmann (2005) famously describe this constraint as the “original sin” of governing a developing country. A direct way for a government to overcome the original sin constraint is to tie its hands at the point of issue, by denominating its offerings in a foreign currency, over which it has no sovereign control. In this way, the government assumes currency risk; it must generate foreign exchange in order to pay back or refinance debt obligations. At its starkest, “original sin” predicts effectively zero demand for domestic-denominated debt from developing country sovereigns. Even if investors trust the sovereign not to deliberately manipulate its currency, “original sin” implies that the sovereign

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<sup>5</sup>Note that, just like foreign investors, domestic investors may hold domestic- or foreign-currency denominated debt. Countries sometimes collect information on the nationality and type of the initial purchasers of debt, but these need not reflect the ultimate bondholders after secondary market transactions.

cannot provide enough assurance that the currency will retain its value in the face of external pressures. A weaker articulation of the “original sin” logic implies that it would be extraordinarily costly for a developing country government to place a domestic-denominated issuance, because it could not provide sufficient compensation via other terms of the bond to account for the bond’s currency risk. Hence, “original sin” anticipates that developing countries rarely borrow in their own currencies.

In fact, our data show that these longstanding expectations are flawed. As the size of sovereign debt markets has grown, the proportion of domestic-denominated sovereign debt offered in those markets has expanded dramatically. Figure 1 shows the explosion in the percentage of sovereign debt issued in domestic currencies, in both OECD and non-OECD countries. Figure 2 documents that the trend extends even to the subset of non-investment grade, non-OECD sovereigns. Many governments have taken advantage of this shift to refinance outstanding debt and to denominate new debt in their own currencies, including Brazil, Colombia, and Venezuela in 2006 (WorldBank, 2006). In 2010, Bolivian officials proudly reported to an international audience that Bolivia had cut dollar-denominated debt to 78% from 95% in just four years.<sup>6</sup>

The boom in the prominence of domestic-denominated debt, and the easing of the “original sin” constraint, partly reflect the overall growth of sovereign bond markets, discussed above. New scholarship speaks more precisely to the determinants of this boom. For instance, in economics, Borri and Shakhnov (2018) ties demand to global liquidity; Engel and Park (2018) considers denomination and domestic economic conditions in a model of optimal monetary policy; and Ottonello and Perez (2019) argues that economic expansion and inflation stabilization in emerging markets help to account for this shift. In international political economy, Betz and Pond (2019) and Pond and Betz (2019) identify how governments can use their regulatory power to increase domestic investors’ holdings of their sovereign debt; and Zeitz (2019) explores how African countries like Ghana have attracted foreign investors into domestic bond markets.<sup>7</sup>

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<sup>6</sup>Brandimarte, Walter. 22 April 2010. “UPDATE 2 - Bolivia plans international bond issue by 2012.” Reuters.

<sup>7</sup>Other analyses of the risk associated with greater borrowing by sub-Saharan African countries emphasize that debt is still more foreign-currency denominated. See: [www.brookings.edu/wp-content/uploads/2019/04/africa\\_sovereign\\_debt\\_sustainability.pdf](http://www.brookings.edu/wp-content/uploads/2019/04/africa_sovereign_debt_sustainability.pdf)

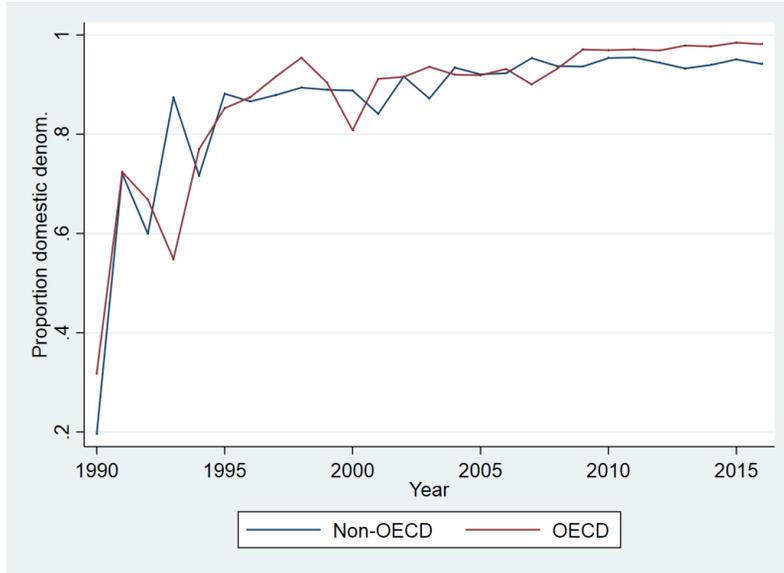


Figure 1: Proportion of domestic-currency denominated sovereign bonds.

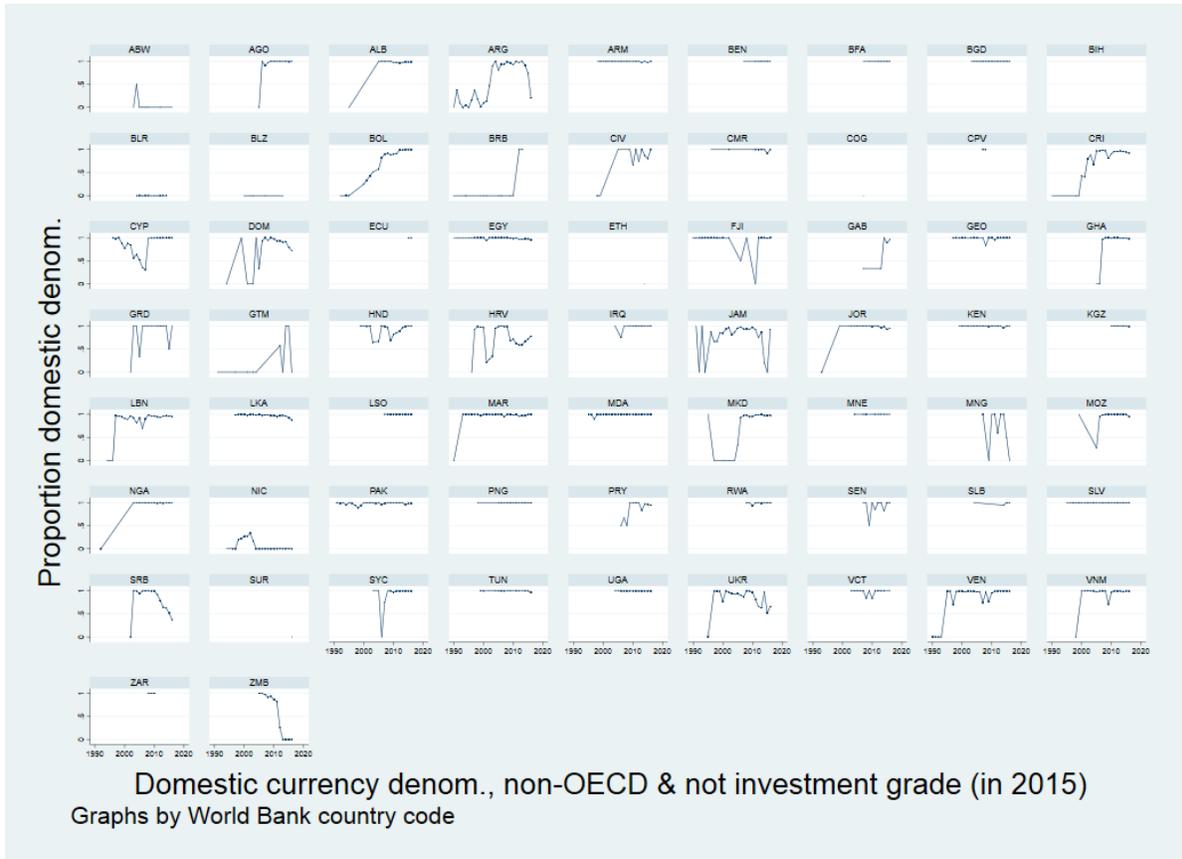


Figure 2: Proportion of domestic-currency denominated sovereign bonds, for non-investment grade non-OECD countries.

We are motivated by a different puzzle revealed by the data: if domestic currency issuance is not only possible but popular, why do some sovereigns persist in tying their hands via foreign denomination? For example, in 2012, the relatively creditworthy government of Costa Rica chose to issue Eurobonds<sup>8</sup> and proudly touted the historically low interest rate, which was achieved in part by denominating in foreign currency.<sup>9</sup> In 2019, Costa Rica explored refinancing some debt on more favorable terms, again doing so with foreign currency-denominated issues.<sup>10</sup> Also in 2019, Indian policymakers traded barbs in the press over the government’s proposal to issue foreign-denominated bonds.<sup>11</sup> In our most recent data, approximately ten percent of developing country debt issued each year has been in foreign currencies (see again Figure 1). We point to this as evidence that the choice over currency denomination remains contested and politically relevant, despite clear changes in the market. Issuing domestic is not impossible, per a stark version of “original sin” logic, nor is it a foregone conclusion, despite the dramatic trend in Figure 1. Indeed, India’s debate regarding the terms of borrowing—highlighting the tradeoff between flexibility and costs—is exactly the tension underlying the choice of currency denomination in developing countries worldwide. We argue that government ideology is a key explanation for government choices over currency denomination, and, moreover, that the effect of ideology is persistent even in a massively changed marketplace.

### 3 Theory: Terms and Partisanship

Domestic currency generates currency risk for investors, so a domestic-denominated bond obliges the government to come to less favorable other terms, including maturity and/or yield, in order to compensate investors. While the steepness of the trade-off between currency and other terms may vary over time and across countries, it is always present. The economic policy preferences that make up different political ideologies diverge on issues underlying this trade-off. Therefore, in theorizing about government choice to issue in domestic currency, we identify ideology—and particularly left ideology—as a core, consistent explanation whatever the broader market dynamics.

Left governments have a well-earned reputation for decidedly distinct preferences over eco-

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<sup>8</sup>Note that “Eurobond” refers to a bond which is denominated in a currency other than that used by the issuing entity. The vast majority of Eurobonds are denominated in US dollars; others are denominated in yen or euros.

<sup>9</sup>The rate was 4.25%. Arias, L. 23 November 2012. “Eurobond sales to help Costa Rica pay down debt.” *The Tico Times*. <https://ticotimes.net/2012/11/23/eurobond-sales-to-help-costa-rica-pay-down-debt>.

<sup>10</sup>“Costa Rica: Staff Concluding Statement of the 2019 Article IV Mission.” IMF. 25 February 2019.

<sup>11</sup>See again footnote 1.

conomic and social policy as compared to their centrist and right counterparts. A long literature in comparative politics roots left governments' distinct ideological preferences in the fact that their constituents hold more of their assets in human capital (labor) than financial capital (business) (Hibbs, 1987, 1994; Alesina and Rosenthal, 1995). Risks to left parties' core constituents stem largely from the commodification of labor and the resulting exposure to labor market disruptions (Esping-Andersen, 1990). Broadly, this results in left parties focusing on unemployment at the expense of inflation (Carlsen, 2000), and on limiting market-generated inequality (Huber and Stephens, 2012). Left parties typically prioritize providing social protection, redistributing income, and regulating industries.<sup>12</sup>

Domestic currency denomination frees left governments from worries about the connection between their preferred macroeconomic and microeconomic policies, on the one hand, and debt servicing and repayment, on the other. Domestic denomination keeps inflation within a government's toolkit as a potential response to debt burdens. This allows a left government to retain the option of following its ideological preference for privileging domestic, rather than foreign, objectives. Key to our argument is that domestic denomination keeps more options on the table for left governments, whether the government in fact exercises them or not. It is not that all left governments are willing to break a currency peg or run the printing presses, eroding their money's value. Yet they do value the possibility to do so, should domestic political or economic conditions demand it. Therefore, in a market environment in which investors are willing to buy domestic-denominated bonds, it should be left governments that disproportionately take advantage of the opportunity.

These left government preferences contrast starkly with those typical of right governments. Right parties traditionally privilege market-friendly policies, including monetary restraint, fiscal discipline, trade and financial liberalization, and respect for property rights (Garrett, 1998; Leblang, 2002). As such, right governments are relatively more willing to issue foreign-denominated debt that curtails their own access to policy instruments like inflation. Foreign-denominated debt also can offer right governments a vehicle for binding their successors to conservative economic policies. Note that our arguments regarding the effect of ideology on debt denomination are probabilistic: there is no reason to expect right governments to "look a gift horse in the mouth" when circum-

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<sup>12</sup>Adams, Haupt and Stoll (2008) attribute left parties' consistent ideology and policy agenda in the face of changing global economic conditions to their "long-term policy orientations" and particularities of their organizational structures.

stances are such that they find the costs of domestic denomination acceptable; nor do we expect left governments to choose domestic denomination when the consequences for other terms are extreme. Nonetheless, even in a global market environment in which it is possible to sell domestic-denominated debt, we expect left governments to systematically differ from right governments over their choice to issue in domestic currency.

Underlying our expectation that ideology generates meaningful variation in how governments issue debt are assumptions that governments vary, and continue to vary, in their ideological predispositions and their policy choices. These assumptions, however, have been hotly debated. Financial liberalization and the attendant possibility of capital flight has called into question the capacity of left parties to “act left” once in office (Garrett, 1998). A body of scholarship claims that in general, private markets are averse to the arrival in office of left-leaning political parties (Cho, 2014; Kaplan, 2013).<sup>13</sup> Investors could worry that left candidates would implement changes to investment policies, tax rates, public spending, or existing contractual commitments (Jensen and Schmith, 2005; Pinto, 2013). Pressure from international financial institutions for neoliberal, Washington Consensus-style trade and financial liberalization can combine with private market actors’ preferences to further raise the stakes for a left government considering enacting left-leaning policy (Nelson, 2014). Left governments therefore may run on leftist economic policy platforms, but once in office find compelling incentives to adopt more centrist- or right-leaning policies that privilege investor preferences (Campello, 2015; Stokes, 2001). Brooks, Cunha and Mosley (2019) find, based on secondary market pricing of debt, that new left parties that lack a track record may be particularly affected by this dynamic. Moreover, left governments without access to alternative financing sources, such as rents from natural resources (Campello, 2015; Wibbels, 2006), also may be especially exposed to market pressures. Consistent with this scholarship, Ballard-Rosa, Mosley and Wellhausen (2019) find that, when it comes to the choice over when and how much sovereign debt to issue, left governments behave no differently than right governments (holding the level of democracy constant).

At the same time, however, another body of scholarship finds a persistent role for partisan positions on economic policy (Campello, 2015; Kurzer, 1993; Mosley, 2003; Pinto, 2013). In general,

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<sup>13</sup>Changes in the governing party can allow for a resetting of financial market-government relations and a reassessment of government reputation (Tomz, 2007; McGillivray and Smith, 2018).

left governments are less inclined to engage in financial liberalization (Brooks and Kurtz, 2007; Chwieroth, 2007).<sup>14</sup> Left governments also are associated with higher sustained increases in public investment (Gupta, Liu and Mulas-Granados, 2015), as well as with higher levels of spending in response to crises (Muller and Zilibotti, 2016). And when countries have signed preferential trade agreements, newly-elected left governments often nevertheless impose new political barriers to trade (Gray and Kucik, 2017). These distinctive policies appear in both developed and developing countries. In Latin America, for instance, left governments are more likely to pursue policies which seek to blunt rising inequality (Huber and Stephens, 2012). Consistent with the expectation that left governments do at least sometimes continue to enact distinctive, left-leaning policies, a growing body of research suggests that investors continue to find partisanship meaningful. Vaaler, Schrage and Block (2006) argue that investors use partisan cues as a shortcut when assessing political risk, and adverse market reactions like capital flight or widening yield spreads come about when politics swings significantly away from a conservative incumbent.<sup>15</sup> Private market actors in sovereign bond markets appear somewhat sensitive to partisan differences. For example, credit ratings agencies give lower sovereign credit ratings to left-governed countries, all else equal (Barta and Johnston, 2018). It is worth noting, however, that financial market reactions to left governments and policies are often somewhat limited. For instance, Brooks, Cuhna and Mosley (2019) find that investors' reactions to left governments come in the form of volatility, rather than as increased sovereign spreads. And Mosley, Paniagua and Wibbels (forthcoming) report scant evidence that bond markets react to changes in corporate tax or labor market policies.

We draw on these bodies of scholarship to argue that left governments can use domestic currency denomination as a means of retaining some autonomy from market-based influences, despite the pressures of financial globalization. Testing our argument requires observing currency domination in primary capital markets. At the point of issue, creditors agree on the appropriate pricing of a specific debt instrument, given their assessment of the bond's terms as well as country-specific and global risk factors. An examination of primary market data allows us to evaluate claims about the intersection of government demand for and investor supply for debt when sovereigns actually issue, and bondholders buy, new bonds.<sup>16</sup> In doing so, we significantly expand on analyses

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<sup>14</sup>Historically, left governments have been less inclined to privilege external commitments, such as the commitment to a fixed exchange rate, over the capacity to intervene in the domestic economy (Simmons, 1997).

<sup>15</sup>While this research finds stock market reactions to partisan shifts, Frot and Santiso (2013) do not.

<sup>16</sup>For example, Cox and Saiegh (2018) identifies that otherwise identical bonds issued by Argentina in advance

of sovereign debt that have, for the very large part, focused on secondary market outcomes, such as the pricing of already-issued government bonds, or sovereign credit ratings outcomes.<sup>17</sup>

At first glance, our argument that ideology shapes the terms of primary issues conflicts with Ballard-Rosa, Mosley and Wellhausen (2019), which uses primary bond market activity to identify the “democratic advantage” at the point of issuance, finding that the salience of political risk and thus the presence of the democratic advantage is conditional on global market conditions. Ballard-Rosa, Mosley and Wellhausen (2019) find no evidence that political ideology explains either the timing of debt issues or the amount that governments borrow. Yet their finding is consistent with our treatment of debt terms as a partisan “escape valve.” Especially at the macro-policy level, bond market investors may pressure governments to avoid large fiscal deficits or dramatic increases in borrowing volumes, so left governments face pressure to converge to economically “responsible” behavior that limits their ability to build up large stocks of debt. Yet left governments retain distinct economic ideology that they would prefer to maximize in the process of coming to terms in primary markets. The disappearance of an “original sin” dynamic presents the opportunity to maximize left preferences through domestic denomination – an “escape valve” that left governments are more likely to choose to exercise, all else equal.

It is worth noting that our theory is built around political party systems that are competitive, in which voters broadly recognize partisan ownership or “clarity of responsibility” over different economic issues (Parker-Stephen, 2013). Party leaders craft their economic policy choices with an eye to winning the support of certain constituencies, such as labor or capital (Bisgaard, 2015). We acknowledge that not all developing countries that issue bonds in global markets are characterized by high levels of political competition. In the empirical analyses below, we also assess the applicability of our argument to less meaningfully democratic regimes.

We also acknowledge that issuing domestic-denominated sovereign bonds can accord with the preferences of economic nationalists, who broadly object to the notion of limiting domestic policy options in favor of the preferences of foreign actors such as investors, countries, or interna-

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of the Baring crisis demonstrated markedly different price trajectories as a function of the funded status of the instrument.

<sup>17</sup>Secondary-market scholarship suggests, among other things, that sovereign risk is shaped by global market conditions (Bauerle Danzman, Oatley and Winecoff, 2017; Rey, 2013; Spanakos and Renno, 2009; Wellhausen, 2015); peer group heuristics (Brooks, Cunha and Mosley, 2015; Gray, 2013); central bank independence (Bodea and Hicks, 2015, 2018; Johnson, 2016); regime type (Beaulieu, Cox and Saiegh, 2012; Schultz and Weingast, 2003; Saiegh, 2005; North and Weingast, 1989); and elections (Bernhard and Leblang, 2006; Campello, 2014; Mosley, 2003).

tional organizations. Economic nationalist audiences may view domestic denomination as a sign of prestige or progress, consistent with the country having greater autonomy from global pressures. While traditionally associated with left parties, economic nationalist ideology can also emanate from other political groups such as those on the far-right. For example, in the mid-2019 debates in India over the (right) Modi government’s proposal to issue foreign-denominated sovereign bonds, actors on the left and the far-right decried the proposal.<sup>18</sup> But given that the rise of economic nationalism among right-leaning parties is a somewhat recent phenomenon (often after 2016, when our analyses end), and one that does not systematically characterize right parties worldwide, we nonetheless expect a left-right difference in currency denomination choices based on longstanding policy differences.

We specify our key hypothesis by comparing expectations for left governments to centrist governments, capturing governments without clear, ideologically-driven economic policy preferences. Our argument also implies the inverse for right governments as compared to centrist governments.

**Hypothesis 1.** *Left (right) governments are more likely to denominate sovereign bonds in domestic (foreign) currency than centrist governments.*

Of course, markets are two-sided. Even in a changing marketplace, in which more investors have an appetite for a variety of sovereign debt, investors’ concerns about sovereign risk have not vanished. If left governments choose domestic denomination in order to avoid having their hands tied by investors, then we should expect them to be more successful in doing so when they provide other kinds of assurances that reduce investors’ perceived risks. A large body of scholarship in political science has focused on how institutions can help mitigate sovereign risk by constraining politicians’ ability to act in ways contrary to market preferences. An independent central bank is one such institution. We follow a long literature suggesting that central bank independence may limit the capacity for political leaders to intervene in the macroeconomy in politically-expeditious

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<sup>18</sup>From the Communist Party of India: “Sacrificing whatever limited economic or political autonomy India had from the United States can only be a recipe for disaster.” From “Sovereign Foreign Debt: Is the Government Paving the Way for India’s Bankruptcy?” 5 July 2019. Available: <https://www.cpiml.net/liberation/2019/08/sovereign-foreign-debt-is-the-government-paving-the-way-for-indias-bankruptcy>. From the far-right RSS: “[The RSS] said it was anti-patriotic as it could create long-term risks for the economy, potentially allowing rich foreign nations and their financial institutions to dictate the country’s policies.” “RSS Wing Calls on Govt Not to Issue Foreign Currency Bonds.” Reuters. 16 July 2019. <https://www.news18.com/news/india/rss-wing-calls-on-govt-not-to-issue-foreign-currency-bonds-2233787.html>.

but economically-damaging ways (Barro and Gordon, 1983; Bodea and Hicks, 2018; Clark and Hallerberg, 2000; Franzese, 1999; Garriga and Rodriguez, 2019; Maxfield, 1997). With an independent central bank, typically mandated to attend to inflation (sometimes in balance with other goals like employment or economic growth), investors should have more certainty that a left government will not inflate away the value of domestic-denominated bonds. Thus, central bank independence (CBI) should help facilitate left governments' ability to place domestic- and not foreign-denominated bonds.

**Hypothesis 2.** *In countries with strongly independent central banks, left governments are more likely to issue sovereign bonds denominated in domestic currency.*

A fixed exchange rate is another mechanism that can address investors' concerns that the real value of a domestic currency bond at maturity will be significantly less than its face value at issue. A country with a credible commitment to a fixed exchange rate, generally tied to a major trading partner or source of capital, can generate greater confidence among bondholders regarding the future value of the asset.<sup>19</sup> Such an institution also should make it easier for left governments to place domestic-denominated debt.

**Hypothesis 3.** *In countries with fixed exchange rates, left governments are more likely to issue sovereign bonds denominated in domestic currency.*

At the same time, investors' general willingness to purchase domestic-denominated bonds will be called into question during or just after periods of crisis. A government with a history of inflation crises may find it particularly difficult to convince investors of its commitment to preserving the value of domestically-denominated assets, even in the presence of credibility-enhancing institutions. Hence, left governments in countries with previous inflation crises should be less able to place domestic-denominated debt. In a country with such a history, investors would be more likely privilege the absolute absence of currency risk accomplished with foreign-denominated bonds. Furthermore, the presence of a currency crisis renders it very difficult to find buyers for domestic-denominated debt, regardless of left governments' desire to do so.<sup>20</sup>

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<sup>19</sup>Mitchener and Weidenmier (2015) find that in the pre-World War I era, adherence to the gold standard was associated with significantly lower risk premiums for core countries. In peripheral countries, however, gold standard adherence did not necessarily lower risk premiums, even many years after gold standard adoption. This suggests that it is not only the fixed rate commitment, but also its credibility, that matters to investors.

<sup>20</sup>Cox and Saiegh (2018) also emphasize the importance of considering differential market reactions to bond issuance in crisis episodes.

**Hypothesis 4.** *In countries with histories of inflation crises, left governments are less likely to issue sovereign bonds denominated in domestic currency.*

**Hypothesis 5.** *In countries facing currency crisis, left governments are less likely to issue sovereign bonds denominated in domestic currency.*

## 4 Empirical Strategy

To test these hypotheses, we analyze a new dataset of the terms of approximately 240,000 initial bond issues in primary capital markets by 131 countries from 1990-2016.<sup>21</sup> Given that currency risk in wealthy countries' sovereign issuance is of limited importance to bond investors (Mosley, 2003), and work on "original sin" in foreign-currency issuance focuses on the developing world (Eichengreen and Hausmann, 2005), we analyze the set of non-OECD countries that have issued debt in the period. Our data cover the effective population of sovereign bonds issued on international markets, such that we record terms to which a sovereign seller and a market buyer agreed. Specifically, we have data on bond denomination, maturity, and yield (interest rate). Note that our observational data do not allow us to observe a government's ideal point with respect to terms; instead, we observe where those preferences over terms intersect sufficiently with market demands and market assessments of risk to enable an issue to occur. This is ideal for our purposes to examine what relationship, if any, partisanship has with outcomes in primary bond markets, as well as the extent to which outcomes are conditioned by market expectations over future behavior as a function of political institutions and economic crises.

A common breakpoint in categorizing sovereign bonds is between a "bill," generally an instrument issued with a maturity of less than one year, and a "bond," an instrument with a maturity of one year or more. Governments typically issue bills to facilitate short-term debt rollovers, and it is less obvious whether these types of liquidity operations should be subject to political considerations over currency denomination, as investors are likely less worried about wild fluctuations in exchange rate values over quite short time periods. In the longer term, flexibility versus cost trade-offs are more consequential, as governments face higher likelihoods of inflationary pressure and investors are more concerned with currency fluctuation and depreciation. Therefore,

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<sup>21</sup>Data were gathered from Bloomberg terminals. We assume that any missing data are as-if randomly distributed. We exclude countries with populations less than 100,000.

we present our main results using the subsample of all bonds issued with a maturity greater than or equal to one year; all our main results are robust to the full sample of all issues, regardless of maturity.<sup>22</sup>

We conduct our analyses at the country-month level.<sup>23</sup> Our main dependent variable is the percentage of the value (amount) of a sovereign’s bonds issued in the country’s domestic currency, collapsed by country-month.<sup>24</sup> This measure captures all bonds issued in the currency within the control of the sovereign issuer. For instance, issuance by the Ugandan government in Ugandan shillings is categorized as domestic denomination, whereas issuance in any other currency (whether dollar, euro, yen, or another currency) is classified as foreign-denominated.<sup>25</sup>

Our main political covariate of interest is government partisanship, both unconditionally and as affected by economic institutions and crisis environments (Hypotheses 1–5). We rely on standard, broadly-available measures of government partisanship, which allow us to test our hypotheses for a broad set of non-OECD countries. Our main measure is of executive partisanship as collected by the Database of Political Institutions (DPI). Per the DPI codebook, party orientation is coded relative to economic policy, which is the appropriate focus for our setting. Following standard practice, we separate governments characterized as “right,” “left,” or “centrist/other.”<sup>26</sup> This trichotomous division of governments allows us to evaluate empirically whether partisanship on the left or the right correlates with systematically different outcomes, relative to the excluded category of governments with no relevant professed preferences. To complement our monthly data on bond issuance, we modify these annual data on government partisanship to match with dates on electoral turnover, so that we capture precisely monthly variation in executive partisanship. To maximize data coverage, we first consider the full sample of countries for which the DPI codes government partisanship. We then incorporate the level of democratic representation in a country, under the expectation that government partisanship may be more informative in more democratic

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<sup>22</sup>As reported in Appendix Tables A.7 and A.8.

<sup>23</sup>This is consistent with the unit of analysis in Ballard-Rosa, Mosley and Wellhausen (2019), which demonstrates a strong empirical correlation between overall amount issued and the number of months with issuances in a given country-year.

<sup>24</sup>For comparability, we convert all amounts to constant US dollars.

<sup>25</sup>Our argument turns on whether the sovereign has control over the currency or not; thus, the identity of the foreign currency is irrelevant. US dollars are the dominant foreign currency choice throughout the period.

<sup>26</sup>Left parties are those identified as communist, socialist, social democratic, or otherwise left. Right parties are conservative, Christian democratic, or otherwise right. We include parties for which the platform does not focus on economic issues (coded 0) in the centrist/other category (Cruz, Keefer and Scartascini, 2018), although our main results are robust to instead dropping these observations entirely.

countries, and given the extensive literature on the advantages that democracies enjoy in accessing international credit markets (Schultz and Weingast, 2003; Beaulieu, Cox and Saiegh, 2012; Biglaiser and Staats, 2012).

Our other covariates of interest include central bank independence (CBI), which we dichotomize into those above or below the sample median level of CBI (Hypothesis 2).<sup>27</sup> We also code whether the exchange rate is pegged (Hypothesis 3). In order to identify countries facing crisis environments, we include a dummy that equals 1 if there has been an inflation crisis at any point in the last five years (Hypothesis 4), and a dummy that equals 1 if the country is currently facing an exchange rate crisis (Hypothesis 5).

Given the observational nature of our data, it is important for us to account for additional factors that might plausibly be correlated both with the currency composition of debt issued in a country-month as well as with the partisan orientation of its government. We begin by including a set of baseline macroeconomic controls commonly associated with borrowing capacity, including GDP per capita and GDP growth, to capture the possibility that economic trajectories might vary with government partisanship. In addition, if left governments prefer to engage in more expansionary spending, there could be consequences for the market's tolerance for government bond terms. This leads us to control for the amount of existing external debt (% of GDP) and the current account balance (% of GDP). To account for the possibility that alternative sources of access to international capital may vary with government partisanship, we control for trade (% of GDP), oil rents (% of GDP), and foreign direct investment (FDI) inflows (% of GDP).

Beyond this baseline set of covariates, we subsequently introduce a fuller set of controls that might plausibly be jointly related to both government partisanship and bond terms, although we note that inclusion of these additional variables leads to non-trivial reduction in our sample size. First, beyond the crisis variables we prioritize in hypothesis testing, it is likely that countries currently experiencing a sovereign debt or inflation crisis may find it harder to choose domestic denomination; if government partisanship also affects the likelihood a country is in a crisis, lack of controls for these factors might result in omitted variable bias. We therefore include dummies for current sovereign debt or inflation crises, as well as a dummy for the presence of an IMF

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<sup>27</sup>Calculated from the weighted measure in Garriga (2016). Explicit data sources for all variables are provided in Appendix Table A.1.

program, the terms of which could be biased in favor of right governments (Nelson, 2014). We also include a measure of capital account openness, addressing the possibility that left governments are more likely to engage in restrictions on the capital account (Chinn and Ito, 2006). We furthermore control for democracy with a continuous measure (VDem’s “polyarchy” score), and probe potential heterogeneity by regime type in robustness results below. All specifications include country fixed effects to capture country-specific, non-time-varying determinants of our outcomes of interest.

Perhaps the most important task in our empirical strategy is to account for the dramatic secular increase in the number of developing country bond issuers and in the amount of domestic currency issuance over our period. We must do so to address changes in the marketplace and therefore isolate the persistent role of partisan factors, whatever the broader global financial environment. Indeed, recent work on the tolerance of bond investors for political risk has emphasized that the international yield environment plays an important role (Ballard-Rosa, Mosley and Wellhausen, 2019; Borri and Shakhnov, 2018). To account for the possible effect of global capital cycles on our results, we also include in our baseline controls a monthly-varying measure of the interest rate on 10-year US Treasury bonds, which are generally taken as the world’s least-risky asset. To capture possible secular movements in our data, we introduce to all specifications a cubic polynomial in time (Carter and Signorino, 2010). We further complement this trend measure with the inclusion of year fixed effects, in order to remove the effect of any shared commonality in currency issuance across all countries within a given year.<sup>28</sup> To address simultaneity bias, we lag all right-hand side measures by one year (as these data vary at the annual level), save our monthly measure of partisanship, which is lagged by one month. Finally, note that our outcome of interest (% domestic issuance) is only observed in country-months in which issuance actually occurs. Therefore, while we use OLS with standard errors clustered by country in our main results, we check that our results are robust to the possibility of selection bias through a Heckman selection design detailed below.

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<sup>28</sup>Our primary results are not sensitive to the exclusion of either the temporal cubic polynomial or the year fixed effects.

## 5 Results

In this section, we present descriptive evidence consistent with our argument and its implications; report results supportive of our Hypotheses 1 through 5; and report robustness analyses and extensions.

### 5.1 Descriptive Preliminaries

We begin by verifying that patterns in our data are consistent with implications of our arguments. First, for partisanship to be consequential for the choice of domestic denomination as we predict, it could be problematic if left governments in developing countries simply issued more sovereign bonds altogether. Figure 3 shows that, if anything, right governments issue a larger amount of debt through sovereign bonds, while center governments issue roughly the same amount as left governments. However, this difference in amount issued across partisanship does not remain a significant determinant of the amount of debt issued (as a % of GDP, by country-month) in a multivariate regression framework.<sup>29</sup> Thus, while left governments might generally be associated with expectations of higher debt levels, they are not systematically acquiring more debt via sovereign bond issues on international markets (1990-2016).

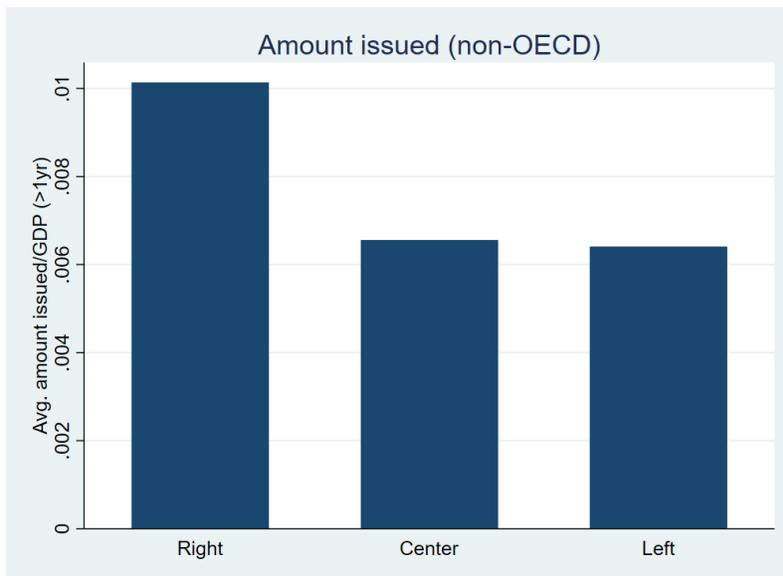


Figure 3: Average amount of sovereign bond issuance (% GDP, monthly) for non-OECD countries.

<sup>29</sup>See Appendix Table A.3. See also Ballard-Rosa, Mosley and Wellhausen (2019).

Next, our argument about partisanship would be less credible if the proportion of left, right, or center parties in non-OECD countries changed radically over the period. Figure 4 shows that this is not the case. Even with phenomena like the mid-2000s “Pink Tide” in Latin America, the proportion of left and right governments has remained relatively stable, and interestingly relatively balanced, over this period, with both slightly declining in recent years. If anything, these data suggest rather the growth of centrist or non-partisan governments in recent years. These trends also increase our confidence that the partisan coding on which we rely is not obviously biased toward attaching our specific, economic partisan preferences of interest to too many rather than too few governments.

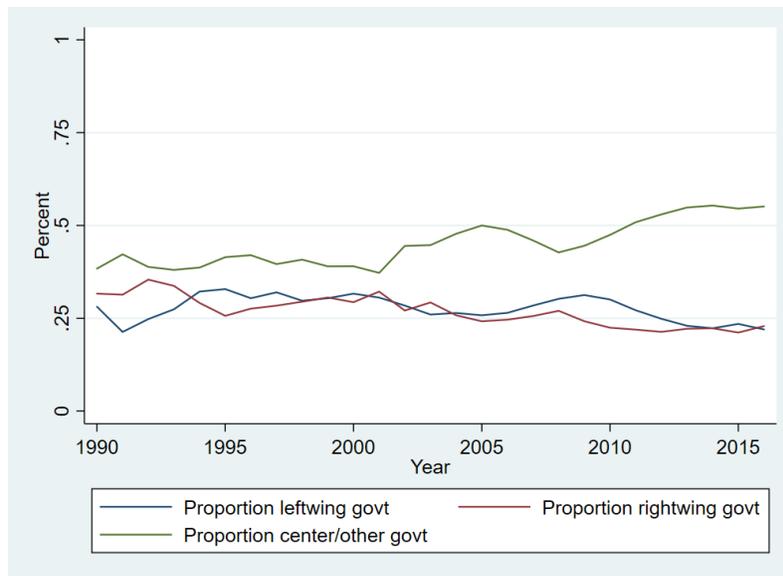


Figure 4: Proportion of governments, by ideology, 1990-2016.

Additionally, our arguments rest on the notion that, while “original sin” does not preclude the issuance of domestic-denominated bonds by developing country governments, domestic-denominated bonds nonetheless carry significant currency risk for investors. As such, we should find evidence that issuing governments compensate investors for taking on these risks. Several compensation mechanisms could be in play to which our data do not speak. For example, governments might aim their offerings at different segments of their potential investor base, varying the denomination of their offerings as time horizons vary. Alternatively, governments might seek some credit outside private bond markets, from private commercial banks, bilateral official creditors, or international financial institutions (Arias, Mosley and Rosendorff, N.d.; Bunte, 2019; Zeitz, 2019);

these creditors may demand compensation that is political or diplomatic, rather than explicitly economic.<sup>30</sup>

Nonetheless, our argument implies that sovereigns issuing in domestic currency provide economic compensation when coming to terms of initial bond issues, so as to compensate the specific investor who holds the bond. The clearest and most direct means of doing so is via the other terms of the bond. Our issue-level data allow us to examine maturity and yield, two key terms of any bond, sovereign or otherwise. We expect that domestic denomination requires issuers to trade off by offering shorter maturities and higher yields. Table 1 explores this expectations via OLS regressions of the percent of domestic currency issuance (by month) on the average maturity and yield of sovereign bonds issued (by month), including our full set of controls.<sup>31</sup> Note that choices over denomination, maturity, and yield are made at the same time; these regressions only explore associations and cannot be interpreted with reference to causality. We do indeed find domestic denomination to be significantly correlated with shorter average maturities (columns 1 and 3). In contrast, results on average yield are not statistically significant. The association between denomination and maturity is sufficient to provide *prima facie* evidence that domestic denomination carries costs, which increases the plausibility of our argument that choosing it is a strategic decision. We leave the development of a theory of how DMOs optimize across denomination, maturity, and yield for future research.

## 5.2 Hypothesis Testing

Table 2 reports results evaluating Hypothesis 1, that left (right) governments unconditionally issue a greater percentage of domestic (foreign) denominated sovereign bonds. First, column 1 reports results from a simple bivariate regression, in which we find that left governments are associated with a significantly greater share, and right governments a significantly smaller share, of bonds issued in domestic currency relative to the excluded category of center/other governments. Column 2

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<sup>30</sup>The capacity of non-OECD governments to choose among a portfolio of potential creditors exists more generally during recent decades, and it is especially pronounced when global liquidity is high, underscoring the importance of our empirical attentiveness to time-related and global market dynamics (Ballard-Rosa, Mosley and Wellhausen, 2019; Brooks, Cunha and Mosley, 2015; Miranda-Agrippino and Rey, 2015).

<sup>31</sup>Monthly averages are the more appropriate unit of analysis than the issue-level terms, because DMOs can package a set of near-simultaneous individual issues that, taken together, provide compensation. One creditor can therefore receive compensation by buying the whole package. As our data do not record the initial buyer, the monthly average allows us to best account for this phenomenon.

Debt terms (1990-2016)

VARIABLES	(1) % Domestic	(2) % Domestic	(3) % Domestic
Avg. maturity	-0.019*** (0.003)		-0.019*** (0.003)
Avg. yield		-0.000 (0.000)	-0.000 (0.000)
Baseline controls	✓	✓	✓
Full controls	✓	✓	✓
Observations	8,187	8,187	8,187
R-squared	0.155	0.097	0.155
Number of countries	79	79	79

Robust standard errors clustered by country in parentheses

\*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

Table 1: This table reports results of OLS regressions of domestic currency issuance (by month) on alternative terms of bonds (by month), as well as a set of control variables defined above. Country and year fixed effects are suppressed, as is a cubic polynomial in time.

confirms that this relationship holds when we include our baseline controls, and column 3 reports support when including other covariates of interest.<sup>32</sup> The partisan differences we detect in domestic debt denomination appear to be a function of both left and right ideologies (Hypothesis 1). That is, right governments also appear to be acting on their distinct preferences over denomination even in a permissive marketplace, relative to centrist governments.

Next, we evaluate the effects of partisanship conditional on other covariates that can affect investors' evaluations of governments' propensity to maintain the value of domestic-denominated debt and, therefore, investors' exposure to currency risk. Figure 5 reports the marginal effects of partisanship when interacted with a dummy for high central bank independence (Hypothesis 2).<sup>33</sup> We do indeed find that left governments in developing countries with high CBI are significantly more likely to issue debt in domestic currency. Results conditional on a pegged exchange rate are similar: left governments issue a greater proportion of domestic-denominated bonds under a pegged exchange rate (Hypothesis 3). These findings are consistent with our argument that left governments take advantage of credibility-enhancing institutions that improve their ability to make choices in line with their ideological preferences.

<sup>32</sup>Note that, in moving from column 2 to 3, we lose eight countries and nearly 3,000 observations; additionally, annual data end here in 2012 due to lack of more recent data for several covariates. Interestingly, very few of the other included covariates appear systematically related to currency of issuance.

<sup>33</sup>Full regression results for this and subsequent marginal effects plots are reported in Appendix Table A.2.

Domestic currency bond issuance (1990-2016), Non-OECD countries

VARIABLES	(1) Bivar.	(2) Baseline	(3) Full controls
Left government	0.087* (0.046)	0.091** (0.045)	0.104** (0.041)
Right government	-0.070* (0.037)	-0.064* (0.035)	-0.074** (0.034)
GDP per capita		-0.039 (0.053)	-0.076 (0.054)
GDP growth (annual %)		0.003 (0.002)	0.002 (0.002)
External debt (% of GDP)		0.001 (0.001)	0.001* (0.001)
Current account balance (% of GDP)		0.001 (0.002)	0.003 (0.003)
Trade (% of GDP)		0.000 (0.001)	-0.001 (0.001)
Oil rents (% of GDP)		-0.004 (0.004)	-0.002 (0.006)
Foreign direct investment, net inflows (% of GDP)		0.000 (0.000)	0.001 (0.002)
US Treasury rate		0.004 (0.007)	-0.003 (0.007)
Inflation crisis			-0.203*** (0.051)
Sov. debt crisis			0.146 (0.121)
IMF prog. in place			-0.039 (0.027)
CBI			0.013 (0.087)
Pegged XR			0.012 (0.026)
Chinn-Ito index			0.004 (0.014)
Democracy			-0.002 (0.140)
Observations	12,179	11,023	8,163
R-squared	0.076	0.079	0.121
Number of countries	103	87	79

Robust standard errors clustered by country in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table 2: This table reports results of OLS regressions of the proportion of domestic currency issuance (by month) on government partisanship (by month, lagged) and varying sets of controls. Country and year fixed effects are suppressed, as is a cubic polynomial in time.

Figure 5 confirms that right governments are significantly less likely than left governments to choose domestic denomination regardless of credibility-enhancing institutions. In the presence of CBI, right governments appear even more likely to choose foreign over domestic denomination; this suggests that the right’s ideological commitment to forego domestic denomination complements the ideological commitment to CBI. Additionally, when the exchange rate is not pegged, right governments appear even more likely to forego domestic denomination. This is consistent with the right’s ideological preference to “bind the hands” of successor governments in the presence of a floating exchange rate.

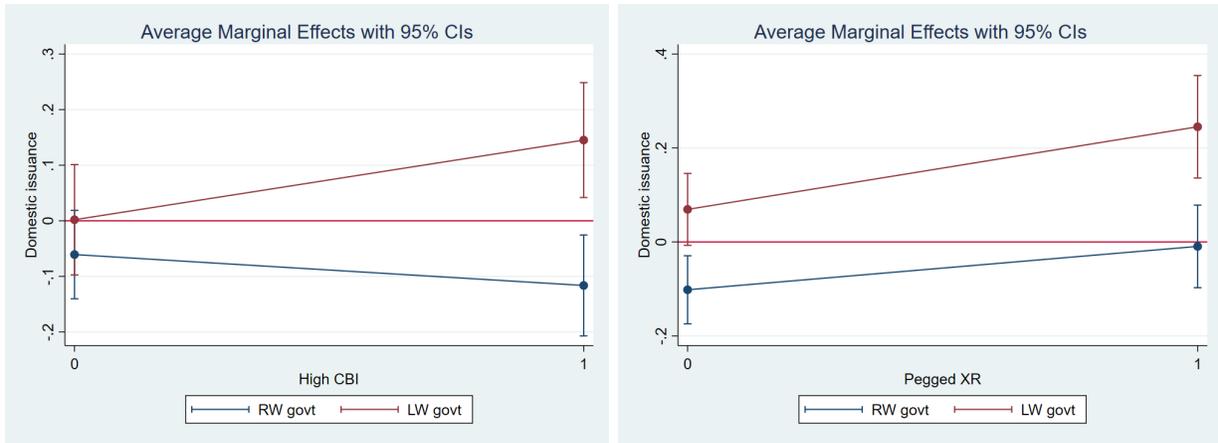


Figure 5: Marginal effect of government partisanship, with 95% confidence intervals, depending on institutional constraints. The left panel conditions on a dichotomous measure of central bank independence, while the right panel conditions on a dummy for fixed exchange rates.

We also consider the extent to which macroeconomic instability can undermine a left government’s ability to come to terms that include domestic denomination. First, we expect that a recent history of rampant inflation, as a particularly relevant kind of economic mismanagement, will suggest to investors increased currency risks (Hypothesis 4). Figure 6 reports the marginal effects of the interaction of a country’s history of inflation crisis in the last five years and government partisanship. We find that left governments without a history of inflation crises remain capable of issuing a significantly greater percentage of domestic-denominated bonds; however, that effect disappears in countries with a recent inflationary past. Inflation history matters on the other side of the political spectrum as well: in more crisis-prone countries, right governments are significantly less likely to choose domestic denomination. Second, we expect that a crashing exchange rate during a currency crisis makes investors especially reluctant to buy or hold domestic-denominated

bonds (Hypothesis 5). Figure 6 reports marginal effects of the interaction of a (current) currency crisis and government partisanship.<sup>34</sup> Indeed, left governments issue a smaller percentage of domestic-denominated bonds during a currency crisis. We find a similar effect for right governments. Note again that, whatever the crisis conditions, right governments issue lower percentages of domestic-denominated bonds.

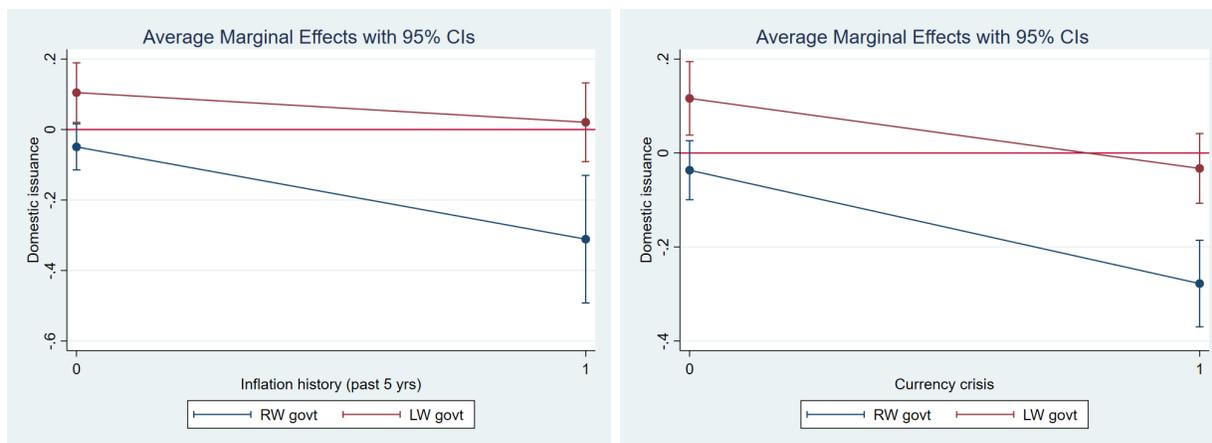


Figure 6: Marginal effect of government partisanship, with 95% confidence intervals, depending on crisis environment. The left panel conditions on a measure of whether the country has faced an inflation crisis in the past 5 years, while the right panel conditions on a contemporaneous currency crisis.

## 5.3 Robustness and Extensions

### 5.3.1 Heckman selection estimates

We have so far demonstrated robust evidence for an association between left government partisanship and domestic currency issuance, as well as the inverse for right governments. However, we can only observe the terms of bonds for those country-months in which issuance actually occurred. This raises the possibility, of course, that our inferences on the effects of partisanship on denomination choice are colored by problems of selection bias, such as might arise if a state’s capacity to borrow internationally at all in a given month is, in part, due to the partisan orientation of its government.

In order to address this potential problem, we re-implement our estimations in a two stage Heckman selection framework. In the first stage, we estimate the probability that a country issues any sovereign bonds in a given month; in the second stage, we account for any potential effects

<sup>34</sup>Results are similar when considering the history of currency crisis, but multicollinearity concerns keep us from including both crisis histories in the same models.

of selection into issuance and re-estimate both the unconditional relationship between government partisanship and currency composition, in addition to the conditional effects of partisanship after accounting for institutional constraints and crisis environments.

In order for Heckman selection models to be consistent, it is standard to identify some factor that helps explain the selection stage but is uncorrelated with the error term in the outcome equation. In our case, this requires a factor that correlates with the issuance of sovereign bonds, but not with the currency composition of the bonds. Here, we rely on democracy and US Treasury rates, drawing on recent work by Ballard-Rosa, Mosley and Wellhausen (2019) that demonstrates a strong effect of democratic regime type on the likelihood of issuance across countries, conditional on global liquidity as measured by US Treasury rates, and recovers no effect of partisanship on the timing or amount of issuance. As reported in column 1 in Appendix Table A.4, we find no evidence that the interaction of democracy and US Treasury rates is related to the currency composition of the debt incurred. While impossible to prove definitively that the “exclusion restriction” for this instrument is valid, we take this as evidence in favor of using the interaction of democracy and US Treasury rates as the excluded factor in our Heckman selection estimations.

Table 3 reports results from our two-stage Heckman selection estimation. In the issuance stage, we reconfirm results from Ballard-Rosa, Mosley and Wellhausen (2019) that there exists a significant effect of democratic regime type on bond issuance conditioned by global liquidity. Turning then to results from the outcome stage, even after taking into account the possibility of selection bias into our data, we continue to recover a significant unconditional positive association between left governments and the percent of domestic denomination, as reported in column 1 (Hypothesis 1).<sup>35</sup> Columns 2 through 5 further demonstrate conditional effects of government partisanship consistent with Hypotheses 2 through 5.

In discussion of Heckman models, it is common to report the estimated correlation between the error terms in the selection versus outcome equations. This parameter, generally referred to as  $\rho$ , is reported at the bottom of Table 3. As can be seen, the estimated correlation between error terms across the two equations is extremely low; in none of the specifications does it come remotely close to rejecting the null hypothesis that the true degree of correlation across these errors

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<sup>35</sup>Note, however, that the negative association between right governments and domestic issuance is less robust in the Heckman selection framework.

is zero, which is usually taken as evidence for the need to perform a correction for sample selection. Thus, while we include Heckman selection results here in order to forestall plausible concerns over selection bias, the data suggest that our original OLS estimates are unlikely to suffer heavily from such bias.

### **5.3.2 Subset on regime type**

Thus far, we have controlled for the possibility of a direct effect of democracy on currency composition in a sample of all non-OECD countries for which the DPI provides data on partisanship. However, our arguments are premised on the existence of political contestation: we expect governments' domestic incentives to act in ways that reflect their ideological leanings are ultimately the result of electoral concerns. While all sovereigns that maintain their own currencies confront the issue of how to denominate their bond issues, face-value partisanship may thus be a less meaningful predictor of a non-democratic regime's choice over terms. To explore this potential heterogeneity, we split our data based on a binary measure of democracy (Magaloni and Min, 2013). Among the subsample of democracies, the effects of left and right governments are robust (column 1 of Appendix Table A.5). In contrast, in the subset of non-democracies, (coded) left partisanship is signed as expected but is far from significance. Note that right partisanship continues to have a significant and relatively large effect: non-democratic governments with (coded) right economic ideology are systematically less likely to choose domestic denomination relative to centrist non-democratic governments. These results underscore the importance of research questioning how the politics of sovereign debt in non-democracies does or does not reflect that in democracies (Ballard-Rosa, 2016, 2020).

### **5.3.3 Effects over time**

Finally, we directly confront the question of whether denomination decisions were once politically relevant but are not anymore, given the boom in domestic issuance (see again Figure 1). Recall that our specifications have accounted for secular dynamics with year fixed effects (to account for shared variation across countries within a given year) and cubic polynomials in time (to account for common secular evolution of dynamics across the entire sample). Still, is the effect of government ideology that we recover simply an artefact of a particular time period? To evaluate this possibility,

## Domestic currency bond issuance, Heckman selection results

EQUATION	VARIABLES	(1) Baseline	(2) CBI	(3) Peg XR	(4) Currency crisis	(5) Inflation history	
DOMESTIC DENOM. DEBT	Right exec.	-0.069 (0.044)	-0.058 (0.061)	-0.102* (0.052)	-0.021 (0.040)	-0.051 (0.042)	
	Left exec.	0.143** (0.057)	0.039 (0.070)	0.106** (0.054)	0.154*** (0.052)	0.136** (0.054)	
	CBI		0.010 (0.063)				
	Right x CBI		-0.023 (0.071)				
	Left x CBI		0.178* (0.097)				
	Pegged XR				-0.020 (0.039)		
	Right x Peg				0.117 (0.074)		
	Left x Peg				0.164** (0.070)		
	Currency crisis					0.055 (0.050)	
	Right x Currency crisis					-0.282*** (0.078)	
	Left x Currency crisis					-0.130* (0.070)	
	Inflation history						-0.113** (0.053)
	Right x Inflation history						-0.222** (0.102)
	Left x Inflation history						-0.035 (0.093)
	GDP per capita		-0.069 (0.070)	-0.051 (0.063)	-0.071 (0.073)	-0.073 (0.067)	-0.097 (0.070)
	GDP growth (annual %)		-0.001 (0.003)	0.001 (0.003)	-0.000 (0.003)	-0.001 (0.003)	-0.000 (0.003)
	Current account balance (% of GDP)		0.001 (0.003)	0.002 (0.003)	0.001 (0.003)	0.002 (0.003)	0.003 (0.003)
	Trade (% of GDP)		-0.000 (0.001)	-0.000 (0.001)	-0.000 (0.001)	-0.000 (0.001)	-0.000 (0.001)
	Oil rents (% of GDP)		-0.002 (0.005)	0.002 (0.005)	-0.001 (0.004)	-0.002 (0.005)	-0.003 (0.005)
	FDI, net inflows (% of GDP)		0.001 (0.001)	0.000 (0.002)	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)
	Public debt (% GDP)		0.001 (0.001)	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)
	US Treasury rate		-0.005 (0.010)	-0.003 (0.010)	-0.006 (0.010)	-0.005 (0.010)	-0.004 (0.010)
	ISSUANCE	Democracy	-0.366 (1.085)	-0.241 (1.093)	-0.364 (1.082)	-0.363 (1.083)	-0.362 (1.083)
		US Treasury rate	-0.188* (0.098)	-0.134 (0.100)	-0.188* (0.098)	-0.188* (0.098)	-0.188* (0.098)
		Democ. x UST	0.268* (0.146)	0.250* (0.151)	0.267* (0.145)	0.267* (0.145)	0.267* (0.145)
		Right exec.	-0.063 (0.184)	-0.048 (0.183)	-0.063 (0.184)	-0.063 (0.184)	-0.063 (0.184)
		Left exec.	-0.137 (0.183)	-0.105 (0.181)	-0.137 (0.183)	-0.137 (0.183)	-0.137 (0.183)
GDP per capita		0.383*** (0.128)	0.394*** (0.126)	0.383*** (0.128)	0.383*** (0.128)	0.383*** (0.128)	
GDP growth (annual %)		-0.000 (0.008)	0.001 (0.009)	-0.000 (0.008)	-0.000 (0.008)	-0.000 (0.008)	
Current account balance (% of GDP)		0.014* (0.008)	0.016* (0.009)	0.014* (0.008)	0.014* (0.008)	0.014* (0.008)	
Trade (% of GDP)		-0.003 (0.003)	-0.004 (0.003)	-0.003 (0.003)	-0.003 (0.003)	-0.003 (0.003)	
Oil rents (% of GDP)		-0.012 (0.015)	-0.021 (0.017)	-0.012 (0.015)	-0.012 (0.015)	-0.012 (0.015)	
FDI, net inflows (% of GDP)		0.001 (0.003)	0.003 (0.004)	0.001 (0.003)	0.001 (0.003)	0.001 (0.003)	
Public debt (% GDP)		-0.002 (0.002)	-0.002 (0.002)	-0.002 (0.002)	-0.002 (0.002)	-0.002 (0.002)	
$\rho$		0.019 (0.066)	0.007 (0.056)	0.021 (0.062)	0.011 (0.059)	0.007 (0.058)	
Observations			19,583	19,138	19,583	19,583	19,583
Number of countries			87	87	87	87	87

Robust standard errors clustered by country in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table 3: This table reports results of two-stage Heckman selection estimation, with issuance of debt as the selection outcome and proportion of foreign-currency denominated bonds as the second state outcome. Country and calendar month fixed effects are suppressed.

we drop year fixed effects and re-estimate our core specification (Table 2) with dummies for the 1990s and 2000s (with the 2010s as the excluded category). We interact each decade dummy with our government partisanship measures. As reported in Appendix Table A.6, the results support our contention that the systematic relationship between left governments and domestic denomination is consistent and not an artefact of time.<sup>36</sup> That is, left governments maintain distinct ideological preferences and seek to act on them, whatever the market’s level of acceptance of the terms those preferences imply. In contrast, right governments’ choice to forego domestic denomination in ways distinct from centrist governments (the excluded category) is strongest during the 1990s but weakens over time. This trend is consistent with the reality that, given that the boom in domestic denomination is indicative of lower costs of bond terms that include that choice, right ideology does not necessitate right governments looking a “gift horse in the mouth.”

## 6 Conclusion

For developing countries, the expansion of international capital markets in general, and sovereign bond markets specifically, offers opportunities as well as threats. Governments have been increasingly able to borrow to fund their activities, but in doing so they may expose themselves to pressures to enact or avoid certain policies. As such, financial openness could reduce the ability of governments to achieve their traditional ideological goals and, in turn, to serve their core constituents.

The “original sin” logic offers one version of market-based constraints, in that developing countries were assumed to be unable to find an international market for domestic-denominated bonds (Eichengreen and Hausmann, 2005). The boom in the proportion of sovereign bonds issued in domestic currency, revealed by our data, undermines this expectation. Nonetheless, neither the absence or presence of appetites for domestic-denominated sovereign debt on international markets changes the reality that politics shapes outcomes. Left governments prefer domestic denomination, thereby preserving the possibility of future monetary policy flexibility and insulation from depreciation-induced increases in debt repayment costs. Our analyses provide evidence that left governments have and continue to prioritize this distinct preference in coming to terms with cred-

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<sup>36</sup>That is, the interaction terms are not significant or substantively meaningful.

itors, whatever the market’s appetite. Right governments, in contrast, do not have an ideological preference in favor of domestic denomination, and in fact quite the opposite. We argue that the changing marketplace has not changed right governments’ preferences, either; rather, the boom in domestic denomination suggests that the ease of coming to terms including domestic currency is such that right governments find it less compelling to adhere consistently to their preference for foreign-denomination.

Still, vestiges of the “original sin” dynamic remain: issuing domestic-denominated sovereign bonds on international markets requires compensation. In our data, we uncover a systematic correlation between domestic denomination and compensation in the form of shorter maturities.<sup>37</sup> Additionally, while left governments find it more difficult to choose domestic denomination when crisis heightens currency risks, they are better able to come to terms including domestic denomination when constrained by an independent central bank or pegged exchange rate. The conditioning effect of national economic institutions on debt denomination points to a need for greater attention to governments’ choices not only across financing terms and debt instruments (Arias, Mosley and Rosendorff, N.d.; Bunte, 2019), but also across national economic institutions. Governments reforming their institutions often are making trade offs across type of constraints; in the area of sovereign debt, this is especially relevant as international financial institutions encourage developing country governments to make their debt management offices (DMOs) not only more professionalized but also more insulated from political authority (Blommestein and Horman, 2007; Missale, 2000; Sadeh and Rubinson, 2018).

Finally, our data reveal massive changes in the marketplace for assets involving domestic currencies, which speak to the debate over whether economic globalization leads toward convergence on a small number of global reserve currencies. Such convergence would privilege countries whose currencies sit atop the global pyramid while reducing the power of others (Cohen, 2015), and it would weaken other countries’ access to the state-building benefits that come with national currencies (Helleiner, 2003). Consistent with the “currency as power” narrative, the dollar and the euro are key currencies for many international transactions, issuers of global reserve currencies experience a variety of benefits, and governments such as China seek to increase the international

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<sup>37</sup>We do not uncover a systematic correlation with yield. As we are not offering a theory of optimization across bond terms, this non-result can easily coexist with our evidence of costly trade-offs based on maturities.

use of their currencies (Broz, Zhang and Wang, 2018; Liao and McDowell, 2016). Nonetheless, it is clear from our data that a great number of currencies feature in global sovereign debt markets. Private investors in these markets seem to have appetites for portfolios including developing country currencies—and to have been able to come to terms including sufficient compensation to whet those appetites. For the 131 sovereign issuers covered in our data (1990-2016), national currencies remain very much alive.

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## Appendix

VARIABLE NAME	SOURCE
Bond issues: timing, amount, and terms (currency, maturity, and yield)	Bloomberg terminals (see replication data)
Government partisanship	World Bank, Database of Political Institutions (DPI)
GDP per capita	World Bank, World Development Indicators (WDI)
GDP growth	World Bank, World Development Indicators (WDI)
External debt	Abbas et al. (2010)
Current account balance	World Bank, World Development Indicators (WDI)
Trade	World Bank, World Development Indicators (WDI)
Oil rents	World Bank, World Development Indicators (WDI)
Foreign direct investment, net inflows	World Bank, World Development Indicators (WDI)
Interest rate on 10-year US Treasury bonds	US Federal Reserve
Pegged exchange rate	Shambaugh (2004)
Central bank independence	Weighted measure from Garriga (2016)
Capital account openness	Chinn and Ito (2006)
IMF program in place	Dreher (2006)
Inflation crisis	Valencia and Laeven (2012)
Inflation crisis history	Calculated from Valencia and Laeven (2012)
Sovereign debt crisis	Valencia and Laeven (2012)
Currency crisis	Valencia and Laeven (2012)
Democracy	“Polyarchy” score from Varieties of Democracy (VDem)

Table A.1: Variable definitions and sources.

Domestic currency bond issuance (1990-2016), Non-OECD countries, OLS results

VARIABLES	(1) CBI	(2) Pegged XR	(3) Currency crisis	(4) Inflation history
Right exec.	-0.061 (0.138)	-0.102*** (0.037)	-0.037 (0.032)	-0.049 (0.033)
Left exec.	0.002 (0.050)	0.069* (0.039)	0.116*** (0.040)	0.105** (0.043)
High CBI	0.008 (0.044)			
Right exec. X High CBI		-0.055 (0.052)		
Left exec. X High CBI		0.143** (0.068)		
Pegged XR		-0.042 (0.027)		
Right exec. X Peg XR		0.092* (0.053)		
Left exec. X Peg XR		0.176*** (0.051)		
Currency crisis			0.073*** (0.027)	
Right exec. X Currency crisis			-0.241*** (0.054)	
Left exec. X Currency crisis			-0.149*** (0.035)	
Inflation history				-0.053 (0.041)
Right exec. X Inflation history				-0.262** (0.103)
Left exec. X Inflation history				-0.084 (0.065)
Baseline controls	✓	✓	✓	✓
Full controls	✓	✓	✓	✓
Observations	8,163	8,163	8,163	8,163
R-squared	0.128	0.128	0.131	0.131
Number of countries	79	79	79	79

Robust standard errors clustered by country in parentheses  
 \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table A.2: This table reports results of OLS regressions of proportion of domestic-currency denominated bonds on government partisanship interacted with measures for economic institutions and crisis environments, along with a full set of controls. Country and year fixed effects are suppressed, as is a cubic polynomial in time.

Amount issued (% GDP) (1990-2016)

VARIABLES	(1) Amount	(2) Amount
Right exec.	0.000 (0.003)	0.003 (0.004)
Left exec.	-0.001 (0.003)	0.001 (0.003)
GDP per capita	0.013** (0.006)	0.010* (0.006)
GDP growth (annual %)	0.000 (0.000)	0.000 (0.000)
External debt (% of GDP)	0.000 (0.000)	-0.000 (0.000)
Current account balance (% of GDP)	0.000 (0.000)	0.000 (0.000)
Trade (% of GDP)	-0.000 (0.000)	-0.000 (0.000)
Oil rents (% of GDP)	-0.000 (0.000)	-0.000 (0.000)
FDI, net inflows (% of GDP)	0.000 (0.000)	0.000 (0.000)
US treasury rate (UST)	-0.000 (0.001)	-0.000 (0.001)
Pegged XR		0.000 (0.002)
CBI		0.006 (0.010)
Capital account openness		-0.000 (0.001)
IMF prog. in place		0.006** (0.002)
Inflation crisis		-0.004 (0.004)
Sov. debt crisis		-0.009 (0.006)
Observations	23,575	18,936
Log likelihood	14784	12303
Pseudo-R2	-0.269	-0.269
Countries	91	87

Robust standard errors clustered by country in parentheses.

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table A.3: This table reports results of tobit regressions taking amount of sovereign bonds issued (by month, % GDP) as the dependent variable. Country and year fixed effects are suppressed, as is a cubic polynomial in time.

Domestic currency issuance and global liquidity (Non-OECD countries, 1990-2016)

VARIABLES	(1) % Domestic
Democracy (VDem)	0.291 (0.246)
Democ. x UST	-0.050 (0.044)
US treasury rate	0.026 (0.029)
GDP per capita	-0.105 (0.067)
GDP growth (annual %)	0.003 (0.002)
External debt (% of GDP)	0.001 (0.001)
Current account balance (% of GDP)	0.002 (0.003)
Trade (% of GDP)	-0.001 (0.001)
Oil rents (% of GDP)	-0.001 (0.007)
Foreign direct investment, net inflows (% of GDP)	0.002 (0.002)
Pegged XR	0.002 (0.027)
CBI Garriga (weighted)	0.011 (0.081)
Chinn-Ito index	-0.012 (0.016)
IMF prog. in place	-0.044 (0.029)
Inflation crisis	-0.215*** (0.050)
Sov. debt crisis	0.179 (0.126)
Observations	8,187
R-squared	0.099
Number of countries	79

Robust standard errors clustered by country in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table A.4: This table reports results of OLS regressions of the proportion of sovereign bonds issued in domestic currency on an interaction between democracy and US Treasury rates, as well as a set of control variables reported. Country and year fixed effects are suppressed, as is a cubic polynomial in time.

Domestic currency bond issuance (1990-2016), Democracies vs Autocracies

VARIABLES	(1) Democ. only	(2) Autoc. only
Right exec.	-0.083** (0.034)	-0.262* (0.152)
Left exec.	0.084** (0.038)	0.127 (0.207)
GDP per capita	-0.163** (0.074)	0.059 (0.062)
GDP growth (annual %)	0.005* (0.003)	-0.005* (0.003)
External debt (% of GDP)	0.001 (0.001)	0.002 (0.002)
Current account balance (% of GDP)	0.004 (0.003)	-0.001 (0.004)
Trade (% of GDP)	-0.001 (0.001)	-0.000 (0.001)
Oil rents (% of GDP)	-0.002 (0.009)	0.003 (0.003)
Foreign direct investment, net inflows (% of GDP)	0.002 (0.002)	-0.001 (0.003)
US treasury rate	-0.002 (0.009)	-0.005 (0.018)
Pegged XR	-0.003 (0.041)	0.062* (0.031)
CBI Garriga (weighted)	0.130 (0.105)	-0.147 (0.147)
Chinn-Ito index	0.008 (0.018)	-0.023 (0.043)
IMF prog. in place	-0.032 (0.029)	-0.101** (0.037)
Inflation crisis	-0.226*** (0.054)	0.000 (0.042)
Sov. debt crisis	0.134 (0.121)	-0.246 (0.256)
Democracy (VDem)	0.095 (0.174)	-0.523* (0.291)
Observations	5,992	2,171
R-squared	0.152	0.100
Number of countries	56	39

Robust standard errors clustered by country in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table A.5: This table reports results of OLS regressions taking proportion of bonds issued in domestic currency as the dependent variable, separately for democratic and non-democratic countries. Country and year fixed effects are suppressed, as is a cubic polynomial in time.

Domestic currency bond issuance by decade, Non-OECD countries

VARIABLES	(1) Decade dummies
Right exec.	-0.020 (0.040)
Right exec. x 1990s	-0.140* (0.072)
Right exec. x 2000s	-0.024 (0.036)
Left exec.	0.150*** (0.053)
Left exec. x 1990s	-0.083 (0.058)
Left exec. x 2000s	-0.053 (0.037)
1990s	0.178*** (0.059)
2000s	0.055** (0.026)
GDP per capita	-0.063 (0.051)
GDP growth (annual %)	0.002 (0.002)
External debt (% of GDP)	0.001 (0.001)
Current account balance (% of GDP)	0.003 (0.002)
Trade (% of GDP)	-0.001 (0.001)
Oil rents (% of GDP)	-0.002 (0.006)
Foreign direct investment, net inflows (% of GDP)	0.002 (0.002)
US treasury rate	0.019*** (0.007)
Pegged XR	0.012 (0.025)
CBI Garriga (weighted)	0.032 (0.080)
Chinn-Ito index	-0.002 (0.013)
IMF prog. in place	-0.040 (0.026)
Inflation crisis	-0.198*** (0.048)
Sov. debt crisis	0.131 (0.117)
Democracy (VDem)	-0.014 (0.130)
Observations	8,163
Number of countries	79
R-squared	0.119

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

Table A.6: This table reports results of OLS regressions of the proportion of domestic-currency denominated bonds on government partisanship interacted with a dummy for decade, along with a full set of controls. Country fixed effects are suppressed, as is a cubic polynomial in time.

Domestic currency bond issuance (1990-2016), Non-OECD countries, all bonds issued

VARIABLES	(1) Bivar.	(2) Baseline	(3) Full controls
Right exec.	-0.029 (0.028)	-0.016 (0.025)	-0.014 (0.030)
Left exec.	0.059 (0.044)	0.067* (0.038)	0.085** (0.035)
GDP per capita		-0.016 (0.053)	-0.026 (0.054)
GDP growth (annual %)		0.005*** (0.002)	0.004** (0.002)
External debt (% of GDP)		0.002* (0.001)	0.003*** (0.001)
Current account balance (% of GDP)		0.000 (0.001)	0.001 (0.002)
Trade (% of GDP)		-0.000 (0.001)	-0.000 (0.001)
Oil rents (% of GDP)		0.000 (0.002)	0.003 (0.004)
Foreign direct investment, net inflows (% of GDP)		-0.000 (0.000)	0.001 (0.001)
US treasury rate		0.003 (0.005)	-0.002 (0.006)
Pegged XR			-0.001 (0.022)
CBI Garriga (weighted)			-0.039 (0.056)
Chinn-Ito index			0.004 (0.012)
IMF prog. in place			-0.038 (0.025)
Inflation crisis			-0.112*** (0.041)
Sov. debt crisis			0.152* (0.091)
Democracy (VDem)			-0.098 (0.104)
Observations	16,141	14,416	10,499
R-squared	0.058	0.073	0.114
Number of countries	104	89	80

Robust standard errors clustered by country in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table A.7: This table reports results of OLS regressions of the proportion of domestic currency issuance (by month, all bonds issued) on government partisanship (by month, lagged) and varying sets of controls. Country and year fixed effects are suppressed, as is a cubic polynomial in time.

Domestic currency bond issuance (1990-2016), Non-OECD countries, all bonds issued

VARIABLES	(1) CBI	(2) Pegged XR	(3) Currency crisis	(4) Inflation history
Right exec.	-0.005 (0.039)	-0.024 (0.036)	0.012 (0.029)	-0.002 (0.029)
Left exec.	0.023 (0.052)	0.064* (0.036)	0.090*** (0.034)	0.087** (0.035)
High CBI	-0.033 (0.039)			
Right exec. x CBI	-0.032 (0.043)			
Left exec. x CBI	0.090 (0.068)			
Pegged XR		-0.020 (0.022)		
Right exec. x Peg		0.028 (0.051)		
Left exec. x Peg		0.100** (0.048)		
Currency crisis			0.041** (0.020)	
Right exec. x Currency crisis			-0.183*** (0.047)	
Left exec. x Currency crisis			-0.084*** (0.031)	
Inflation history				-0.052 (0.035)
Right exec. x Inflation history				-0.123 (0.112)
Left exec. x Inflation history				-0.065 (0.050)
GDP per capita	0.030* (0.017)	-0.024 (0.056)	-0.028 (0.053)	-0.031 (0.053)
GDP growth (annual %)	0.004** (0.002)	0.004** (0.002)	0.004* (0.002)	0.004** (0.002)
External debt (% of GDP)	0.002*** (0.001)	0.003*** (0.001)	0.003*** (0.001)	0.003*** (0.001)
Current account balance (% of GDP)	0.002 (0.002)	0.001 (0.002)	0.001 (0.002)	0.001 (0.002)
Trade (% of GDP)	-0.000 (0.001)	-0.000 (0.001)	-0.000 (0.001)	-0.000 (0.001)
Oil rents (% of GDP)	0.001 (0.003)	0.003 (0.004)	0.003 (0.004)	0.003 (0.004)
Foreign direct investment, net inflows (% of GDP)	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)
US treasury rate	-0.008 (0.007)	-0.001 (0.006)	-0.002 (0.006)	-0.002 (0.006)
Pegged XR	-0.006 (0.021)	-0.004 (0.015)	-0.002 (0.022)	-0.003 (0.022)
CBI Garriga (weighted)	0.021 (0.083)	-0.053 (0.052)	-0.059 (0.054)	-0.059 (0.060)
Chinn-Ito index	0.004 (0.011)	0.001 (0.012)	0.001 (0.011)	0.001 (0.011)
IMF prog. in place	-0.041 (0.025)	-0.041* (0.025)	-0.042* (0.025)	-0.042 (0.026)
Inflation crisis	-0.137*** (0.037)	-0.117*** (0.040)	-0.091** (0.036)	-0.043 (0.029)
Sov. debt crisis	0.180* (0.093)	0.153* (0.090)	0.143 (0.097)	0.148 (0.097)
Democracy (VDem)	-0.002 (0.112)	-0.108 (0.104)	-0.076 (0.101)	-0.093 (0.104)
Observations	10,499	10,499	10,499	10,499
R-squared	0.093	0.117	0.122	0.119
Number of countries	80	80	80	80

Robust standard errors clustered by country in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table A.8: This table reports results of OLS regressions of the proportion of domestic-currency denominated bonds (for all bonds issued) on government partisanship interacted with measures for economic institutions and crisis environments, along with a full set of controls. Country and year fixed effects are suppressed, as is a cubic polynomial in time.