Contingent Advantage? Sovereign Borrowing, Democratic Institutions and Global Capital Cycles *

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Abstract

We explore the interaction between domestic and global factors in shaping governments' capacity to issue debt in primary capital markets. Consistent with the "democratic advantage" logic, we demonstrate that countries with high levels of electoral accountability, executive constraints, and policy transparency are better able to issue debt. Further, we argue that democratic institutions not only facilitate borrowing directly; they also assuage investors' worries about elections, government ideology, and partisan switches – of particular importance in developing countries. However, in contrast to previous literature, we argue that the democratic advantage is contingent: investors' attention to domestic politics varies with conditions in global capital markets. When global financial liquidity is low, investors are risk averse, and political risk has an important effect on governments' capacity to borrow. But when global markets are flush, investors are risk-tolerant and less sensitive to risks suggested by domestic politics. We test and find support for our claims with new data on government bond issues in primary capital markets—the point at which variation in access to financing is most apparent, and the point at which governments' cost of market access matter most—from 1990-2016, covering the population of 131 sovereign issuers. Our findings highlight the role of systemic factors, which are under-appreciated in much "open economy politics" research, in determining access to capital markets.

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Introduction

Governments routinely seek to access global capital markets, borrowing from official and private sources. Capital account liberalization has dramatically expanded access to financing, especially for developing countries. Following the 1980s debt crisis, bonds—issued and traded in private, disintermediated markets—became the dominant form of sovereign finance. However, the ability of governments to access bond markets varies.[1] We advance several theoretical claims that build on existing research on sovereign borrowing, and we assess these claims with new empirical data on actual sovereign bond issues in primary capital markets. On the theoretical side, we build on the "democratic advantage" logic. First, we unpack the democratic advantage mechanism and show that constraints on political leaders, accountability via electoral democracy, rule of law, and policy transparency improve governments' borrowing capacity.

Second, we argue that the advantage that democracy confers reduces investors' immediate concerns about political events. Ex ante, one may expect elections—especially those that are closely contested, that bring new political parties and actors into office, or that involve ideological switches—to heighten investors' concerns about political risk. In contrast, we predict and find that, in the presence of democratic institutions that promise a regular and transparent political process, outcomes of particular electoral events do not limit sovereign borrowing opportunities. This is the case not only in established, wealthy democracies, but also in developing countries.

Third, global capital market conditions are a central but under-appreciated determinant of sovereign debt dynamics. We argue that domestic democratic institutions have a conditional, rather than constant, effect on governments' capacity to borrow. This is because changes in global capital market conditions affect the salience of political risk. When markets are liquid, interest rates and returns on safe assets are relatively low. Investors' search for higher returns renders them more tolerant of risk, including sovereign political risk. In such situations, domestic institutions matter less. Even governments that lack democratic institutions (or that have shaky economic fundamentals) find themselves able to issue more debt, more often, in international markets. On the other hand, low global liquidity brings domestic political institutions back into play. When risk-averse investors have more attractive outside options, they give greater consideration to governments' future ability and willingness to repay their debt. Hence, "democratic advantage" effects

[1] Kaplan and Thomsson (2016).

operate only at some stages of the global capital market cycle. In making this claim, we depart from the traditional open economy politics approach, which tends to treat global conditions as a background feature rather than as a central mediating force in international economic relations.

Empirically, we advance scholarship on sovereign debt by analyzing primary capital markets – the markets in which governments issue bonds internationally. A focus on primary capital markets offers several advantages. First, it allows us to treat borrowing as the outcome of a strategic interaction between governments (specifically, government debt managers) and investors (specifically, financial institutions that manage and underwrite bond issues). Governments are active players in competitive international markets, rather than passive recipients of market assessments and offers.[2] Government debt managers are often highly professionalized, with a keen sense of investors' preferences, market conditions, and peer countries' borrowing behavior. Within the constraints of public financing needs, they prefer to access markets when capital is available at low interest rates, at longer maturities, and in domestic rather than foreign currencies. In doing so, they must anticipate investors' responses to domestic politics. Second, primary capital markets represent the most direct effect of markets on government borrowing. The interest rate at which a government issues debt—rather than the discount or premium at which debt is later traded—most directly determines the government's financing costs. Third, primary capital market data allow us to test our argument on the full population of countries issuing debt on international markets. Most if not all previous empirical analyses include only those countries that issue a benchmark instrument, those that are included in an index such as JP Morgan's Emerging Markets Bond Index (EMBI), those for which credit default swaps (CDS) exist, or those that have a sovereign credit rating. Such measures preclude the inclusion of the broad set of developing countries that are able to issue debt on international markets. While selection effects still exist in primary capital market data, its coverage makes it a much more preferable measure.[3]

We elect to focus on sovereign bonds, rather than on other forms of sovereign credit, because bond-based financing is a central feature of contemporary financial globalization. Certainly, some states satisfy some of their borrowing needs via commercial bank loans, bilateral official credit, or multilateral official credit, and scholars would do well to better consider the tradeoffs across these

[2]Campello (2015); Copelovitch (2010); Kaplan and Thomsson (2016).

[3]See Beaulieu, Cox and Saiegh (2012) for an extended discussion of the selection issues that can arise in credit ratings data.

and sovereign bond issues.[4] Sovereign debt issued on private international markets have been a growing means of government finance, and it has become the most common form for the last two decades.[5] We therefore assemble data for all sovereign debt issued by 131 countries in international markets, spanning the 1990-2016 period.

The Democratic Advantage and its Limits

Contemporary capital account openness allows governments access to a broad pool of capital, often facilitating reductions in public sector financing costs. Financial globalization also increases the extent to which governments are subject to market discipline. Market-based pressures vary with governments' need to attract capital;[6] and governments vary in their preferences for privileging internal versus external constituencies. The "structural dependence" of governments on capital implies pressures from capital owners, whether or not capital is internationally mobile.[7] Yet financial openness may generate particular constraints, as governments avoid some policy choices for fear of upsetting exit-prone investors, or as governments reverse or moderate choices that prove unpopular with mobile investors.

In general, investors' impact on sovereign debt outcomes increases as capital account openness makes their threats of exit more credible. At the extreme, investors can refuse to lend to a government at any rate of return (credit rationing). Or, investors can demand a higher interest rate (risk premium) when they deem sovereign risk to be greater.[8] In order to keep borrowing costs down, governments may choose different policies or they may engage in specific, market-friendly institutional reforms.[9] In extreme cases, when governments find themselves highly indebted and facing the prospect of default, cuts in fiscal outlays are often necessary to restore investors' confidence, even if such cuts have devastating effects on the real economy – the so-called "confidence

[4] See, for example, Kaplan and Thomsson (2016). For a consideration of the determinants of state-to-state lending, see Bunte (2017). We take into account a government's perceived creditworthiness and thus its ability to access capital outside of sovereign bond markets.

[5] See the World Bank's International Debt Statistics on bond versus commercial bank financing, as well as official versus private sector financing, for a wide range of countries, since 1970.

[6] For instance, market-based pressures are less binding for resource-rich countries during commodity booms (Campello, 2015).

[7] Przeworski and Wallerstein (1988).

[8] Tomz (2007) discusses different strategies for market actors in response to perceived risks of different "types" of sovereign borrowers.

[9] e.g. Bodea and Hicks (2015).

fairy" mechanism. Indeed, a common trope beginning in the 1990s was the "golden straitjacket," in which financial liberalization afforded opportunities for governments but also constrained their policy choices.[10]

In response to claims about how global capital markets might affect governments' policy autonomy, scholars of comparative and international political economy have examined more directly the ways in which investors evaluate borrowing governments. They aim to identify the extent as well as the nature of the pressures that financial markets exact on governments. This research suggests that domestic institutions and interests serve to mediate the pressures of financial globalization, rendering a complete cross-national, market-driven convergence of government policies unlikely.[11] This scholarship, drawing heavily on an open economy politics perspective, also holds that financial markets generally are attentive to certain—but not to all—dimensions of government policies, political events and domestic institutions.

Central to understanding financial market assessments of borrowing governments is default risk. As sovereigns, governments possess a unique ability to repudiate their financial obligations.[12] Investors therefore focus significant attention on assessing governments' future ability and willingness to repay their debt. For example, governments with histories of default (especially in good economic times) tend to be highly constrained.[13] While disentangling ability to pay from willingness to pay is difficult, the former often is associated with economic outcomes: governments with lower inflation, smaller fiscal deficits, lower levels of public debt and higher rates of economic growth are better able to service their debt. Along these lines, we often observe governments engaging in economic reforms—reducing fiscal deficits, liberalizing labor markets or improving tax collection capacity—with the stated purpose of reassuring bond market investors, especially in times of crisis.[14]

Willingness to pay, by contrast, is typically assumed to result from leaders' political calculations: to what extent do governments privilege external commitments, including sovereign bond

[10] e.g. Kurzer (1993); Strange (1998). American political consultant James Carville famously quipped in 1993 that he wanted to be reincarnated as the bond market, rather than as pope, president or a .400 baseball hitter, "because that way, you can intimidate everybody."

[11] For example, market-based pressures tend to be greater for developing rather than developed country governments (Mosley, 2003; Wibbels, 2006).

[12] Ballard-Rosa (2016); Eaton and Gersovitz (1981); North and Weingast (1989); Simmons (1994).

[13] Mosley (2003); Tomz (2007).

[14] Kaplan (2013).

contracts, over internal motivations to resist payment? In what ways might domestic institutions either facilitate or limit leaders' capacity, say, to stimulate the economy, via loose monetary or fiscal policies, at the expense of external commitments? Countries with politically independent central banks, for instance, are associated with better market access,[15] while left-leaning governments may heighten political risk.[16]

A central contention of this scholarship is the existence of a "democratic advantage" in sovereign borrowing: all else equal, countries with democratic political institutions have easier access to finance than their non-democratic counterparts.[17] International investors' belief that democracies have a higher willingness to service their debt may result from several, often interrelated, mechanisms. Constraints on executive power, especially those imposed by legislatures, can limit leaders' fiscal profligacy.[18] Democratic leaders also may fear electoral penalties in response to default, either because some bondholders are part of the electorate, or because the electorate generally prefers that leaders uphold their foreign obligations.[19] Additionally, democracies are characterized by strong respect for the rule of law and judicial independence; these features further enhance investors' confidence that governments will honor contracts.[20] And, because democracies tend to be more transparent not only in their release of economic and financial information, but also regarding their policymaking processes, investors may be better able to price risk (and to ration credit in the riskiest situations) when lending to democracies.[21]

These institutional features—constraints on executive power, electoral accountability, judicial independence, and transparency—can vary among democracies, but they often correlate highly with and reinforce one another. Without necessarily disentangling the multiple mechanisms at play, several empirical studies establish that democracy leads to lower risk premiums on outstanding (secondary market) debt, lower prices for insurance against default (credit default swaps) and higher sovereign credit ratings.[22]

[15] Bodea and Hicks (2015); Maxfield (1997).
[16] Mosley (2003); Hardie (2006).
[17] Schultz and Weingast (2003); Beaulieu, Cox and Saiegh (2012).
[18] North and Weingast (1989).
[19] Saiegh (2005); Schultz and Weingast (2003); Stasavage (2011).
[20] Biglaiser and Staats (2012); Cordes (2012).
[21] Campello (2015); Devlin (1989); Hollyer, Rosendorff and Vreeland (2011); Copelovitch, Gandrud and Hallerberg (2018).
[22] Beaulieu, Cox and Saiegh (2012); North and Weingast (1989); Saiegh (2005). See DiGiuseppe and Shea (2016) on penalties for credit downgrades for non-democratic governments.

We establish the presence of these multiple mechanisms, and the broader democratic advantage effect, in our empirical analyses. Additionally, we establish that it the existence of democratic processes – captured in various institutional features of political regimes – rather than the outcomes of those processes that is salient for investors. Elections, even those that are close, those that bring left-leaning governments to power, or those that generate ideological switches, are not significantly associated with changes in governments' capacity to access sovereign finance. This bodes especially well for developing country borrowers, in which electoral volatility may be persistent in the context of established democratic procedures.

Most importantly, we identify the boundaries of the democratic advantage. The effects of democratic institutions on investor behavior are conditional on global capital market conditions. All the components of democratic institutions that assuage investors' worries matter most when investors' worries are high. When global markets are liquid, and investors are "searching for yield," adverse political institutions are no longer a significant deterrent to capital access: borrowers with non-democratic institutional features are as able to get credit as their democratic counterparts.

We use newly-assembled data on sovereign issues in primary capital markets to reinforce democratic advantage mechanisms, demonstrate the difference between the effects of democratic institutional features versus that of political events, and establish the conditional nature of the (institutional) democratic advantage. In the next section, we explain why our measures of primary issues—in terms of occurrence, amount, and price—are useful to our tasks and of crucial importance in identifying constraints on government finances. We then spell our our hypotheses and report our findings.

Why Primary Capital Markets?

In refining and identifying the limits of the democratic advantage, we focus on the primary market for sovereign debt in which governments initially issue bonds. We introduce a new dataset of issues of sovereign bonds in primary capital markets for the population of 131 countries participating from 1990-2016.[23]

Primary capital markets offer the best possible setting to understand the political economy

[23] See below for details.

of sovereign debt because governments' actual borrowing costs are determined at the point of issuance. To date, the wide availability of secondary market data, at least for developed country issuers of benchmark (domestic currency denominated, ten-year maturity) government bonds, has facilitated the use of secondary market interest rates on outstanding debt issues as the key measure of how markets price sovereign risk. The emergence of insurance contracts against sovereign default (credit default swaps) has offered scholars another measure of secondary market pricing.[24] Other scholars, seeking to include a broader range of sovereign issuers in their analyses, have used sovereign credit ratings as their main dependent variable.[25] We see all of these as less accurate operationalizations of government borrowing.

Secondary markets for government bonds (and CDS contracts, when available) are often active and liquid. Secondary market pricing changes as investors reassess risks related to specific assets. But changes in secondary market prices do not immediately affect governments' borrowing costs.[26] Nor do changes in a country's sovereign credit rating immediately affect the government's borrowing costs. It is only when governments re-enter debt markets with new issues that we might expect the connection between primary and secondary markets to matter for governments.[27] For example, a bond issued at 5 percent interest today, but trading at 7 percent next year, costs the government 5 percent in interest rate payments throughout the life of the bond. The 7 percent in secondary markets surely correlates with terms available for new debt issued in the primary market, but this is directly relevant only when a government decides to issue new debt.[28] The use of sovereign credit ratings to measure bond market activity is even often further removed, as sovereign ratings changes often follow, rather than precede, secondary market shifts. Therefore, the most accurate picture of how investors impose costs on, or offer access to, governments comes from evaluating primary capital market outcomes.

[24] E.g., Longstaff et al. (2011); Pan and Singleton (2008); Wellhausen (2015).

[25] Archer, Biglaiser and DeRouen (2007); Beaulieu, Cox and Saiegh (2012); Saiegh (2005).

[26] Changes in secondary markets have limitations in capturing cross-sectional, relative changes in financing costs as well. For example, not every country has a liquid market in the benchmark instrument (e.g. a ten-year domestic currency bond), nor does every country have comparable credit default swap (CDS) pricing. This is especially true for developing country issuers. Additionally, indices such as J.P. Morgan's Emerging Market Bond Index (EMBI) include developing country issuers, but only those with debt outstanding above a certain threshold.

[27] Along these lines, international financial institutions have identified the strategic timing around public debt management as central to preventing financial crises (*Revised Guidelines for Public Debt Management*, 2014).

[28] Note that, in cases where government routinely "roll over" existing debt by financing old loans with new ones, the salience of changes in market perceptions of political risk are likely to be heightened; yet, this still implies that it is during new issuances that these conditions are of greatest direct importance to government finances.

Moreover, operations in primary capital markets offer a window on the strategic interactions between governments that issue debt and the financial actors that underwrite and purchase debt.

nated) [34] While the strategic process in which government debt managers, underwriting agents and potential bond investors interact has not received much attention from political economists, it has clear parallels to work that analyzes strategic trade-offs around monetary (central bank) and fiscal (budgetary) institutions, as well as to analyses of sovereign debt rescheduling and default.[35] For our purposes, we hypothesize that democratic institutions affect whether debt is actually issued as the outcome of these interactions. At the same time, our focus on the exact moment when buyers match sellers allows us to test our argument that the democratic advantage is contingent on contemporaneous global conditions.

We therefore compile a new database containing all available issues of sovereign bonds. This dataset comprises approximately 245,000 individual issues, by 131 countries, of central government bonds on international markets during the period covering 1 January 1990 through 31 December 2016.[36] We exclude the United States from the dataset as its sovereign debt plays an important role in making markets for other sovereign issuers and, as such, US Treasury bond rates are a key proxy for global market conditions.

Using these issue level data, we generate two main measures of debt issuance outcomes. The first is whether a given government issues new debt in a given month.[37] While we describe below the compilation and structure of our data, it is worth noting that the median government issues about 7 new bonds per year; some of these issues occur within the same month.[38] The average government issues new sovereign bonds in 5 months of the year (with a standard deviation of 5). Figure 1 reports the distribution of the number of months a country issues sovereign bonds within a particular year for our full sample.

[34] Future work would do well to explore the sources, as well as the effects, of variation in debt managers' mandates and degree of professionalization.

[35] See, for example, Bodea and Hicks (2015); Hallerberg, Strauch and von Hagen (N.d.); Maxfield (1997).

[36] Data were gathered from Bloomberg terminals. See the Appendix for the list of issuing states included in our database. We do not collect data on sovereign states with a population less than 100,000, or for the United States.

[37] Given our theoretical interest in governments facing potentially new constraints from financial markets in response to political risks, in our discussion and analysis below we largely restrict ourselves to government issuance of "untapped" bonds; this contrasts with some cases where governments issue "tapped" bonds that are issued under the same terms as prior issuance.

[38] The amount of bonds issued is subject to outliers at the upper end: the mean number of bonds issued per year in our data is 37.

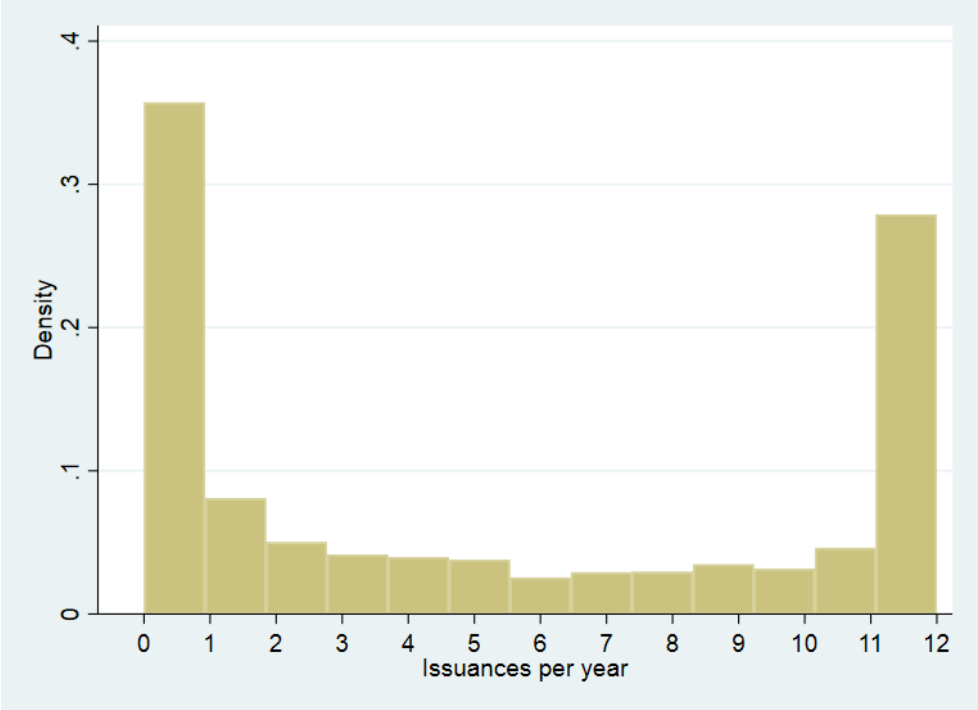

Figure 1: *Distribution of number of months with issuance per year.* This reports the distribution of the number of months a country issued at least one new (untapped) sovereign bond in a given year (1990-2016).

Focusing on the occurrence of issue(s) in a given month (a binary outcome), rather than the details of each issue, allows us to include the broadest possible sample of sovereign bonds and issuers in our dataset. However, if some government debt managers spread a given amount of debt over several issues, while others elect to offer fewer, large issues, our binary issuance measure would be flawed. Figure 2 offers evidence that undermines this concern: governments that issue more frequently in a given year also issue a greater amount in that year. In other words, the choice to issue debt is closely linked to the amount of debt brought to market. This makes sense, as underwriting institutions charge relatively low fees so transaction costs around multiple issuances should not be prohibitive. Further, debt managers' standard operating procedures call for them to smooth the profile of maturing debt over time, which suggests issuing more debt in more bonds. Nonetheless, we confirm below that our results are robust to a dependent variable measuring amount issued rather than issuance itself. Of course, issues also vary in price and other terms, particularly the currency of issue and the maturity. While we see exploring the politics of these features as important future research, we focus here on establishing the parameters of the

democratic advantage specifically for the capacity to issue. This implies that the buyer and seller were able to come to some satisfactory agreement on terms to facilitate the issue.

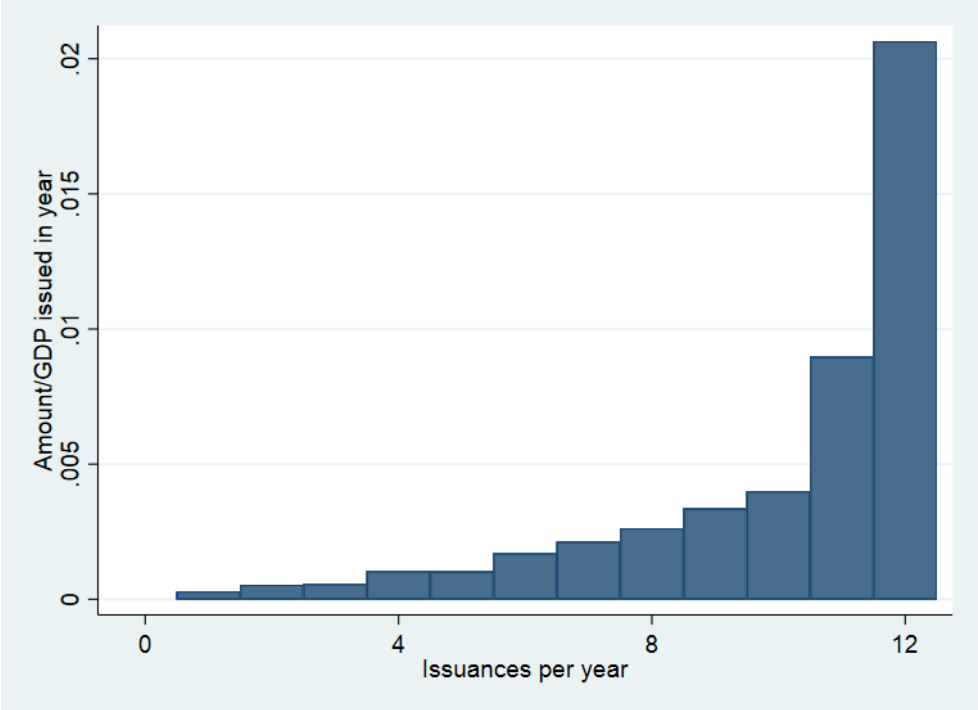

Figure 2: *Average amount issued in a year, by number of months issued.* This reports the distribution of the median amount issued by a country in a given year (in constant US$) against the number of months in that year in which the country issued (untapped) sovereign bonds (1990-2016).

Hypotheses

Our hypotheses focus on substantiating the mechanisms behind the democratic advantage and testing for its operation in primary capital markets; contrasting the institutional mechanism of the democratic advantage with market dynamics driven by political events (elections, government changes, government ideology); and establishing the conditional (on the global capital market environment) nature of its operation.

First, we set our baseline expectations of the channels through which the democratic advantage operates. Because we see the several channels identified in the literature as plausible, and because these channels are often interrelated in theory as well as in practice, we expect to recover evidence that each of these channels hold for explaining debt issuance in primary markets. Constraints on executive behavior, high levels of electoral accountability, respect for rule of law, and transparency of policy outcomes and processes serve to increase investors' confidence that govern-

ments will prioritize their commitments to repay sovereign debt and, thus, to improve governments' ability to issue new debt.[39]

Hypothesis 1. *More democratic states are more likely to issue debt and in greater amounts. Democracy a ects issuance (1) when treated as an overall measure of regime type, as well as when separated into its component parts, including (2) executive constraints, (3) electoral accountability, (4) respect for rule of law, and (5) transparency.*

While we expect to recover the democratic advantage through institutional measures, we do not expect that political events, specifically elections (as well as the shifts in governments that elections sometimes produce), have an effect on primary capital market activity. We make this argument knowing that the anticipation of elections often motivates governments to engage in pre-electoral fiscal and monetary expansion.[40] At the extreme, such electorally-motivated political business cycles could diminish the government's future capacity for repayment. Investors may expect such extremes to be more likely when elections are close, when they bring new parties to power, or if they result in ideological switches. High profile cases of electoral uncertainty—such as pre-election movements in Brazilian markets in late 2002, when former trade unionist Luiz Incio Lula da Silva was first elected to office—have attracted significant attention. More systematically, a series of analyses find that elections, coalition formation, and business cycles can affect sovereign spreads in secondary markets as well as sovereign credit ratings.[41]

In contrast, we expect that political outcomes have few systematic effects on the capacity of governments to issue debt. The presence of a set of stable democratic processes serves to blunt investors' concerns regarding the outcomes of elections. Governments may engage in pre-electoral economic expansions, but political leaders facing greater constraints and more accountability are less likely to do so to extremes; indeed, Kaplan and Thomsson (2016) argue that it is precisely when governments are reliant on bond markets for financing (and therefore face a credible threat

[39] Certainly, democracy is not a perfect predictor of creditworthiness: scholars have identified situations in which default can provide electoral benefits to democratically-elected governments (Ballard-Rosa, N.d.; Saiegh, 2005; Tomz, 2004; Tomz and Wright, 2013). And within democracies, differences in monetary and fiscal institutions and practices may generate variations in perceptions of investment risk. Still, on balance, existing scholarship leads us to expect that, all else equal, democracies should be better able than their non-democratic counterparts to access primary capital markets.

[40] Nordhaus (1975); Hibbs (1977); Block and Vaaler (2005).

[41] Bechtel (2009); Bernhard and Leblang (2006); Block and Vaaler (2005); Campello (2015); Hardie (2006); Jensen and Schmith (2005); Leblang and Satyanath (2006); McMenamin, Breen and Muoz-Portillo (2016); Spanakos and Renno (2009).

of investor exit in the case of fiscal profligacy) that we should expect these electoral effects to be weakest. Elections may be closely contested, but an orderly transition of power is expected in democracies. While changes in governments may bring about shifts in ideology and changes in various domestic policies, investors expect that most democratically-elected governments will pursue or continue policies that include monetary restraint, trade liberalization and respect for property rights.[42] The creation of professionalized debt management offices in many countries, a process which began in the developed world in the 1980s and has since spread to emerging and frontier market countries, regularizes the interactions between investors and governments throughout the electoral cycle.

Furthermore, even in countries with endogenous election timing, strong democratic institutions provide investors with stable expectations. They may not know the precise timing of an election, or be able to estimate its outcome precisely, but they nonetheless expect that most elections will not lead to dramatic shifts in default risk otherwise not captured by institutional factors. And transparency regarding economic policies and outcomes allows investors to account for macroeconomic conditions, regardless of the political cycle, when evaluating risk.[43]

In short, investors can "price in" anticipated effects around elections, especially in the presence of democratic institutions and their several constituent characteristics that we identify in Hypothesis 1. The process of primary capital market issuance gives investors many ways of accounting for concerns related to the electoral cycle, while still providing credit to sovereigns. While we focus in this paper on the timing and amount of debt issuance, the debt issuance process also includes negotiation regarding the bond's interest rate, maturity structure and currency denomination. An investor who worries more about the longer-term prospects for a newly-elected left government might, for instance, prefer government bonds with a five-year rather than a ten-year maturity.[44] Hence, primary market investors can be broadly reassured by democratic institutional structures, as well as by their capacity to adjust terms. In secondary markets, however, adjustments to outstanding issues can occur only via price. Hence, we may well observe a non-effect

[42] Bodea and Hicks (2015); Pandya (2014). Significant partisan differences do remain with respect to, for instance, compensation from those hurt by trade openness, or income redistribution (Milner and Judkins, 2004). But these do not detract from investors' assumption that most governments—especially democratic ones—are committed to generally liberal, market-based economic policies.

[43] Hollyer, Rosendorff and Vreeland (2011).

[44] Future work will explore the tradeoffs that debt managers make across the various elements of these terms, including the interest rate, maturity, and currency.

of elections on issuance at the same time that existing studies of secondary markets reveal a link between elections and bond spreads.[45]

The null effect of elections and election-related outcomes on issuance offers particular benefits to developing countries. Such countries often have greater financing needs as well as greater exposure to externally induced economic volatility. Thus, it is normatively important that we expect that stronger democratic institutions will facilitate developing country governments' ability to issue new debt, even if elections are tumultuous events. Our new dataset, with its broad country coverage, allows us to test this expectation broadly, rather than just for the subset of developing countries for which debt is actively traded on liquid secondary markets.

Hypothesis 2. *Elections and election-related changes in government are not signi cantly associated with the instance of debt issues or the amount of debt governments issue.*

Our final argument is perhaps the most important. We expect that the effects of domestic political institutions are conditional: they exist only when investors are more discriminating with respect to investment opportunities. When global capital is relatively scarce, the presence of democratic institutions indeed offers an advantage. But when global markets are flush, return-seeking investors look past the political risks associated with lending to less democratic governments.[46] This argument represents a departure from typical open economy politics theories that link domestic political institutions with sovereign debt market outcomes. We identify the top-down global effect of international markets on outcomes of interest and the conditions under which these determinants effectively negate the role of domestic institutions.

One reason to expect limits on the democratic advantage is the reality that the late 2010s offers numerous examples of governments with weak democratic political institutions gaining (relatively inexpensive) access to sovereign finance. In 2014, partly due to loose monetary policy in the United States and Europe, global interest rates were low, and investors were eager to invest in higher-return assets. Cote d'Ivoire, Ethiopia, Ghana, Kenya, Senegal, Vietnam, and Zambia, among others, issued sovereign bonds. Ghana again tapped international markets in September 2016, issuing a ten-year bond at 9.25 percent. Orders for the bond exceeded supply by more than five times – and these came despite Ghana's contentious December 2016 election.[47] In June 2017,

[45] Mosley (2003).

[46] To paraphrase Petty (1979), even the losers get lucky sometimes.

[47] Julie Wernau and Christopher Whittall. "Global Finance: Ghana's Bonds are Suddenly Hot." Wall Street

Argentina—a country that has defaulted five times in the last century, remains classified by the MSCI equity index as "frontier," and had only returned to international markets in 2016, after a fifteen year absence—issued a 100-year maturity bond, with an effective yield of 8 percent.[48] As in the case of Ghana, investors' demand for the issue (9.75 billion USD in orders) far exceeded the supply (2.75 billion USD). Similarly, July 2017 saw Greece's first bond sale in five years; the five-year maturity bond it issued, at a yield of 4.625 percent, was also oversubscribed. The *Financial Times* had a pithy explanation for this: "investors do not seem to care [about political risk]."[49]

The late 2010s also offer numerous examples of non-democracies easily accessing international bond markets. Citing dollar-denominated issues by Bahrain, Belarus, Cameroon, Ethiopia, Iraq, and Tajikistan, *Bloomberg News* posited that investors now love authoritarian regimes – in part because investors are hungry for yield wherever they can find it.[50] As one emerging markets fund manager surmised, "The quest for yield squeezes money into some strange places. As the market goes up, people will buy almost anything."[51] Indeed, investors have even been willing to hold Venezuela's public debt, despite concerns about high default risk, because doing has offered very high returns in an era of historically low yields on "safe" assets like US Treasuries.

Moreover, similar patterns emerged in the run-up to the global financial crisis. Many sub-Saharan African governments first sought sovereign credit ratings, and first issued international debt, in 2006 and 2007. Brazil, a democracy which experienced a currency crisis in 1998-1999 and election-related volatility and capital flight in 2002, took advantage of low global interest rates; it replaced much of its outstanding higher-interest, foreign currency denominated-debt with new, cheaper issues of real-denominated bonds.[52]

Repeated examples of market access for sovereign borrowers with weak or nonexistent democratic political institutions, not to mention troubled credit histories and shaky economic fundamentals, challenges the logic of the democratic advantage. What unifies these examples is

Journal, September 9, 2016, p. c3.

[48] https://www.ft.com/content/0c73b8f4-5670-11e7-9fed-c19e2700005f.

[49] https://www.ft.com/content/0c73b8f4-5670-11e7-9fed-c19e2700005f

[50] The article also raised the classic hypothesis that investors appreciate the policy certainty that comes with (stable) autocratic regimes. https://www.bloomberg.com/news/articles/2017-04-20/autocracies-beating-democracies-in-emerging-market-bond-world.

[51] https://www.bloomberg.com/news/articles/2017-09-14/no-democracy-no-problem-is-the-mantra-as-wall-street-hunts-yield

[52] Bankers' supply-side incentives to lend help explain the build-up of debt during the 1970s and early 1980s (the era of bank-based sovereign financing) in many low- and middle-income countries. Devlin (1989)

a global capital market environment characterized by high liquidity. High liquidity environments generate shifts in investors' risk preferences. Indeed, research in financial economics finds that investors' risk preferences are not fixed over time, but rather depend on the yield environment.[53] For instance, exceptionally low returns on US Treasury bonds in the early to mid-2000s pushed investors to search for other sources of yield, even via opaque instruments like collateralized debt obligations, credit default swaps and mortgage-backed securities.[54] Low global interest rates also motivate investors to embrace the relatively higher yields offered by riskier assets. We contend that these riskier assets include sovereign bonds issued by governments with non-democratic political institutions.

When, on the other hand, global capital market liquidity is low and rates on safe assets in mature markets are high, investors' attention to sovereign political risk increases. In such periods, we expect investors to discriminate among borrowers on the basis of their political institutions. Countries lacking democratic characteristics like executive constraints, electoral accountability, rule of law, and policy transparency are likely to have greater difficulty accessing sovereign debt markets. When investors' "flight to safety" is at its peak, sovereigns can experience credit rationing, finding it impossible to issue new debt.

In short, our argument picks up on the role of "push" (features external to borrowers) and "pull" (country-specific) factors in sovereign debt markets. Global market conditions, proxied by rates in mature markets such as the U.S., have been identified as a significant determinant of sovereign borrowing costs, alongside country-specific characteristics such as political institutions.[55] We contend that this approach does not take the global financial environment seriously enough: it is not only that push factors directly affect the costs and terms of sovereign borrowing. Rather, the global capital market environment also acts as central conditioning feature. By affecting investors' sensitivity to default risk, global liquidity determines the extent to which countries' political institutions—such as the degree of democracy—matter for governments' capacity to borrow. Hence, push factors interact with, and can limit the importance of, pull factors. Our focus on global capital market push factors is consistent with recent methodological critiques of open econ-

[53] This work builds on the early insights of Minsky (1977) and Kindleberger (1978).

[54] Rajan (2011). Indeed, when it comes to the risk of financial crisis, observers have long noted the role of the external environment ("push factors") in exposing countries to risk. See, e.g., Devlin (1989); Eichengreen and Mody (1998); Kindleberger (1978); Longstaff et al. (2011); Reinhart, Reinhart and Trebesch (2016); Bauerle et al (2017).

[55] Mosley (2003); Campello (2014); Brooks, Cunha and Mosley (2015); Longstaff et al. (2011).

omy politics approaches.[56] We seek to amplify a recent trend in international political economy which theorizes about, rather than merely controls for, the effects of global market dynamics.[57]

Hypothesis 3. *More democratic states are more likely to issue sovereign debt in greater amounts when global liquidity is low (as interest rates on US Treasury bonds increase).*

Data and Empirical Strategy

Investment banks typically underwrite sovereign (as well as corporate) debt issues, and they advise an issuing government's debt management office on the market conditions it will face. Today, governments frequently move between underwriters or use a syndicate of underwriters for each issue.[58] While contemporary underwriters earn a relatively small fee (between 10 and 25 basis points) for their sovereign debt work, sovereign underwriting is attractive because it often brings additional business from the country's corporate sector. Many governments also employ (often international) legal counsel, intended to mediate their relationship with investment banks and to ensure that the government's interests are well served. Law firms with practices in primary capital markets typically view this work as a gateway to other work with an issuing government, or with sub-national and quasi-sovereign entities in the issuing country. Additionally, in the wake of a successful issue by one government, underwriters often contact other governments' debt managers to encourage them to consider entering the market, reminding us that it is not only governments that have an interest in creation of new debt issues.[59]

Prior to a debt issue, the underwriter and the issuing government are in regular contact regarding the possibility of bringing a bond to market. Together, underwriters and government debt managers often make presentations to the investment community. These "road shows" allow debt managers to present information about the economic and political situation in their state and to gauge market demand for and concerns related to their state's sovereign assets.[60] Road shows

[56] See, for example, Oatley (2011) and Chaudoin, Milner and Pang (2015). Our approach does not, however, consider the agency of political actors in core countries, whose decisions may directly affect conditions in global capital markets; see BauerleDanzmanetal2017. Rather, we treat such choices as exogenous determinants of the borrowing environment confronted by sovereign issuers.

[57] See, for example, Brooks, Cunha and Mosley (2015); Chaudoin, Milner and Pang (2015); Mosley (2003); Oatley (2011).

[58] This contrasts with the pre-World War I era, in which issuing governments often had long-standing relationships with a specific underwriter. Flandreau et al. (2009).

[59] Devlin (1989).

[60] Debt managers and underwriters use comparisons between countries to frame their road show sales pitches to

also facilitate the setting of the pricing and terms of new debt.[61] Once a government debt manager and underwriter agree on an issue and its terms, the underwriter gathers potential buyers.[62] On the day of issue, the underwriter buys the entire primary issue (typically at a small discount), and the underwriter then places the issue with investors, typically institutional investors, central banks, and, increasingly, sovereign wealth funds.[63] A successful issue may be placed in an hour or less; for new or riskier sovereign borrowers, the marketing period may last a few weeks.

In addition to our theoretical justification for considering primary debt issues—as the most direct measure of financial market influence on a government's operating costs—this focus is also appealing from an empirical standpoint. Secondary market measures of sovereign risk premia typically require comparable instruments, such as a benchmark (domestic currency-denominated, ten-year maturity) government bond. But many countries, especially outside the OECD, do not issue this standard instrument. Some analyses endeavor to overcome this limitation by instead using government bond indices, especially various forms of J.P. Morgan's EMBI Index, or by considering the pricing of credit default swaps (CDS). These measures also suffer, however, from significant selection bias: only developing countries with a sufficient stock of outstanding bonds are eligible for inclusion in the EMBI. Similarly, CDS instruments typically exist only when there is sufficient market demand for them. Therefore, while primary bond issuance data do not cover all governments—not every sovereign state worldwide has the capacity or creditworthiness to issue international bonds—our data represent a far greater amount of sovereign borrowers than existing studies.

Sovereign debt issues have some attributes that deserve attention. In some cases, a security is simply issued once.[64] In other cases, a government chooses to reissue or "tap" securities, which means that a government raises money by issuing additional debt through an existing security.[65]

potential investors, comparing (for instance) Slovak economic prospects with Czech and Belgian data.

[61] Because information relevant to sovereign risk is available from credit ratings agencies and other sources, underwriter efforts today provide less certification to potential bond purchasers than in the past. Flandreau et al. (2009).

[62] For offerings registered in the United States, underwriters are not permitted to take orders, but they can pre-arrange placement of the issue through "expressions of interest."

[63] Chwieroth (2014); Datz (2008).

[64] For example, on 20 May 2005, Austria issued a sovereign bond valued at US$62.8 million. There is a corresponding entry in the database reflecting this bond.

[65] The reissued bond retains the same name, ISIN number, maturity date, and coupon rate as the original issuance. For example, Austria issued a sovereign bond on 14 January 2000. The government reissued the same bond on 7 March 2000, and then several more times thereafter.

As the responsiveness of tapped bonds to political institutions and events is less clear-cut than in the case of fresh issues, in this article we focus on the subset of bonds that are newly issued. In addition, bonds with maturities of less than six months are often used for "money management" functions and thus are issued quite regularly, so we restrict our sample to bonds with maturities of greater than six months. However, our primary findings are not driven by either of these theoretically-informed parsings of the data.[66]

Additionally, governments occasionally issue several bonds at the same time or within days of each other, at different prices or with different terms. This is because government debt managers may direct their underwriters to place a set of bonds across a cross-section of investors with different risk appetites. In this article, we consider the determinants of issuance and not of terms; therefore, we treat such groupings of bonds as a single entry to the market. To do so, we collapse the database such that the unit of analysis is the presence or absence of any sovereign bond issue(s) on international markets in a country-month. As noted above, our binary country-month issuance variable correlates positively and strongly with the amount of debt issued: more frequent issuers also place greater volumes of debt. We show below that results are similar when the dependent variable is amount rather than issuance.

Our first political covariate of interest, *Democracy*, is the one-year lag of a country's "Polyarchy" score from the Varieties of Democracy project (VDem); according to the VDem description, this is a measure of the "electoral principle of democracy [that] seeks to embody the core value of making rulers responsive to citizens."[67] This continuous measure of democracy allows us to detect marginal differences across countries arising from differences in political liberalization, in addition to providing more room for variation within countries over time.[68] Scores on the "Polyarchy" measure range from essentially zero to one, with zero representing the most autocratic state and one capturing the most democratic state; the mean value for our full sample is approximately 0.6, with a standard deviation of 0.25.[69]

With respect to elections, we focus first on meaningful elections in democratic systems;

[66] Results available from the authors.

[67] The full VDem dataset, and all related documentation, can be found at https://www.v-dem.net/en/

[68] Nonetheless, given the debate over whether democracy is a difference of kind rather than degree, we report results with a dichotomous measure in the Appendix. Przeworski et al. (2000).

[69] Technically, in our sample Polyarchy ranges over [0.0159, 0.947]. Note as well that there exists substantial within-unit heterogeneity in this score over time, with an average (within) variance of about 0.25.

we analyze the effects of elections on issuance only for the subset of country-months in which the regime is democratic.[70] To capture the effects of elections on bond issuance, a dichotomous variable *Election* takes a value of 1 if an election for the head of government or a national legislative election will occur in the next calendar month. There are 3,842 country-months with an election in our (democratic) subsample, representing approximately 19% of observations for which electoral information are available.[71]

To capture global capital liquidity, we use *US Treasury*, the interest rate on US 10-year constant maturity Treasury bonds. During our sample period, interest rates on US Treasuries ranged from 1.5% to nearly 9%; the median interest rate over our period was approximately 4.7%, with a standard deviation of approximately 1.8%. There is a definite downward trend in rates across the period. Thus, in order to alleviate concerns that any effects we detect are simply the result of global secular trends over time, our estimations include up to a cubic polynomial in time trends.[72] Even after detrending US Treasury rates, there still remains substantial variation over time (Figure 3). In essence, our analysis leverages within-credit-cycle variation to identify the effects of the changing yield environment.[73]

[70] For the purposes of sample differentiation, we employ the binary classification of democracies following Magaloni and Min (2013).

[71] In the Appendix, we break this variable down into executive or legislative elections, in parliamentary or non-parliamentary systems. We also extend the time frame to consider any elections in the next three months as well as elections in autocratic regimes. Data from the Database of Political Institutions (DPI).

[72] Results are robust to alternative specifications of time trends, ranging from linear up to a quartic polynomial of time.

[73] To address concerns over the changing composition of democracies in the world over our sample period, we also report consistent decade-by-decade analyses in the Appendix.

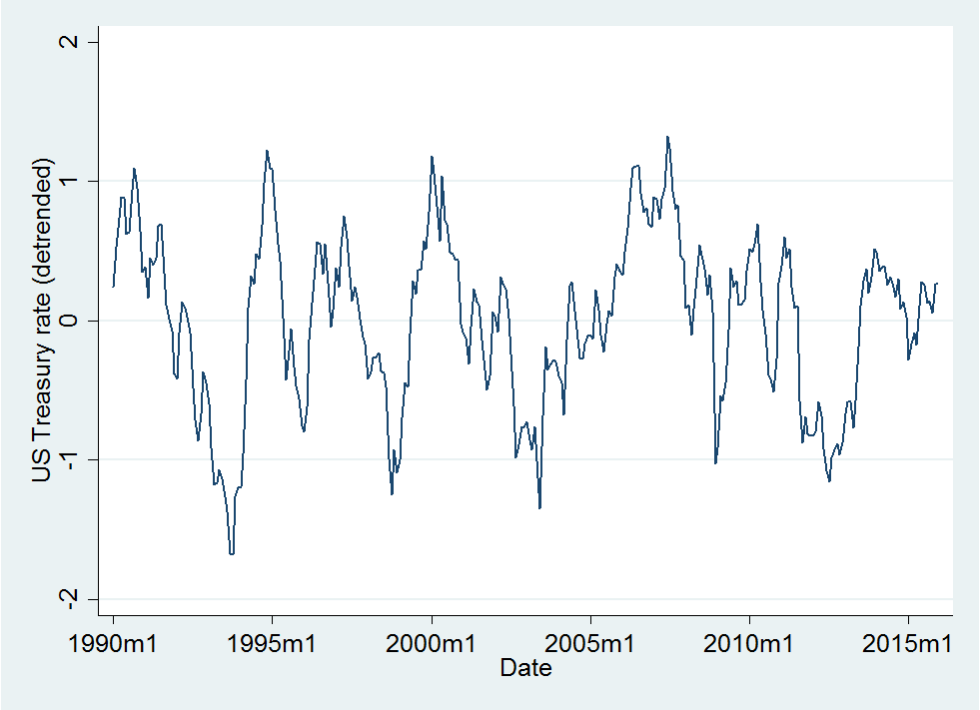

Figure 3: *US Treasury Rates (detrended).* This reports the monthly interest rate on 10-year constant maturity US Treasury bonds (1990-2016), after detrending the data to account for linear and quadratic temporal dynamics.

We include a set of additional covariates. Work in political economy suggests that international investors may suffer from informational overload and may therefore be guided by cognitive heuristics.[74] One prominent heuristic is the use of a country's peer group as the basis for evaluating the likely riskiness of a particular sovereign.[75] For example, borrowing costs in peer countries are a significant correlate of secondary market spreads. We therefore expect that, as more peers issue bonds, members of the peer group may be assessed more positively and therefore be more likely to issue bonds themselves. Peer groups can be defined in different ways. Here, to capture peer group effects on debt issuance, we define a sovereign's peer group using a measure of portfolio market development from MSCI. MSCI categorizes countries as Developed, Emerging, Frontier, or unrated, and countries' categorizations can change over time.[76] The *MSCI peer issuance* variable is the one-month lag of the proportion of countries in a sovereign's category (excluding the country

[74]Brooks, Cunha and Mosley (2015); Gray (2013); Gray and Hicks (2014); Mosley (2003).

[75]Gray (2013). The existence of peer group effects suggests that sovereign debt markets are not necessarily efficient and that investors' ideas regarding peer group-appropriate policies and institutions also affect governments' borrowing costs. Amstad and Remolona (2016); Chwieroth (2009); McNamara (2002); MacKenzie (2006); Sinclair (2005).

[76]The Frontier category began in 2008. We avoid losing observations by assigning all countries not otherwise categorized to an "unrated" category. Results are robust to dropping observations of unrated countries.

in question) that have issued debt in a given month. We also include dummy variables indicating a country's membership in a given MSCI category.

A country's level of economic development and overall economic health influence the perceived attractiveness of its debt. We introduce a baseline series of macroeconomic controls, including *GDP per capita*; *GDP growth (annual %)*; and the *Chinn-Ito index* which measures a country's openness to international capital.[77] Trade imbalances are another determinant of sovereign borrowing, so we include the *Customs balance (% GDP)* as the (nominal) customs balance scaled by (nominal) GDP.[78] Additionally, current and potential investors may grow increasingly wary of countries with large outstanding debt burdens, as this is likely to constrain future finances, so we include *Public debt (% GDP)*.[79]

Beyond this baseline set of covariates, we have also accounted for a number of additional potential determinants of sovereign debt issuance. A country's exchange rate regime may affect issuance via28(ote-l10.isnan)28(o)-3vwo iti8(e)-371(h6clude)-342(a)-276(a)-myCusPe(e)-gge(e)-371(conXRJ F8 1(

view democratic countries as less risky if such countries are also more likely to have independent central banks; to ensure that any effect of democracy on bond issuance is not simply capturing the perceived quality of economic institutions, we also include a direct measure of central bank independence (*CBI*).[85] While we believe that these additional factors are important to account for, it is worth noting that inclusion of our full set of controls results in fairly substantial loss of sample size.[86]

We endeavor to thoroughly account for temporal dynamics. Under the presumption that a government that has already issued in a given calendar year may find it easier to issue again (although their need to issue may decline), we include a dummy measure of whether the country *Issued this year*. Sovereign debt tends to be issued earlier in the calendar year, all else equal: corporations' fiscal years typically are off-cycle relative to the calendar, such that governments issuing early face less competition for investors' attention. Sovereign issues early in the year also set a financing cost benchmark for later corporate debt offerings by entities within a given country.[87] As such, we also always include the *Quarter* of the year.[88] Finally, as noted above, in order to account for the possibility of evolving dynamics in sovereign debt markets as a function of the passage of time, we include linear, quadratic, and cubic time trends.[89] These covariates are especially important since raw US Treasury rates show a clear downward trend over the period.

As is standard with binary outcomes, we use a probit regression with country-fixed effects and standard errors clustered by country to account for within-unit serial correlation.[90] Unless otherwise specified, all covariates are lagged by twelve months to protect against concerns of simultaneity bias.

[85] Garriga (2016).

[86] In unreported additional results, we find very similar findings when we employ multiple imputation to deal with concerns of data missingness that is not orthogonal to the political or economic conditions we argue are important; see Lall (2016) for an extended discussion of the potential perils of employing listwise deletion approaches.

[87] Author interviews, May 2016. These are further indicators that debt managers and underwriters in sovereign debt markets are strategic and should be treated as such.

[88] Findings are robust to using the *Month* of the year.

[89] We find virtually identical results using up to a quartic polynomial of time.

[90] Below and in the Appendix, we show that our results are robust to different estimation choices.

Results

We begin by considering a straightforward test of the "democratic advantage:" in our full sample of countries, is it the case that countries that rank as more democratic do enjoy an increased capacity to issue new bonds on international markets? As can be seen in column 1 of Table 1, in our full sample of countries from 1990-2016, we do recover a positive and statistically significant correlation between electoral democracy and sovereign bond issuance. However, it has commonly been noted that the most democratic countries in the world also tend to enjoy a number of additional advantages that may reduce their perceived riskiness to lenders; in order to ensure that this relationship is not merely proxying for "developed western country," we repeat our analysis in column 2 after dropping all OECD countries. Somewhat surprisingly, perhaps, in this specification we find that the association between electoral democracy and bond issuance is—while still positive—no longer statistically significant at conventional levels. Does this mean that democracy does not matter, save perhaps in the developed world?

We argue that this focus on the relationship between sources of political risk and access to sovereign bonds misses a crucial component of the relationship: the conditioning role of international financial conditions on the risk tolerance of investors. As argued above, bond traders may be more willing to overlook sources of political risk (or, conversely, not give benefit to sources of political stability) during periods of low yields on safe assets. This suggests the need to consider the effect of democracy on bond issuance conditional on prevailing international interest rates, as proxied here by rates on 10-year US Treasury bonds. Once this interaction is included in column 3, we recover a strongly positive and statistically significant effect, suggesting that as rates rise on Treasury bonds, the benefits of being a democracy increase as well. This positive and significant interaction effect between democracy and treasury rates remains in column 4, when we introduce an additional battery of controls to account for alternative potential explanations of political risk.

Table 1: Sovereign Bond Issuance and Electoral Democracy (1990-2016)

VARIABLES	(1) Full sample	(2) No OECD	(3) No OECD	(4) No OECD
Elect. democ. (VDem)	1.403**	1.063	-1.569*	-1.290
	(0.638)	(0.667)	(0.948)	(1.150)
US treasury rate	-0.044*	-0.017	-0.306***	-0.309***
	(0.025)	(0.027)	(0.085)	(0.098)
Democ. X UST			0.529***	0.527***
			(0.144)	(0.169)
GDP per capita	0.547**	0.445*	0.403*	0.609**
	(0.219)	(0.245)	(0.237)	(0.239)
GDP growth (annual %)	-0.001	-0.001	-0.002	-0.001
	(0.007)	(0.007)	(0.008)	(0.008)
Chinn-Ito index	0.007	0.006	0.057	-0.052
	(0.082)	(0.093)	(0.087)	(0.093)
Current account balance (% of GDP)	0.010	0.009	0.007	0.020**
	(0.006)	(0.006)	(0.007)	(0.009)
Public debt (% GDP)	-0.007*	-0.007	-0.005	-0.003
	(0.004)	(0.004)	(0.004)	(0.003)
MSCI peer issuance	1.340***	0.430	0.465	0.065
	(0.463)	(0.447)	(0.451)	(0.409)
CBI				-0.246
				(0.488)
Regime duration				0.023***
				(0.005)
Pegged XR				-0.024
				(0.119)
Oil rents (% of GDP)				-0.041**
				(0.017)
IMF prog. in place				0.152
				(0.121)
Inflation crisis				-0.044
				(0.209)
Default crisis				-0.548**
				(0.265)
Observations	25,433	20,822	20,822	16,684
Log likelihood	-12233	-9827	-9706	-7924
Pseudo-R2	0.292	0.300	0.308	0.303
Countries	111	91	91	78

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

This table reports results of probit regression of sovereign bonds issuance on democracy, global interest rates, and their interaction (as well as various controls). Country fixed effects, MSCI ratings dummies and cubic time trends are also included, but are suppressed for presentation.

Interpretation of the marginal effect of increasing democracy, conditional on prevailing US Treasury rates, can be seen in Figure 4. As predicted by our theory, when interest rates are low—and therefore investors have strong incentives to tolerate greater risk as part of the "hunt for

yield"—we find no systematic benefit for democratic states in their ability to issue more debt. On the other hand, once interest rates on US Treasury bonds are high enough,[91] we recover strong evidence of the "democratic advantage" in accessing international bond markets. Recalling that the electoral democracy measure is scaled from zero to one, this provides a natural interpretation of the substantive magnitude of these effects: moving from the most autocratic to the most democratic state when, say, interest rates are around 7% suggests an increased probability of issuance of nearly 50 percentage points. Clearly, such a dramatic change in regime type would be a rare event; still, even for a more standard interpretation of a two-standard deviation increase in levels of democracy would suggest an increased probability of debt issuance of approximately 20% points.

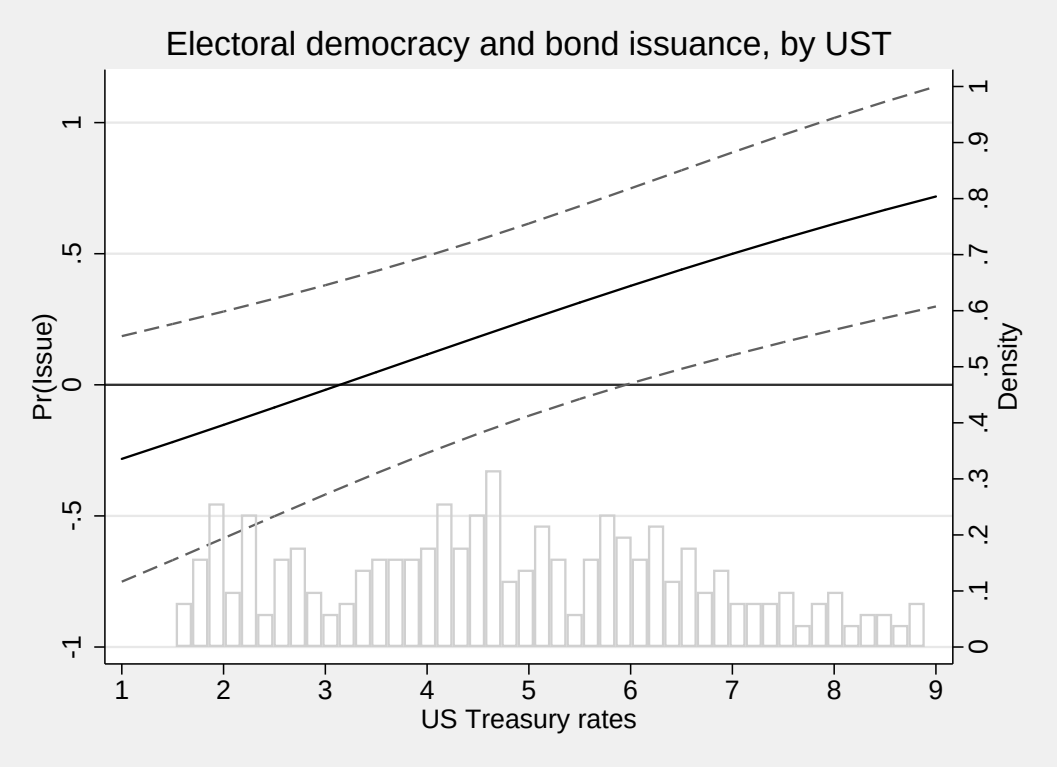

Figure 4: *Marginal e ect of democracy, by US Treasury rates.* The figure shows marginal effects for increases in electoral democracy measure from VDem on probability of issuance, conditional on interest rate on 10-year US Treasury bond. The grey boxes show the density of US Treasury rates across the distribution. This figure is based on Table 1, Model 3.

What about elections? Table 2 shows no effect of elections next year on bond issuance, which is also true for various lags and leads, and other definitions.[92] The only important factor is

[91] The effect of democracy becomes statistically significant at approximately 6%.

[92] We report results on leader elections only. Results on legislative elections are similar.

whether elections are free and fair – again, an institutional variable.

Table 2: Sovereign Bond Issuance and Elections (1990-2014)

VARIABLES	(1) No OECD	(2) No OECD	(3) No OECD	(4) No OECD	(5) No OECD
US treasury rate	-0.012	-0.001	-0.001	-0.040	-0.303***
	(0.026)	(0.025)	(0.025)	(0.086)	(0.078)
Any election (next 3 mo.)	-0.068				
	(0.087)				
Upcoming elect. X UST	0.017				
	(0.018)				
Leader election (next 3 mo.)		0.048			
		(0.270)			
Upcoming leader elect. X UST		-0.018			
		(0.053)			
Leader election (past 3 mo.)			0.274		
			(0.264)		
Past leader elect. X UST			-0.050		
			(0.053)		
Elections on course				0.253	
				(0.513)	
Elect. on course X UST				0.039	
				(0.085)	
Elect. free & fair (past 3 mo.)					-2.070***
					(0.664)
Free & fair X UST					0.497***
					(0.112)
GDP per capita	0.449*	0.465*	0.465*	0.427*	0.391
	(0.249)	(0.239)	(0.239)	(0.245)	(0.241)
GDP growth (annual %)	-0.001	-0.001	-0.001	-0.000	-0.001
	(0.007)	(0.007)	(0.007)	(0.008)	(0.008)
Chinn-Ito index	0.001	0.007	0.007	0.005	0.054
	(0.092)	(0.086)	(0.086)	(0.092)	(0.084)
Current account balance (% of GDP)	0.009	0.008	0.008	0.007	0.007
	(0.006)	(0.006)	(0.006)	(0.007)	(0.006)
Public debt (% GDP)	-0.006	-0.006	-0.006	-0.006	-0.005
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
MSCI peer issuance	0.252	0.263	0.261	0.287	0.264
	(0.423)	(0.411)	(0.411)	(0.422)	(0.429)
Observations	21,514	23,122	23,122	21,514	21,514
Log likelihood	-10038	-10564	-10563	-10019	-9848
Pseudo-R2	0.303	0.310	0.310	0.305	0.317
Countries	91	97	97	91	91

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

This table reports results of probit regression of sovereign bonds issuance on different aspects of elections; see text for description of each. Country fixed effects, MSCI ratings dummies and cubic time trends are also included, but are suppressed for presentation.

Next, we ask how we can know that these results are about risk perceptions around demo-

cratic institutions. We look at two factors that are related to democratic institutions (rather than political events) and that we expect to associated with heightened risk: political corruption and the interruption of elections. Table 3 shows that, when interest rates are high, countries do face significant issuance penalties in the presence of these adverse institutional measures.

Table 3: Sovereign Bond Issuance and Political Risks (1990-2014)

	(1)	(2)
VARIABLES	No OECD	No OECD
US treasury rate	0.272***	0.000
	(0.091)	(0.026)
Political corruption	2.125**	
	(1.052)	
Corrupt X UST	-0.504***	
	(0.157)	
Exec. no longer elected		6.298***
		(1.084)
Exec. interrupt. X UST		-1.085***
		(0.234)
GDP per capita	0.477*	0.516**
	(0.245)	(0.248)
GDP growth (annual %)	-0.004	-0.003
	(0.007)	(0.007)
Chinn-Ito index	0.039	0.005
	(0.087)	(0.094)
Current account balance (% of GDP)	0.008	0.007
	(0.006)	(0.006)
Public debt (% GDP)	-0.004	-0.005
	(0.004)	(0.004)
MSCI peer issuance	0.031	0.111
	(0.390)	(0.402)
Observations	21,037	21,037
Log likelihood	-9606	-9718
Pseudo-R2	0.313	0.305
Countries	91	91

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

This table reports results of probit regression of sovereign bonds issuance on sources of political risk. Country fixed effects, MSCI ratings dummies and cubic time trends are also included, but are suppressed for presentation.

Next, on Hypothesis 1: what is it about democracy that matters? We expect that the various channels identified in the literature through which democratic institutions affect sovereign debt should all hold. Consistent with Hypothesis 1, We demonstrate similar conditional effects for freedom of association, freedom of expression, limits on government, and one measure of transparency

(HRV), although we note that FRT measure of financial transparency does not demonstrate similar patterns. We find generally null results for other aspects of democracy, also pulled from the V-Dem project.[93]

[93] Details available from authors.

Table 4: Sovereign Bond Issuance and Subindices of Democ. (1990-2014)

VARIABLES	(1) No OECD	(2) No OECD	(3) No OECD	(4) No OECD	(5) No OECD
US treasury rate	-0.206**	-0.169	-0.268**	-0.143*	-0.030
	(0.099)	(0.107)	(0.122)	(0.074)	(0.040)
Free assoc.	0.965				
	(1.025)				
Free assoc. X UST	0.291**				
	(0.129)				
Free express.		0.247			
		(0.921)			
Free express. X UST		0.239*			
		(0.144)			
Limits on govt.			-1.275		
			(1.434)		
Limits X UST			0.416**		
			(0.186)		
HRV				-0.482***	
				(0.184)	
HRV X UST				0.073**	
				(0.032)	
FRT					-0.467
					(0.319)
FRT X UST					-0.011
					(0.069)
GDP per capita	0.496**	0.508**	0.465*	1.014***	0.606**
	(0.227)	(0.236)	(0.248)	(0.285)	(0.294)
GDP growth (annual %)	-0.003	-0.003	-0.005	-0.005	-0.016*
	(0.007)	(0.007)	(0.007)	(0.009)	(0.009)
Chinn-Ito index	0.029	0.026	0.039	0.043	0.078
	(0.091)	(0.091)	(0.088)	(0.102)	(0.075)
Current account balance (% of GDP)	0.007	0.006	0.006	0.003	0.019***
	(0.007)	(0.007)	(0.007)	(0.009)	(0.006)
Public debt (% GDP)	-0.005	-0.005	-0.005	-0.001	0.000
	(0.004)	(0.004)	(0.004)	(0.003)	(0.005)
MSCI peer issuance	0.174	0.188	0.248	0.046	-0.758
	(0.411)	(0.415)	(0.431)	(0.423)	(0.617)
Observations	21,037	21,037	20,441	15,355	8,334
Log likelihood	-9588	-9642	-9526	-6930	-4450
Pseudo-R2	0.315	0.311	0.304	0.316	0.210
Countries	91	91	91	68	36

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

This table reports results of probit regression of sovereign bonds issuance on different aspects of democracy. Country fixed effects, MSCI ratings dummies and cubic time trends are also included, but are suppressed for presentation.

Amount

To this point, this article has identified political determinants of the likelihood of sovereign bond issuance. Issuance—the ability to access international markets—is a central part of activity in the primary capital markets, and variation in access affects the extent to which governments can pursue their agendas. That said, the analyses presented so far cannot directly speak to a related question: do considerations of political risk affect not only whether a country can access private bond markets, but also how much debt a country can raise from private markets? Recall that, as described in Figure 2 above, countries that issue more frequently also issue greater a greater amount of debt. We use these data to replicate our primary results. We compute the (logged) (constant US$) total issued by a country in a given month.[94]

In Table 5, we report results of tobit regressions on the amount issued by a sovereign in a given year.[95] We focus specifically on non-OECD countries because our expectations are particularly important, normatively, in that sample. Our expectation of the interactive effect of US Treasury rates and democracy hold; the conditional effect of electoral democracy on amount issued, as described in Figure 5, is remarkably similar to that on issuance.

[94] For reasons discussed above, and to retain comparability across outcomes, we again limit the data to untapped bonds with maturities greater than 6 months. In logging, we add one dollar to country-months without issues.

[95] Given the "truncation" of observations for which issuance is equal to zero, approaches that account for cut-points in distributions like tobit are more appropriate.

Table 5: Amount of Bond Issuance and Electoral Democracy (1990-2016)

VARIABLES	(1) Amt. (No OECD)	(2) Amt. (No OECD)
Elect. democ. (VDem)	-23.037**	-21.618**
	(9.478)	(9.820)
US treasury rate	-3.577***	-2.899***
	(0.853)	(0.803)
Democ. X UST	6.734***	5.672***
	(1.399)	(1.304)
GDP per capita		2.861
		(2.337)
GDP growth (annual %)		-0.001
		(0.072)
Chinn-Ito index		1.288*
		(0.751)
Current account balance (% of GDP)		0.116*
		(0.063)
Public debt (% GDP)		-0.082*
		(0.043)
MSCI peer issuance		5.896
		(4.723)
Observations	29,969	21,990
Log likelihood	-59977	-44345
Pseudo-R2	0.135	0.145
Countries	101	97

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

This table reports results of tobit regression of amount of bonds issued on democracy. Country fixed effects, MSCI ratings dummies and cubic time trends are also included, but are suppressed for presentation.

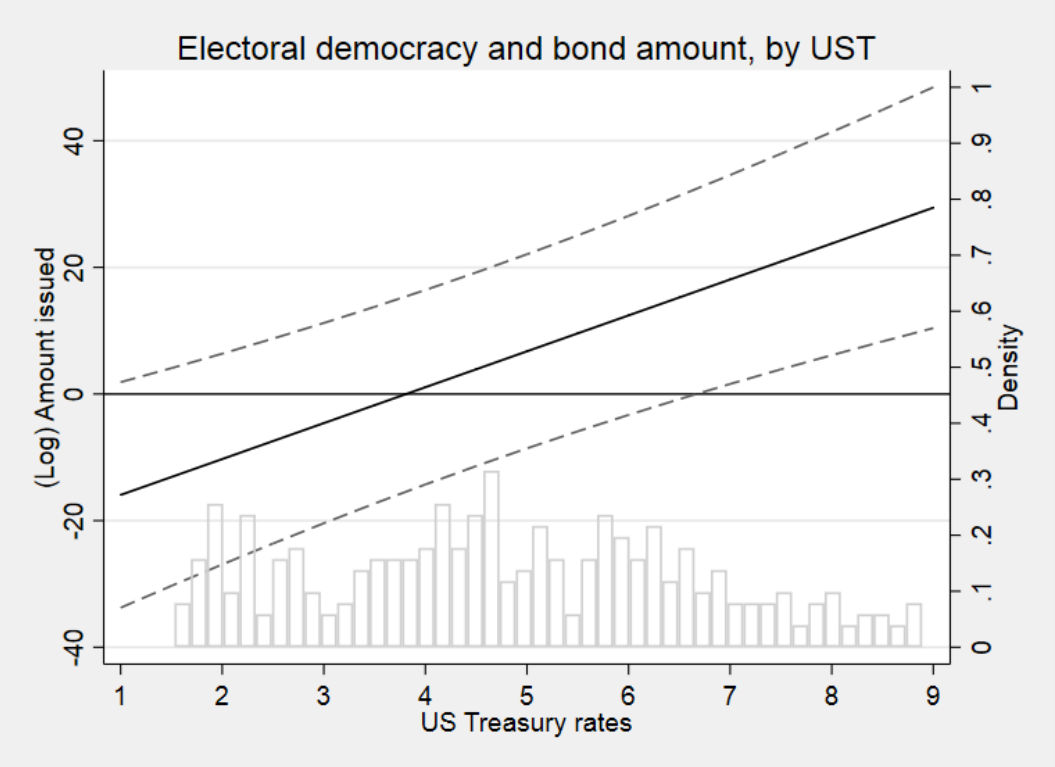

Figure 5: *Marginal e ect of democracy, by US Treasury rates.* Shows marginal effects for electoral democracy measure from VDem on amount of bond issuance, conditional on interest rate on 10 year treasury bond.

Note that additional results and robustness tests will be reported in the next iteration of the paper.

Conclusion

We explore the interaction between governments and investors in the issuance of sovereign bonds. At the theoretical level, we offer two important refinements to research on the domestic politics of sovereign debt. First, while we agree with the general logic of "democratic advantage" claims – that the presence of transparent policymaking, accountable leadership and constrained executives improves investors' assessments of governments' willingness to repay their debt – we posit that these claims are conditional. The democratic advantage exists only when global capital market conditions focus investors' attention on risk, rather than on return. When global capital market liquidity is low, investors act in a more discriminating fashion, and the presence of democratic political institutions offers one means of discrimination. When capital market liquidity is high,

however, investors seek out higher yields, and they are less sensitive to risk – including politically-generated risk. Hence, global capital market conditions, which are exogenous to all but the largest sovereign borrowers, mediate the effects of domestic institutions. In establishing empirical support for this claim, we answer the call to pay greater attention to structural factors in explaining the politics of global finance.

Second, we draw a distinction between the domestic political process (captured by various facets of political institutions) and the outcomes of those processes, which include elections and government ideology. We posit that, despite a few high-profile cases in which investors pay attention to close elections or partisan swings, there is little systematic relationship between political events and the capacity of governments to borrow. Investors in initial issues appear willing to overlook the vagaries of politics, provided that a set of democratic institutions is in place. Put differently, democratic institutions assure investors that they will have an accurate sense of economic outcomes (transparency); that governments will face electoral penalties for defaults or poor economic decisions (accountability); and that dramatic policy switches are unlikely to occur, even with partisan swings (executive constraints). Hence, we find no evidence of systematic relationship between elections, election outcomes and government partisanship, on the one hand, and sovereign debt issuance, on the other. This finding is especially relevant for low- and middle-income countries, which may face greater challenges in accessing – and greater needs for – external finance.

Our empirical analyses are based on new data from primary capital markets; these data allow to consider a broad range (131 countries, in total) of issuers, over the 1990 to 2016 time frame. Primary capital markets have largely been overlooked in the literature despite their crucial role in facilitating government borrowing. Primary markets are the best locus for observing the interaction between debt issuers and investors, because primary markets are where debt issuers and investors directly interact. We aggregate issue-level data to the monthly level, investigating whether a given sovereign is able to issue bonds in a specific country-month. Our results are robust to estimating the amount of debt issued in a given country-month.

In additional to offering substantial support for our hypotheses, this work also highlights the importance of primary capital markets to understanding the politics of sovereign debt. Government debt management offices have received very little attention from scholars of international political

economy.[96] These agencies vary in their structure and mandates; overall, they have become more professionalized in recent decades. They take direction from politicians and interact closely with investment banks that underwrite sovereign debt and the institutional investors, foreign central banks, and other entities that purchase sovereign debt. For all but the most credit-rationed borrowers, these debt managers have a significant degree of choice regarding how to access international capital. They are aware of the cyclical nature of global capital flows, and of the opportunities and constraints that these cycles present.

Future work would do well to explore not only when and how often these managers borrow (as this paper does), but also the terms (including price, maturity structure and currency denomination) at which they borrow. We expect that debt managers often adjust their issuing behavior to appeal to certain types of bondholders (central banks or commercial banks; resident or non-resident investors; hedge funds versus institutional investors). These appeals, in turn, reflect governments' preferences regarding the varying types of costs and benefits presented by different financing strategies. Some sovereign borrowers might prefer to borrow at shorter maturities and lower prices, even though this heightens the need for refinancing. Other sovereigns may privilege insulation from market pressures and therefore issue at longer maturities despite the higher risk premia typically associated with doing so. Surely, debt managers and the politicians who are their principals hold diverse views on the relative importance of each component of an issue's terms. Exploring the tradeoffs across the terms of primary issues can make important contributions to the political economy of sovereign debt.

More broadly, exploring governments' strategic considerations also allows us to address bigger questions related to sovereign finance. The monetary policy decisions made by large, mature economies – especially the United States – have consequences for other governments' financing strategies.[97] Tightening the United States is, for instance, likely to intensity borrowing constraints for developing countries, especially those with non-democratic political systems. Given the centrality of fiscal policy to governments, US financial decisions could therefore affect low and middle income countries' tax policy, social policy and societal conflict.

Finally, while bond market financing has been the most prominent form of sovereign finance

[96] In contrast, for instance, to research on central banks and central bankers, e.g. Bodea and Hicks (2015).
[97] Bauerle Danzman, Oatley and Winecoff (2017).

since the early 1990s, governments looking to borrow still choose between a variety of options (contingent on their creditworthiness), including commercial bank loans, bilateral official credit, and multilateral official credit. The strategic interactions between governments and sovereign bondholders are likely to differ from those between governments and bank creditors, or governments and official creditors.[98] Deeper investigations of sovereign financing and debt management promise to advance our understanding of how modern capital markets work. Such work will also allow us to identify more precisely how modern governments take advantage of, and also might be constrained by, financial globalization.

[98] Gelos, Sahay and Sandleris (2011); Kaplan and Thomsson (2016).

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Tables and Figures

Country List

Full List of Countries:

Albania, Angola, Argentina, Armenia, Aruba, Australia, Austria, Azerbaijan, Bahamas, Bahrain, Bangladesh, Barbados, Belarus, Belgium, Belize, Benin, Bolivia, Bosnia-Herze., Botswana, Brazil, Bulgaria, Burkina Faso, Cameroon, Canada, Cape Verde, Chile, China, Congo, Croatia, Cyprus, Czech Rep., Dem. Rep. Congo, Denmark, Estonia, Fiji, Nigeria, Finland, Colombia, Norway, France, Costa Rica, Cote dIvoire, Dom. Republic, Ecuador, Egypt, El Salvador, Ethiopia, Gabon, Georgia, Germany, Ghana, Greece, Grenada, Guatemala, Honduras, Hong Kong, Hungary, Iceland, India, Indonesia, Iraq, Ireland, Israel, Italy, Jamaica, Japan, Jordan, Kazakhstan, Korea, Kuwait, Kyrgyzstan, Latvia, Lebanon, Lesotho, Lithuania, Luxembourg, Macedonia, Malaysia, Malta, Mauritius, Mexico, Moldova, Mongolia, Montenegro, Morocco, Mozambique, Namibia, Netherlands, New Zealand, Nicaragua, Oman, Pakistan, Panama, Papua New Guinea, Paraguay, Peru, Philippines, Poland, Portugal, Qatar, Romania, Russia, Rwanda, Saudi Arabia, Senegal, Serbia, Seychelles, Singapore, Slovakia, Slovenia, Solomon Island, South Africa, Spain, Sri Lanka, St. Vincent, Suriname, Sweden, Switzerland, Taiwan, Thailand, Trinidad And Tobago, Tunisia, Turkey, UAE, Uganda, Ukraine, United Kingdom, Venezuela, Vietnam