

The Politics of Sovereign Defaults

Juan Carlos Hatchondo and Leonardo Martinez

Sovereign debt issuance and repayment decisions are determined by public officials and may thus be affected by issues such as the proximity of elections; conflicts between the executive branch and the parliament; institutional breakdowns such as military coups; etc. This article first discusses theoretical and empirical studies about the role of political factors in sovereign default episodes. Before concluding, the article also discusses the role of political factors in five recent default episodes.¹

The preferences of public officials and the environment in which they must act affect their perceived costs and benefits of defaulting. This has been recognized by several authors. For instance, in discussing the role of political factors as determinants of defaults, Sturzenegger and Zettelmeyer (2006) conclude that “a solvency crisis could be triggered by a shift in the parameters that govern the country’s willingness to make sacrifices in order to repay, because of changes in the domestic political economy (a revolution, a coup, an election, etc.)...” Similarly, Rijckeghem and Weder (2009) argue that a country’s willingness to pay is influenced by politics, i.e., by the distribution of political power and of benefits and costs of defaulting across voters. The heterogeneity of public officials’ preferences is also highlighted by Santiso (2003) who writes, “One basic rule of the confidence game [in international financial markets] is then to be very careful when nominating the official government voicer. For investors it is mainly the ministry of economics or finance or the governor of the central bank.”

■ Hatchondo is an economist with the Federal Reserve Bank of Richmond. Martinez is with the International Monetary Fund. For helpful comments, we thank Kartik Athreya, Anne Davlin, Andreas Hornstein, Jorge Roldos, and Alex Wolman. The views expressed herein are those of the authors and should not be attributed to the IMF, its Executive Board, or its management; the Federal Reserve Bank of Richmond; or the Federal Reserve System. E-mail: juancarlos.hatchondo@rich.frb.org.

¹ Hatchondo, Martinez, and Saprizza (2007a) present a brief discussion of political costs of defaulting. In this article, we extend their analysis and present a more thorough discussion of theoretical and empirical results.

We first describe theoretical studies that illustrate how the risk of losing elections may induce a sovereign to avoid a default even when creditors have no access to legal procedures that would allow them to force the sovereign to pay. This risk would be present when sovereign debt is at least partially held by local creditors with political power to deny support to political groups that advocate for a default. Note that, since it is difficult to declare a selective default on foreign bondholders only, the presence of these local creditors could also explain why foreign investors are willing to buy sovereign debt.

Second, we describe theoretical work that studies how political turnover, i.e., the alternation in office of policymakers with different objectives, affects incentives to borrow from foreign lenders and to default on debt held by foreigners. Policymakers may differ in the weights they assign to different constituencies of domestic residents when allocating fiscal resources and they may differ in their willingness to pay the debt. Studies that assume differences in policymakers' spending preferences find that a higher frequency of political turnover tends to generate higher debt levels and higher default probabilities. In contrast, studies that assume that policymakers differ in their willingness to repay debt find that the relationship between the default probability and the frequency of political turnover may be nonmonotonic.

Studies that assume that policymakers differ in their willingness to repay make possible the existence of defaults triggered by political turnover.² We refer to such default episodes as "political defaults." Political defaults occur when a "creditor-friendly" government (with a higher willingness to pay) is replaced by a "debtor-friendly" government (with a lower willingness to pay). It should be mentioned that while political turnover may explain the timing of the default decision, poor economic conditions are likely to play a key role in political defaults. In fact, in Hatchondo, Martinez, and Saprizza's (2009) model of political defaults, political defaults are only likely to occur after a creditor-friendly government encounters poor economic conditions that lead it to choose high borrowing levels. These studies also find that after political defaults, debt and interest rate spread levels are lower than the levels observed after defaults caused by negative income shocks only, and are lower than the pre-default levels.³ Recall that a political default is triggered when a creditor-friendly government is replaced by a debtor-friendly government. These studies argue that in a political default, post-default debt levels are

² Using a historical data set with 169 sovereign default episodes, Tomz and Wright (2007) find that 38 percent of default episodes in their sample occurred in years when the output level in the defaulting country was above the trend value. Thus, it is unlikely that these episodes were triggered by difficult economic conditions. Tomz and Wright argue that some of these episodes may have been triggered by political turnover.

³ The interest rate spread corresponds to the difference between the yield of sovereign bonds and the risk-free rate. When we contrast theoretical predictions with data, we use the yield on 90-day U.S. Treasury bills as the risk-free rate.

lower than pre-default levels because investors are less willing to lend to debtor-friendly governments. This contrasts with alternative explanations that rely on a boycott against a government in default that is not explained by characteristics of the government but by its past behavior.⁴

Third, we review empirical studies that have tested the existence of statistical relationships between political factors and default decisions. These studies have found that the proximity of elections, the turnover of government officials, increases in political instability, and the presence of a presidential democratic regime instead of a parliamentary democratic regime are statistically associated with a higher default probability.

We conclude with a brief description of the role of political turnover in five recent default episodes: Argentina 2001, Ecuador 1998, Pakistan 1998, Russia 1998, and Uruguay 2003. First, we attempt to identify whether these default episodes occur after a creditor-friendly government was replaced by a debtor-friendly government. In order to do so, we look at a measure of political risk computed by the International Country Risk Guide (ICRG). We argue that if a creditor-friendly government was replaced by a debtor-friendly government at the time of the default, the level of political risk computed by the ICRG should be lower in the years before the default than in the years after the default. We find that only in Argentina is the level of political risk systematically lower in the years before the default than in the years after the default. We also present anecdotal evidence indicating that political turnover was important in determining the timing of the Argentine default. The role of political factors in the Argentine crisis has also been highlighted in previous studies. IMF (2004) argues that in Argentina “economic, social, and political dislocation occurred simultaneously, leading to the resignation of the President, default on Argentina’s sovereign debt, and the abandonment of convertibility. . . .” Similarly, IMF (2003) finds that in Argentina “the inability to mount a policy response stemmed from a combination of economic constraints and political factors. . . .” In addition, we show that the behavior of interest rate and debt levels before and after the Argentine default is broadly aligned with the predictions of theoretical studies.

1. THEORETICAL LITERATURE

In this section, we summarize lessons that can be extracted from theoretical studies that analyze the role of political factors in sovereign default episodes.

⁴For instance, it is often argued that creditors may punish a defaulting government by excluding it from capital markets. This is assumed in Eaton and Gersovitz’s (1981) seminal model of sovereign default and in extensions of their work (Hatchondo, Martinez, and Saprizza [2007b] discuss the role of this assumption).

First, we discuss political costs of sovereign defaults. Second, we describe how political turnover affects debt issuance and repayment decisions.

Political Costs of Defaults

In a hypothetical scenario in which sovereign defaults were costless, governments would always default and, in anticipation of that, investors would not purchase public debt to begin with. Yet, we observe that governments are able to borrow significant amounts in spite of the weak legal protection enjoyed by bondholders. This observation can be taken as evidence of costs associated with sovereign defaults.⁵ The literature has debated the ability of foreign creditors to impose explicit sanctions on governments that have reneged on their debts (see Hatchondo, Martinez, and Saprizza [2007a]). This section reviews a number of studies that emphasize that sovereign defaults may be politically costly primarily because a fraction of sovereign debt is held by local voters.

For a government, an alternative to defaulting is to raise taxes in order to be able to pay its debt. In any society, people are likely to have different exposures to the debt of their government and to a tax increase. In general, we can expect that a sovereign default will not occur as long as debtholders have sufficient political power. Dixit and Londregan (2000) formalize this idea. They argue that when making the decision to raise taxes to pay the interest or repay the principal on its debt, the government will pay due attention to the relative political power of the debtholders and other taxpayers. They consider a two-period model in which debt is issued in the first period and two political parties compete to win an election. Voters differ in their learning abilities for human capital accumulation, initial wealth, and in their preferences over “position issues” such as gun control, abortion, etc. In the first period, voters invest by accumulating human capital or by buying government bonds. Government debt revenues are allocated to build infrastructure capital. Elections are held at the end of the first period. Before the elections, each party presents a platform of income taxes, debt repayment, and their stance on position issues. In the second period, production takes place and the party in office levies taxes and decides the fraction of debt that is repaid. There are no punishments to a defaulting government. Dixit and Londregan (2000) show that under some distributional assumptions, the number of bondholders who are indifferent to voting for any of the two parties on the basis of position issues alone may be larger than the number of nonbondholders—voters that decided to invest in human capital instead of buying government bonds. Consequently, an

⁵ That is, for sovereign debt to exist, it is necessary that at least in some circumstances it would be more costly for a sovereign to default than to pay back its debt. Similarly, for sovereign defaults to exist, it is necessary that at least in some circumstances it would be more costly for a sovereign to pay back its debt than to default.

equilibrium with positive debt issuance and no default can be sustained. In that equilibrium, the presence of a larger number of swing voters who would favor the repayment of debt ensures that the party that proposes to pay back the debt wins the election.

In general, citizens who are wealthier may hold more government debt and may suffer more in the event of a sovereign default. Furthermore, those who are older tend to be wealthier while those who are younger tend to generate more income and thus are more exposed to an increase in income taxes. Consequently, as long as wealthier and older citizens impose their will, sovereign defaults may be prevented. Tabellini (1991) emphasizes these ideas. He presents a two-period economy that is inhabited in period 1 by a generation of young agents who live for two periods. There are two generations active in period 2: young and old. The young in period 1 differ in their initial endowment of goods. The old in period 2 care about the welfare of their offspring, so they may leave bequests. There is political competition and the government's decisions are determined by majority voting. Debt is issued in the first period and the repayment decision is made in the second period. Tabellini (1991) assumes that individuals cannot punish a defaulting government. The young in period 1 vote on how much debt to issue and individually decide how much to save for the next period. They can only save in government bonds, so aggregate savings must equal total debt issuance (there is no external debt). At the beginning of period 2, the young and old vote on how much debt is going to be repaid. Old agents are the debtholders and young agents are the only ones being taxed in period 2. Tabellini (1991) shows that a coalition composed of old agents and those young agents who are the children of the wealthy (old) bondholders may vote to repay the debt. The second group in the coalition may enjoy a net benefit from repaying the debt because the taxes they pay to honor the debt are offset by the bequests they plan to receive from their parents.

If a sovereign cannot perfectly discriminate between domestic and foreign creditors, then the political cost of defaulting described above also allows the sovereign to issue debt to foreign lenders. This is argued by Guembel and Sussman (2009). While the setups presented in Tabellini (1991) and Dixit and Londregan (2000) do not consider the possibility of a government borrowing from foreign lenders, Guembel and Sussman (2009) study this possibility. They propose an environment in which the government cannot perfectly discriminate between domestic and foreign creditors who cannot impose sanctions to a government in default. The authors assume electoral competition between two political parties that compete with a platform that specifies the repayment strategy to be implemented once in power. The two parties are identical and their only objective is to win elections. A default entails a redistribution of wealth toward local individuals who hold an amount of debt that is low enough to make the loss caused by not being compensated for

the defaulted debt smaller than the benefit from avoiding the taxes they would have paid to service the debt. Like Tabellini (1991) and Dixit and Londregan (2000), Guembel and Sussman (2009) show that, under certain circumstances, the government repays its debt in spite of the fact that no creditor can punish defaulting governments. The reason is that the median voter would favor a platform that proposes to pay back the debt. The authors also show that when there is imperfect information about the characteristics of the median voter, “lending booms” (high foreign demand for bonds) can price the median voter out of the market and thus increase the probability of default. With imperfect information, investors may mistakenly interpret high bond prices that can be caused by an increase in foreign demand for bonds as evidence of a strong willingness to pay by the future government.

Drazen (1998) focuses on analyzing the influence of political factors on a government’s decision to finance its expenditures by issuing debt to domestic or foreign lenders. Like Guembel and Sussman (2009), Drazen (1998) considers a setup in which the government issues debt to local and foreign residents. Unlike Guembel and Sussman (2009), Drazen (1998) studies the case in which the government can selectively default on local or foreign debt and foreign debtholders can punish a defaulting government. He argues that governments can, in fact, exert some control over whether debt is held by domestic or foreign residents. In particular, he mentions that the government can affect the allocation of debt among domestic and foreign agents through capital controls that restrict the ability of domestic (foreign) residents to buy debt issued abroad (locally), through the currency denomination of public debt (debt denominated in domestic currency may be more attractive to domestic residents), through differential tax treatment, etc. He proposes then a political economy model in which domestic debtholders vote on repayment decisions. Thus, as in Tabellini (1991) and Dixit and Londregan (2000), debt held by local agents can be sustained in equilibrium. Since Drazen (1998) assumes that foreign debtholders *can* punish a defaulting government, debt held by foreigners can also be sustained in equilibrium. Drazen (1998) argues that countries where debtholders have more political power should tend to finance a higher proportion of public expenditures by issuing domestic debt. In his setup, as the income distribution becomes less concentrated, more agents can save and buy domestic debt and thus benefit from interest payments on public debt. Those agents would vote for a political platform that proposes to issue more domestic debt and to honor this debt. Consequently, countries with relatively less concentrated income distributions (higher median income for the same mean) may tend to finance a higher proportion of public expenditures by issuing domestic debt.

In summary, the main lessons from the literature on the political costs of sovereign defaults described above are (i) a sovereign default will not occur as long as local debtholders have sufficient political power; (ii) a default is

likely to be prevented as long as wealthier and older citizens impose their will; (iii) as long as a sovereign cannot default solely on foreign creditors without affecting local creditors, political costs of defaulting also allow the sovereign to issue debt to foreign lenders; and (iv) countries where debtholders have more political power (for instance, because of a more even distribution of income) will tend to finance a higher proportion of public expenditures by issuing domestic debt.

Political Turnover and Sovereign Default Risk

In this section, we summarize lessons from studies that focus on the role of political turnover, which is defined as the alternation in power of groups with different preferences. These studies typically lack a deep theory that links the objectives of citizens and policymakers, and links policy choices to election outcomes. This modeling strategy may be useful to clarify causality relationships from political variables to sovereign debt issuance and default decisions.

An economy is said to have more political stability when political turnover is less frequent. What is the relationship between political stability and default risk? Amador (2003) and Cuadra and Sapriza (2008) contribute to answering this question. They study models of sovereign default in which policymakers disagree on the optimal allocation of fiscal resources within each period because they want to please different constituencies. They show that an increase in political stability reduces the risk of a sovereign default, which in turn reduces the interest rate spread on sovereign bonds. The intuition for their results is as follows. The current government knows that future resource allocations may be decided by a government that would make different choices from the ones the current government would make. Consequently, the current government would like to transfer resources from the future (when decisions may not be made following its preferred criteria) to the present (when it can decide where to allocate those resources). With less political stability it is more likely that the current government will disagree with the choices of future governments and, therefore, the current government is more eager to transfer resources from the future to the present. Thus, political stability affects the effective discount factor of the incumbent government. One instrument that the government can use to bring resources from the future is to issue more debt. Higher debt levels increase the default probability—when defaulting, the government benefits from not paying back its debt and these benefits are larger if debt levels are larger. Another strategy is defaulting in situations in which the government would have to pay large amounts in the present while a substantial fraction of the cost of defaulting appears in the future. In contrast, if there is more political stability, the government is less eager to transfer resources to the present, it wants to borrow less, and it is less willing to default.

The analysis in Amador (2003) and Cuadra and Sapriza (2008) assumes that policymakers do not differ in their willingness to pay back sovereign debt and, therefore, receive the same treatment from international investors. This implies that lenders do not care about the type of policymaker in office or about which type of policymaker may be in office in the future. This seems unrealistic. Examples abound in which politicians disagree about the benefits of maintaining a good credit standing. As explained in the next section, in the proximity of elections, default risk may be influenced by poll data. This suggests that a better understanding of the relationship between political turnover and default risk could be achieved by allowing for the existence of policymakers with different preferences for debt repayment.

Aghion and Bolton (1990) study a setup in which policymakers differ in their willingness to pay. Unlike other studies described in this section, they present a model with endogenous turnover. They show how the government may want to overaccumulate debt to affect the result of elections. They consider a two-period closed economy inhabited by a continuum of agents who live for two periods (there are no intergenerational transfers). At the beginning of each period, elections are held to appoint government authorities. Agents only differ in the endowment they receive in every period and derive utility from private consumption and a publicly provided good. The first-period government determines the level of the public good provided in that period and the proportion of expenditures that is financed through a uniform tax and through debt issuances. The second-period government determines the level of the public good provided in that period, the uniform tax, and the repayment of debt. Aghion and Bolton (1990) assume that there are two political parties. The “right-wing” (“left-wing”) party is assumed to maximize the utility of a group of agents with an above-average (below-average) income level. Given that debtholdings increase with income, the right-wing party displays a stronger preference to pay back debt than the left-wing party. By issuing more debt in the first period, the right-wing party increases the size of the constituency that prefers the debt to be paid back and, through that, it increases the likelihood of winning the election held at the beginning of the second period. Thus, electoral concerns induce the right-wing party to issue a larger amount of debt in the first period.

Cole, Dow, and English (1995), Alfaro and Kanczuk (2005), and Hatchondo, Martinez, and Sapriza (2009) also study models of sovereign default with two types of policymakers that differ in their willingness to pay. Unlike Aghion and Bolton (1990), these studies assume that the two types alternate stochastically in power. In their setups, policymakers who assign more weight to the future (for example, because they are more likely to win elections) are more willing to pay because they are more concerned about the costs of defaulting that appear in the future.

Cole, Dow, and English (1995) and Alfaro and Kanczuk (2005) study setups with asymmetric information about the type of policymaker in office. Thus, a cost of defaulting is that lenders update their beliefs about the government's type, which in turn may affect future borrowing opportunities. Cole, Dow, and English (1995) show that an equilibrium exists in which the patient policymaker always repays, the impatient policymaker always defaults, and, in the period where there is a type change from impatient to patient, the patient policymaker is able to perfectly signal its type by making a settlement payment because the impatient type would not find it optimal to do the same. Their model can explain cycles of borrowing and exclusion from credit markets that finish when the government pays part of the debt in default. They argue that this pattern is consistent with the aftermath of many 19th century default episodes in Latin America and in the United States.

In the framework proposed by Alfaro and Kanczuk (2005), there are equilibria in which lenders do not know the type of policymaker in office. They allow for a publicly observable aggregate productivity shock and show the existence of equilibria in which, for moderately negative productivity shocks, the patient type does not default in order to avoid damaging the government's reputation—i.e., the probability that lenders assign to the patient type being in office.

In order to simplify the learning process faced by lenders and make their models tractable, Cole, Dow, and English (1995) and Alfaro and Kanczuk (2005) limit the set of borrowing levels available to the government. In general, in models with asymmetric information, equilibrium borrowing levels may be distorted by the desire of the borrower who is less willing to default to reveal his type through his borrowing choice. In particular, when borrowing less would allow a patient government to distinguish itself from impatient governments, the patient government may not want to borrow as much as it would if its type was public information. The drawback of restricting the set of borrowing levels is that it limits the usefulness of the models for studying macroeconomic fluctuations.

Hatchondo, Martinez, and Sapriza (2009) consider a political process similar to the one used by Cole, Dow, and English (1995) and Alfaro and Kanczuk (2005), but do not assume asymmetric information about the government type and, therefore, do not need to restrict the set of borrowing levels available to the government. Moreover, the framework used by Hatchondo, Martinez, and Sapriza (2009) follows closely the one used in recent quantitative models of sovereign default (see, for example, Aguiar and Gopinath [2006], Arellano [2008], Hatchondo and Martinez [2009], and Hatchondo, Martinez, and Sapriza [2010]).

Hatchondo, Martinez, and Sapriza (2009) identify two channels through which political stability may influence default risk in addition to the channel outlined in Amador (2003) and Cuadra and Sapriza (2008). On the one hand,

if political turnover is expected to trigger a default, the default risk premium charged on bond issuances is higher when the probability of political turnover is higher (which corresponds to lower political stability). Thus, this channel predicts a negative relationship between political stability and default risk, as in Amador (2003) and Cuadra and Sapriza (2008). On the other hand, if less political stability were to imply more default risk, the default risk premium charged on bond issuances would be higher. In turn, a higher borrowing cost would make the government less willing to borrow. In particular, it could make the government unwilling to choose debt levels for which a political default—defined as a default that would occur because of political turnover—would be likely. Therefore, less political stability could reduce default risk. The possibility of a positive relationship between political stability and default risk is not present in Amador (2003) and Cuadra and Sapriza (2008).

Based on their findings on the relationship between political stability and borrowing costs, Hatchondo, Martinez, and Sapriza (2009) argue that political defaults are only likely to occur in economies where there is enough political stability. If the current government chooses borrowing levels that would lead to a default after political turnover, it has to compensate lenders for this contingency, i.e., for the contingency of another government becoming the decisionmaker in the future. If the probability of this contingency is high enough (political stability is low), it is too expensive for the current government to choose borrowing levels that would lead to a political default. In this scenario, the current government does not borrow so heavily and, therefore, political turnover would not trigger a default.

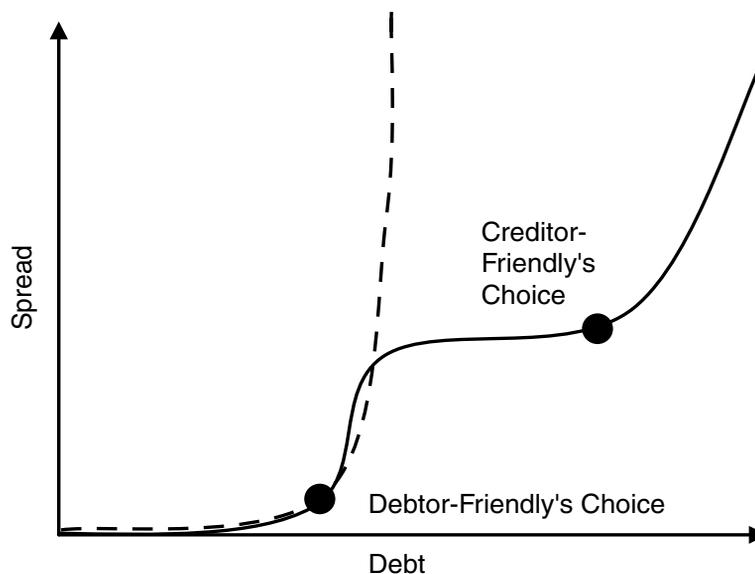
In addition, Hatchondo, Martinez, and Sapriza (2009) show that, in economies with enough political stability, political turnover may weaken the correlation between default and output. Thus, introducing political turnover may bring the predictions of the baseline quantitative model of sovereign default closer to the data. Using a historical data set with 169 sovereign default episodes, Tomz and Wright (2007) report a weak correlation between economic conditions and default decisions. They find that 38 percent of default episodes in their sample occurred in years when the output level in the defaulting country was above the trend value.

The model presented by Hatchondo, Martinez, and Sapriza (2009) also highlights distinctive features of political defaults. In their model, if a default is not preceded by political turnover, post-default debt levels tend to return to pre-default levels relatively fast. In contrast, if a default is caused by political turnover, post-default debt levels tend to be lower than pre-default levels. Recall that a default is caused by political turnover when a government is replaced by another government that is more willing to default. In a political default, post-default debt levels are lower than pre-default levels because the cost of borrowing is higher for governments that are more willing to default and, consequently, post-default governments borrow less than

pre-default governments. This contrasts with alternative explanations for low post-default borrowing levels that rely on a boycott against a government in default that is not explained by characteristics of the government but by its previous default decision (for instance, creditors could agree to exclude a defaulting government from capital markets independently of the likelihood of future government repayments). The mechanism that generates lower post-default debt levels illustrated by Hatchondo, Martinez, and Saprizza (2009) is similar to one presented by Cole, Dow, and English (1995). In Cole, Dow, and English (1995), post-default governments cannot borrow because they would always default. In Hatchondo, Martinez, and Saprizza (2009), post-default governments can borrow but at a higher interest rate than pre-default governments. In equilibrium, post-default governments *choose* to borrow less than pre-default governments.

The second distinctive feature of political defaults highlighted by Hatchondo, Martinez, and Saprizza (2009) is that post-default equilibrium spreads tend to be lower than pre-default spreads. That is, high-willingness-to-pay governments pay higher spreads than do low-willingness-to-pay governments. Before a political default, when the government has a high willingness to pay, bondholders require a compensation for the possibility that the current government is replaced by a government with a lower willingness to pay. In contrast, after a political default, the low-willingness-to-pay government does not need to compensate lenders for the risk of political turnover. This is because political turnover would actually mean good news to bondholders.

To further illustrate the relationship between pre- and post-political default levels of debt and spread, consider the case in which two types of governments, creditor-friendly and debtor-friendly, alternate in power, and a political default occurs when the first type is replaced by the second type. In addition, suppose that the type of policymaker currently in charge of the government is likely to be in charge of the government at the time the debt it issues has to be paid back (but a change in the type of policymaker is possible). Figure 1 presents the interest rate spread each of these two types of government would have to pay as a function of the borrowing level they choose. The functions in the figure resemble the equilibrium functions derived in Hatchondo, Martinez, and Saprizza (2009). The functions presented in Figure 1 display three steps. The first step corresponds to “low” issuance volumes. At these volumes, the debt issued is sufficiently low that the government will almost surely pay it back, regardless of the type in power. The second step corresponds to “intermediate” issuance levels. These are the issuance values such that a debtor-friendly policymaker would default in the next period whereas a creditor-friendly policymaker would pay. When a creditor-friendly policymaker is in office, the spread charged by lenders for these issuance volumes is increasing in the probability of political turnover. When a debtor-friendly policymaker is in office, the spread charged by lenders for these issuance

Figure 1 Interest Rate Spread

volumes goes to infinity because a debtor-friendly government would choose to default on these volumes (this is the case when the recovery rate on defaulted debt is zero, as in Hatchondo, Martinez, and Saprizza [2009]). Finally, the third step corresponds to “high” issuance volumes. At these volumes, investors realize that the government will almost surely default tomorrow, regardless of the type in power and, therefore, spreads go to infinity. Hatchondo, Martinez, and Saprizza (2009) show that, when facing such options, creditor-friendly governments may choose to issue intermediate debt levels and to pay intermediate spreads while debtor-friendly governments may choose to issue low debt levels and to pay low spreads. Thus, the levels of debt and spread are typically higher before a political default than after the default. Figure 1 also presents the typical government’s choices according to the equilibrium studied by Hatchondo, Martinez, and Saprizza (2009).

In summary, the literature studying the relationship between political turnover and default risk shows us that: (i) governments may want to over-accumulate debt to affect the result of elections; (ii) more political stability may imply a lower default risk if it makes the government less eager to transfer resources to the present; (iii) political defaults are only likely to occur in economies where there is enough political stability; (iv) political turnover may weaken the correlation between default and output; (v) around political defaults, post-default debt levels may be lower than pre-default levels; and (vi)

creditor-friendly governments may pay higher spreads than debtor-friendly governments and, consequently, post-political-default spreads may be lower than pre-political-default spreads.

2. EMPIRICAL LITERATURE

In Section 1, we discussed insights from theoretical studies that show how political factors may influence sovereign default risk. In this section, we summarize the findings of empirical studies that have investigated statistical relationships between political factors and default risk. These studies have found that the proximity of elections, changes in the finance minister or central bank governors, increases in indicators of political instability, and the presence of a presidential democratic regime instead of a parliamentary democratic regime are statistically associated with a higher default probability. These studies include controls such as the debt over gross domestic product ratio, the level of reserves, or output growth. This attenuates the criticism that political indicators may be significant only because of their correlation with policy choices (such as the accumulation of debt).

Political Stability

In Section 1, we discussed how an increase in political instability may increase default risk. We discuss next studies that propose measures of political stability and use these measures to evaluate whether political stability affects default risk. Citron and Nickelsburg (1987), Balkan (1992), and Brewer and Rivoli (1990) find that this seems to be the case.

Citron and Nickelsburg (1987) use a logit model to estimate the probability of default using data from Argentina, Brazil, Mexico, Spain, and Sweden for the 1960–1983 period. They construct an indicator of political instability that measures the number of changes in government—that were accompanied by changes in policy—that took place within the previous five years. They find that, on top of various macroeconomic indicators, their measure of political instability has a significantly positive effect on the default probability.

The results in Balkan (1992) are consistent with the ones in Citron and Nickelsburg (1987). Balkan (1992) uses an index of political instability that “measures the amount of social unrest that occurred in a given year.” He estimates the probability of default using a sample larger than the one used by Citron and Nickelsburg (1987): 31 countries from 1971–1984. Controlling for 10 economic indicators and an index of democratization, he finds that a higher index of political instability increases the probability of observing a debt rescheduling in the subsequent year.

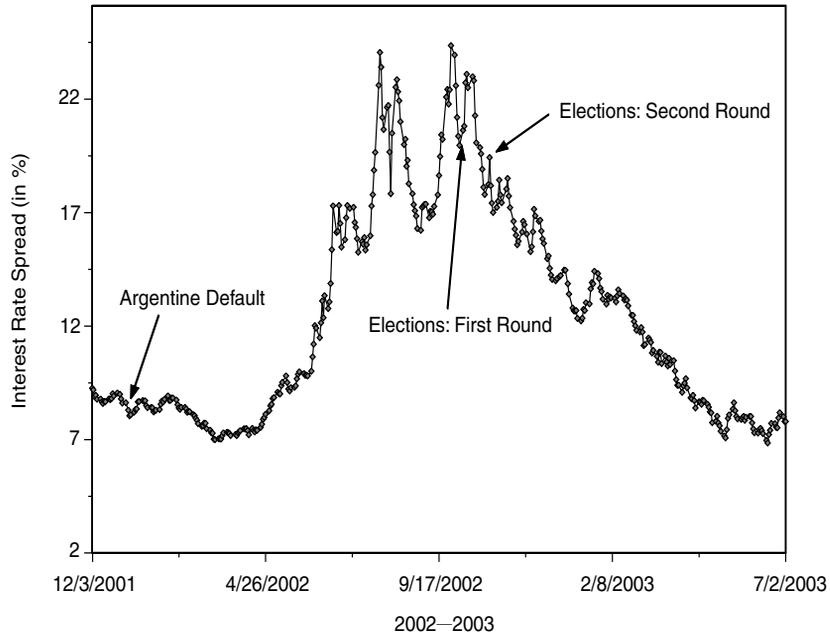
Brewer and Rivoli (1990) also find that political instability has a significant negative effect on a country’s perceived creditworthiness. In particular, they

argue that the frequency of regime change appears to be at least as important as economic variables in explaining lenders' risk perceptions. They use two indexes of regime stability. One index represents the frequency of change in the head of government and the other represents the frequency of change in the governing group (political party or military government). Instead of using data on defaults or interest rate spread, Brewer and Rivoli (1990) use credit ratings from Institutional Investor and Euromoney (two private credit-rating consultants). They use a sample of 30 countries from 1967–1986. They do not find evidence in favor of other political indicators such as the existence of an armed conflict or the democratic nature of the government having significant effects on credit ratings.

Bussiere and Mulder (2000) use a sample of 44 developing countries to test the contribution of political variables to the severity of the financial crises that took place between 1994–1997 (not all crises are linked to a default episode). They find that indicators about the uncertainty of election outcomes amplify the magnitudes of subsequent crises. Those indicators consist of an index of volatility of the electorate (the change in the proportion of seats held by each party from one election to the other) and a dummy variable that captures the presence of elections during the sample period. (They also find that an index of political polarization based on the number of political parties and an index of the fragility of the ruling coalition do not have statistically significant effects.)

Political Turnover and Default Risk

In Section 1 we also discussed theoretical studies that assume that policymakers differ in their willingness to default, which allows for political defaults—i.e., defaults triggered by political turnover—to occur. Figure 2 illustrates a notable example of how the probability of default (reflected in sovereign bond spreads) may be influenced by changes in the probability of political turnover. This should happen when policymakers differ in their willingness to default. The figure shows the behavior of the sovereign spread in Brazil before and after the election of 2002. The concerns raised by the possible electoral victory of the left-wing candidate Luiz Inacio “Lula” Da Silva because of his previous declarations in favor of a debt repudiation is the most accepted explanation for the sharp increase in the spread on sovereign bonds preceding the 2002 Brazilian election. Goretti (2005) finds further evidence in favor of that hypothesis. She uses a nonlinear econometric model to account for the behavior of the sovereign spread in Brazil between November 2001 and October 2002. She finds that a measure of the perceived probability of Lula's victory (based on opinion polls) has a statistically significant effect on spread levels. In the event, Brazil did not default on its debt.

Figure 2 Elections and Sovereign Bond Spread in Brazil

Source: J.P. Morgan (EMBI Global).

Notes: The Emerging Market Bond Indices (EMBI) track the return on traded debt instruments nominated in a foreign currency. J.P. Morgan computes various indices that differ in the countries included, the weights assigned to countries, and the liquidity of the debt instruments included.

The results in Block and Vaaler (2004) and Manasse, Roubini, and Schimmelpfennig (2003) suggest that the Brazilian example illustrated in Figure 2 is not an exception. Close to elections, the possibility of political turnover seems to increase the level of default risk. Block and Vaaler (2004) find that election years are associated with an average downgrade of sovereign debt. They also report that bond spreads are higher in the 60 days before an election compared to spreads in the 60 days after an election. They study a sample of 19 developing countries from 1987–1998. The sample includes 18 presidential elections. Similarly, Manasse, Roubini, and Schimmelpfennig (2003) find that the probability of a debt crisis increases in years with presidential elections. They define a debt crisis as either an episode classified as a default by Standard & Poor's, or the acceptance of an IMF loan in excess of 100 percent of the country's quota. They use a sample of 37 developing

countries from 1976–2001 and estimate the probability of a debt crisis one year ahead.

The equilibrium behavior predicted by Hatchondo, Martinez, and Sapriza (2009) may help us understand why an increase in the probability of political turnover, on average, increases default risk, as found by Block and Vaaler (2004) and Manasse, Roubini, and Schimmelpfennig (2003). Hatchondo, Martinez, and Sapriza (2009) show that the effect of political turnover on the default probability may depend on the type of the *current* government. In their model, when a debtor-friendly government is in office, the level of default risk does not depend on the probability of political turnover because political turnover would not trigger a political default. In contrast, when a creditor-friendly government is in office, the level of default risk increases with respect to the probability of political turnover because political turnover could trigger a political default. Thus, on average, one can expect that the possibility of political turnover close to elections would increase the level of default risk, as found in empirical studies.

It should be stressed that a change in the type of government in power does not need to be preceded by an election. For instance, the turnover of high rank government officials could signal changes in a government's willingness to default. Moser (2007) and Moser and Dreher (2007) find evidence suggesting that this may be the case. Moser (2007) finds that changes in the finance minister generate an average increase of 100 basis points of the sovereign spread on the day of the announcement. This is based on a sample of 12 Latin American countries from 1992–2007. Moser (2007) documents that around one third of the announcements of a change in the finance minister during that time led to a decrease in the sovereign spread, which implies that the increase in the spread of the negative announcements is larger than 100 basis points. Similarly, based on a sample of 20 emerging countries from 1992–2006, Moser and Dreher (2007) find that bond spreads increase and local currencies depreciate as a result of changes in central bank governors.⁶

As discussed in Section 1, policymakers may differ in their willingness to default because they represent constituencies with different exposures to sovereign debt. The political power of debtholders may vary with the characteristics of the political system. Consequently, these characteristics could affect default decisions. The findings in Saiegh (2009), Kohlscheen (2009), and Rijckeghem and Weder (2009) suggest that this is the case.

Using a sample of 48 developing countries between 1971–1997, Saiegh (2009) finds that countries governed by a coalition of parties are less likely to default than those governed by single-party governments. Similarly, Kohlscheen (2009) finds that parliamentary democracies display a lower

⁶A possible caveat of these results is that the political factors may reflect shocks to fundamentals.

probability of default compared to that of presidential democracies. He estimates a probit model based on a sample covering 59 democracies from 1976–2003.

Rijckeghem and Weder (2009) classify regimes as democratic and non-democratic according to the value of a democratization index, and differentiate between defaults on external and domestic debt. They use a sample of 73 countries from 1974–2000. Rijckeghem and Weder (2009) find that the frequency of defaults on external debt is larger than the frequency of defaults on domestic debt, independent of whether the political regime is democratic. When they restrict their estimations to samples with only democratic regimes, they find that parliamentary systems and systems with a large number of veto players deter external defaults as long as economic conditions are sufficiently good. They do not find statistical evidence of other political factors deterring defaults on domestic debt. For nondemocratic regimes, they find that the proximity to elections and low polarization do deter defaults on domestic debt but they do not find evidence that political indicators other than the type of regime deter defaults on external debt.

Balkan (1992) constructs an index of democracy that “measures the extent that the executive and legislative branches of government reflect the popular will.” He estimates the probability of default using a sample of 31 countries from 1971–1984. Controlling for 10 economic indicators and a measure of political stability, he finds that a higher index of democracy decreases the probability of observing a debt rescheduling in the subsequent year.

3. RECENT SOVEREIGN DEFAULTS IN EMERGING MARKETS

In this section, we discuss the influence of political factors on five recent default episodes: Argentina 2001, Ecuador 1999, Pakistan 1999, Russia 1998, and Uruguay 2003. First, we attempt to identify whether these defaults were political defaults. We do this with a commonly used index of political risk. This index suggests that the Argentine default is the most likely to have been political. Then, we present the behavior of the levels of sovereign debt and spreads around the Argentine default and show that the Argentine data is consistent with the predictions of the theory developed by Hatchondo, Martinez, and Sapriza (2009) for political defaults.

Political Turnover and the International Country Risk Guide Aggregate Index of Political Risk

In Section 1, we explain how governments may differ in their willingness to pay back sovereign debt because they represent different constituencies. For instance, while some governments may be more concerned about the

well-being of debtholders, others are more concerned about the well-being of taxpayers. We also explain that this implies that a default may occur when a creditor-friendly government (with a lower willingness to default) is replaced by a debtor-friendly government (with a higher willingness to default) and we refer to such a default as a political default. Having a measure of governments' willingness to default would allow us to conduct a systematic analysis of whether default episodes were triggered by political turnover. We will use as such a measure the index of political risk for investors included in the International Country Risk Guide (ICRG). ICRG is a credit-rating publication published by The Political Risk Services Group. This index is commonly used in empirical studies (see, for example, Erb, Harvey, and Viskanta [1996, 1999], Bilson, Brailsford, and Hooper [2002], Reinhart, Rogoff, and Savastano [2003], and Bekaert, Harvey, and Lundblad [2007]).

Bilson, Brailsford, and Hooper (2002) define political risk as "the risk that arises from the potential actions of governments and other influential domestic forces, which threaten expected returns on investment." In the context of sovereign debt, default is the government's action that affects the return obtained by lenders and, for a given debt level, political risk for investors is lower (higher) when policymakers with a high (low) willingness to pay are in power. Thus, political turnover could trigger a default when the level of political risk changes from low to high.⁷

The ICRG index of political risk is one of the three components of the overall ICRG country risk index. The other two indexes are the financial risk index and the economic risk index. The index of political risk is supposed to reflect political risk only, independent from economic risk and financial risk (which are captured by the other two indexes). Thus, the index of political risk does not necessarily mirror default risk. In fact, we will illustrate that the default premium implied by Argentine bond prices (the spread) was higher when political risk was lower.

The ICRG Index of Political Risk and Political Turnover in Recent Default Episodes

Table 1 presents summary statistics of the behavior of political risk (100 minus the ICRG index of political risk) before and after the default episodes in Argentina 2001, Ecuador 1999, Pakistan 1999, Russia 1998, and Uruguay 2003. Since a political default occurs after a creditor-friendly government is replaced by a debtor-friendly government, one should expect that in the years before a political default political risk was lower than in the years after

⁷ It must be said that the ICRG index of political risk does not purely reflect an assessment about the type of policymakers in office. It also depends on the perceived likelihood of observing a change of the type in office and on institutional factors.

Table 1 Political Risk in Recent Default Episodes

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Argentina	12-2001	29.1	25.6	38.4	0	0	124	n/a
Ecuador	07-1999	40.3	39.3	42.9	11.5	0	28	n/a
Pakistan	11-1999	49.7	48.6	52.9	27.1	8.3	4	18
Russia	08-1998	44.6	43.3	47.5	34.2	22.2	22	23
Uruguay	05-2003	27.8	27.9	27.5	36.5	61.1	1	13

Notes: (1) month of default; (2) average risk in the sample; (We consider data starting eight years before the default and three years after the default. The exception is Russia. The data for Russia starts in April 1992.) (3) average risk *before* the default; (4) average risk *after* the default; (5) percentage of months before the default with risk above the after-default average; (6) percentage of months after the default with risk below the before-default average; (7) number of consecutive months before the default with political risk below the after-default average; (8) number of consecutive months after the default with political risk above the before-default average; n/a indicates that political risk after the default is always above the before-default average.

the default. One can see in Table 1 that this occurs in Argentina, Ecuador, Pakistan, and Russia.

Among the four default episodes associated with an increase in political risk, we identify the default episode in Argentina as the most likely to have been political. Argentina exhibits the largest increase in political risk after the default. Comparing columns (3) and (4) in Table 1, we can see that the post-default level of political risk in Ecuador, Pakistan, and Russia is less than 10 percent higher than the pre-default level. In Argentina, the post-default level of political risk is 39 percent higher than the pre-default level. In addition, among these four countries, Argentina is the most likely to have experienced the kind of political stability Hatchondo, Martinez, and Saprizza (2009) argue should precede a political default. Recall that Hatchondo, Martinez, and Saprizza (2009) explain that pre-default creditor-friendly governments would only choose debt levels for which a political default would occur in environments with high political stability. Table 1 shows that among the four countries where default episodes marked an increase in political risk, Argentina is the only one where the level of political risk was consistently lower before the default (and consistently high after the default; see columns (5)–(8) in Table 1). In order to further support the view that the Argentine default was preceded by political turnover, the next subsection describes political events around the default.

Political Turnover Around the Argentine Default

A series of political events that occurred around the 2001 default seem to confirm that the default episode in Argentina was preceded by political turnover.

In the presidential campaign of 1999, the two main candidates expressed opposing positions as to whether the future government should declare a moratorium on its foreign debt. *The Economist* (1999) wrote that “while Eduardo Duhalde, his Peronist opponent, has made rash public-spending promises, and suggested that Argentina should default on its foreign debt, it has been Mr. de la Rúa who has responsibly promised to maintain the main thrust of current economic policies, including convertibility.”

The creditor-friendly approach of Fernando de la Rúa’s government is also apparent from its attempt to impose drastic austerity to balance the budget—including cuts of up to 13 percent in public sector wages and pensions. In the face of a drying up of credit and an economy in its fourth year of recession, this was perceived to be the only way to stave off default on Argentina’s \$128 billion of public foreign debt and maintain the currency-board system that pegs the peso, at par, to the dollar. This policy stance was reinforced by de la Rúa’s statement that “. . . there’ll be no default and no devaluation. Our effort is to reactivate the internal market, which needs lower interest rates. It could be necessary to lower the costs of the debt, but we will comply with our obligations” (see *The Economist* [2001]).

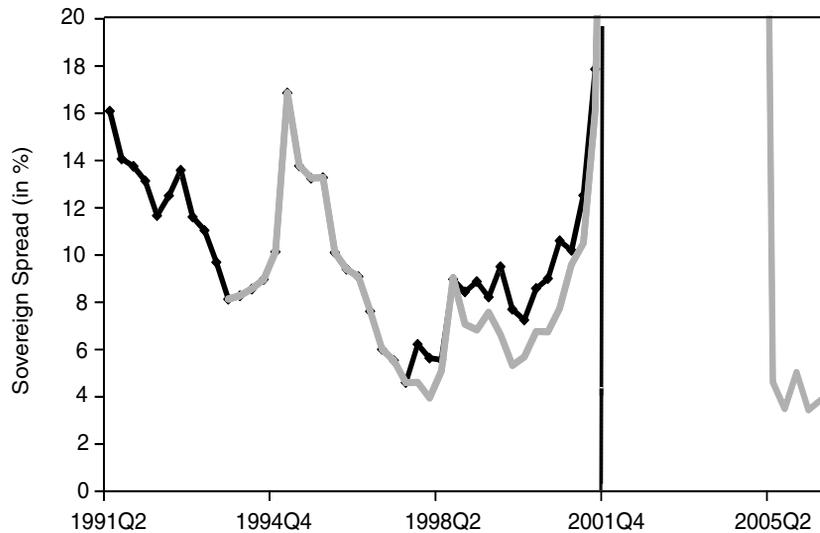
Having lost political support even from members of his own party, de la Rúa left office on December 19, 2001, and was succeeded by governments with a more debtor-friendly approach. The newly appointed president, the Peronist Adolfo Rodríguez Saa, immediately declared a default that was widely supported in Congress. He was replaced two weeks later and his successor, Eduardo Duhalde, confirmed the default decision by failing to serve a USD 28 million interest payment due on an Italian lira bond. According to Sturzenegger and Zettelmeyer (2006), it is estimated that around 60 percent of the debt in default was held by domestic residents.

The Behavior of Spread and Debt Levels Around the Argentine Default

Hatchondo, Martinez, and Sapriza (2009) predict that in a political default, post-default debt levels are lower than pre-default levels and post-default spread levels are lower than pre-default levels. We will contrast these predictions with the behavior of debt and spread levels around the 2001 Argentine default, which we have argued has the characteristics of a political default.

Figure 3 shows that, in Argentina, spreads were lower after the 2005 debt exchange, when (according the ICRG index of political risk) the government was perceived as riskier to creditors, than before the default, when the government was perceived as less risky to creditors. Thus, the behavior of the

Figure 3 Argentina Sovereign Spread



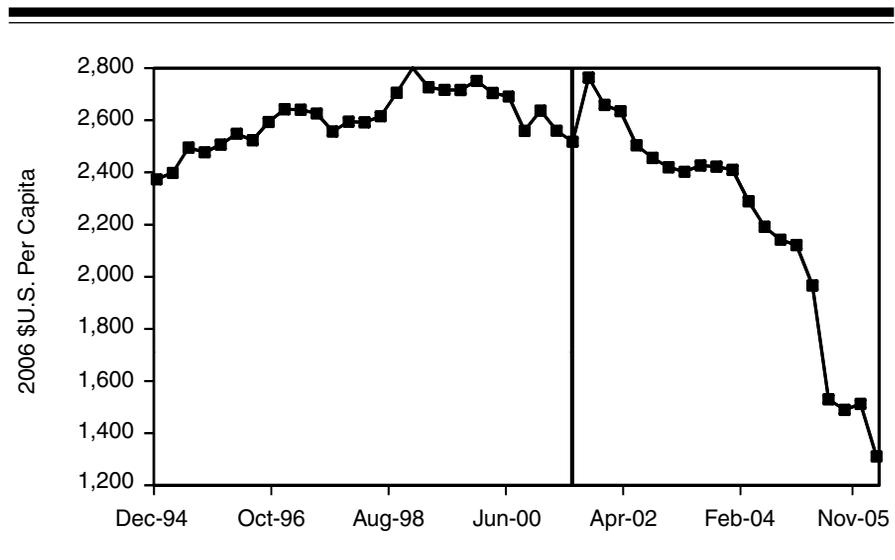
Notes: The vertical line marks the month of default. The line with dots (black) corresponds to the yield of government debt computed by Neumeyer and Perri (2005). The solid gray line corresponds to the measure of the spread computed by J.P. Morgan using foreign currency debt.

spread in Argentina is roughly in line with the one predicted by Hatchondo, Martinez, and Saprizza (2009).⁸

Figure 4 shows that in Argentina, governments perceived to be riskier to creditors have chosen relatively low debt levels after the default—the debt level decreases sharply in 2005 when the defaulted debt is exchanged. This is consistent with the decrease in the debt level after a political default predicted by Hatchondo, Martinez, and Saprizza (2009). It is also consistent with the difficulties in market access observed after a default episode (IMF [2002a] and Gelos, Sahay, and Sandleris [2004] discuss evidence of a drainage in capital flows to countries that defaulted).

⁸ In Hatchondo, Martinez, and Saprizza’s (2009) model, the recovery rate on defaulted bonds is zero and, consequently, defaulted bonds have no value. Therefore, Hatchondo, Martinez, and Saprizza (2009) do not present predictions that one could contrast with the spread data between the default episode in 2001 and the debt exchange in 2005.

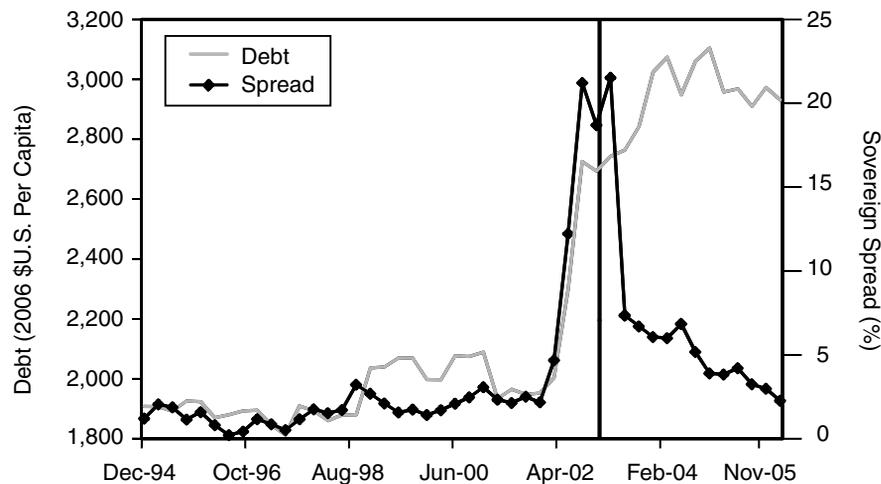
Figure 4 Face Value of Argentina's Public Debt that is Denominated in Foreign Currency



Notes: The series does not include arrears. The vertical line marks the month of default.

Of course, other factors besides political turnover may have affected Argentina's borrowing decisions and the market price of its debt. One way of controlling for some of these factors is to compare the behavior of debt and spread in Argentina with the one in Uruguay. Argentina and Uruguay are neighboring countries with highly correlated business cycles. In fact, both countries had experienced negative growth since 1999, after the Brazilian devaluation. Brazil was a major trading partner of Argentina and Uruguay and both countries had pegged their exchange rate to the dollar, which may have slowed down the adjustment of prices to that shock. Both countries defaulted on their debt, but the 2003 Uruguayan default does not seem to have been triggered by political turnover. According to Table 1, the pre- and post-default levels of political risk in Uruguay are almost identical. There is also anecdotal evidence consistent with that. The Uruguayan president at that time, Jorge Batlle, had previously campaigned in 1989 with a platform that proposed to swap the central banks' gold reserves to pay off the debt in default. In the midst of the 2002 crisis, he announced that the country would make sacrifices in order to honor its debt contracts. Unlike in Argentina, the ruling coalition in Uruguay had control of Congress and managed to approve several rounds of spending cuts and tax increases to reduce the budget deficit (see *The Economist* [2002]). The Uruguayan government could avoid missing

Figure 5 Uruguay's Foreign-Currency-Denominated Public Debt and Sovereign Spread over U.S. Treasury Bills



Notes: The vertical line marks the month of default.

debt payments and also stop a bank run thanks to a joint rescue package provided by the IMF, the World Bank, and the Inter-American Development Bank (see IMF [2002c]). In a press release, the IMF executive board "... commended the Uruguayan authorities for their decisive policy action, their commitment to maintaining a framework that will foster private sector activity, and their continued close cooperation with the Fund..." (see IMF [2002b]). Sturzenegger and Zettelmeyer (2006) estimate that the bondholders that participated in the Uruguayan exchange suffered a reduction in the net present value of their claims within the range of 10–15 percent, substantially lower than the loss experienced by holders of Argentine debt (more than 60 percent). In order to induce a higher participation rate in their debt exchange, the Uruguayan authorities announced that the new bonds were going to receive *de facto* seniority over the previously issued bonds. *Ex post*, bondholders that did not participate in the exchange were fully paid back.

Figure 5 shows that the spread and debt levels in Uruguay were not lower after the default episode than before the crisis (as they were in Argentina). The figure also shows that the spread and debt levels were not particularly low in Uruguay after 2005, at the time when they were low in Argentina. Thus, we do not find that low post-default levels of spread and debt in Argentina may be accounted for by shocks that also affected Uruguay during that time.

4. CONCLUSIONS

This article discusses how political factors may influence sovereign default risk. First, the article presents a summary of theoretical studies on this issue. We survey studies that argue that a sovereign may be willing to repay its debt because it is in the best interest of local agents with political power. We also discuss theoretical studies that examine how changes in the government's willingness to pay and the frequency of these changes (political stability) affect sovereign default risk. We then discuss a large body of empirical work that finds evidence of the influence of political stability and other characteristics of a political system on default risk. In addition, we study five recent sovereign defaults and find that the 2001 Argentine default is the most likely to have been triggered by political turnover, and that the behavior of spread and debt levels around that default is broadly in line with the one predicted by Hatchondo, Martinez, and Sapriza (2009).

REFERENCES

- Aghion, Philippe, and Patrick Bolton. 1990. "Government Domestic Debt and the Risk of Default: A Political-Economic Model of the Strategic Role of Debt." In *Public Debt Management: Theory and History*, edited by Rudiger Dornbusch and Mario Draghi. New York: Cambridge University Press, 315–44.
- Aguiar, Mark, and Gita Gopinath. 2006. "Defaultable Debt, Interest Rates and the Current Account." *Journal of International Economics* 69 (June): 64–83.
- Alfaro, Laura, and Fabio Kanczuk. 2005. "Sovereign Debt as a Contingent Claim: A Quantitative Approach." *Journal of International Economics* 65 (March): 297–314.
- Amador, Manuel. 2003. "A Political Economy Model of Sovereign Debt Repayment." Stanford University mimeo.
- Arellano, Cristina. 2008. "Default Risk and Income Fluctuations in Emerging Economies." *American Economic Review* 98 (June): 690–712.
- Balkan, Erol M. 1992. "Political Instability, Country Risk and Probability of Default." *Applied Economics* 24 (September): 999–1,008.
- Bekaert, Geert, Campbell Harvey, and Christian Lundblad. 2007. "Liquidity and Expected Returns: Lessons from Emerging Markets." *Review of Financial Studies* 20 (November): 1,783–831.

- Bilson, Christopher M., Timothy J. Brailsford, and Vincent C. Hooper. 2002. "The Explanatory Power of Political Risk in Emerging Markets." *International Review of Financial Analysis* 11: 1–27.
- Block, Steven A., and Paul M. Vaaler. 2004. "The Price of Democracy: Sovereign Risk Ratings, Bond Spreads and Political Business Cycles in Developing Countries." *Journal of International Money and Finance* 23 (October): 917–46.
- Brewer, Thomas L., and Pietra Rivoli. 1990. "Politics and Perceived Country Creditworthiness in International Banking." *Journal of Money, Credit and Banking* 22 (August): 357–69.
- Bussiere, Matthieu, and Christian Mulder. 2000. "Political Instability and Economic Vulnerability." *International Journal of Finance & Economics* 5 (October): 309–30.
- Citron, Joel-Tomas, and Gerald Nickelsburg. 1987. "Country Risk and Political Instability." *Journal of Development Economics* 25 (April): 385–92.
- Cole, Harold L., James Dow, and William B. English. 1995. "Default, Settlement, and Signalling: Lending Resumption in a Reputational Model of Sovereign Debt." *International Economic Review* 36 (May): 365–85.
- Cuadra, Gabriel, and Horacio Sapriza. 2008. "Sovereign Default, Interest Rates and Political Uncertainty in Emerging Markets." *Journal of International Economics* 76 (September): 78–88.
- Dixit, Avinash, and John Londregan. 2000. "Political Power and the Credibility of Government Debt." *Journal of Economic Theory* 94 (September): 80–105.
- Drazen, Allan. 1998. "Towards a Political-Economic Theory of Domestic Debt." In *The Debt Burden and its Consequences for Monetary Policy*, edited by G. Calvo and M. King. London: Macmillan, 159–76.
- Eaton, Jonathan, and Mark Gersovitz. 1981. "Debt with Potential Repudiation: Theoretical and Empirical Analysis." *Review of Economic Studies* 48 (April): 289–09.
- Erb, Claude B., Campbell R. Harvey, and Tadas E. Viskanta. 1996. "Political Risk, Economic Risk, and Financial Risk." *Financial Analysts Journal* 52: 29–46.
- Erb, Claude B., Campbell R. Harvey, and Tadas E. Viskanta. 1999. "New Perspectives on Emerging Market Bonds." *Journal of Portfolio Management* 25 (Winter): 83–92.

- Gelos, Gaston, Ratna Sahay, and Guido Sandleris. 2004. "Sovereign Borrowing by Developing Countries: What Determines Market Access?" IMF Working Paper 04/221.
- Goretti, Manuela. 2005. "The Brazilian Currency Turmoil of 2002: A Nonlinear Analysis." *International Journal of Finance & Economics* 10: 289–306.
- Guembel, Alexander, and Oren Sussman. 2009. "Sovereign Debt without Default Penalties." *Review of Economic Studies* 76 (October): 1,297–320.
- Hatchondo, Juan Carlos, and Leonardo Martinez. 2009. "Long-Duration Bonds and Sovereign Defaults." *Journal of International Economics* 79 (September): 117–25.
- Hatchondo, Juan Carlos, Leonardo Martinez, and Horacio Sapriza. 2007a. "The Economics of Sovereign Default." Federal Reserve Bank of Richmond *Economic Quarterly* 93 (Spring): 163–87.
- Hatchondo, Juan Carlos, Leonardo Martinez, and Horacio Sapriza. 2007b. "Quantitative Models of Sovereign Default and the Threat of Financial Exclusion." Federal Reserve Bank of Richmond *Economic Quarterly* 93 (Summer): 251–86.
- Hatchondo, Juan Carlos, Leonardo Martinez, and Horacio Sapriza. 2009. "Heterogeneous Borrowers in Quantitative Models of Sovereign Default." *International Economic Review* 50 (October): 1,129–51.
- Hatchondo, Juan Carlos, Leonardo Martinez, and Horacio Sapriza. 2010. "Quantitative Properties of Sovereign Default Models: Solution Methods Matter." *Review of Economic Dynamics* 13 (October): 919–33.
- IMF. 2002a. "Sovereign Debt Restructurings and the Domestic Economy Experience in Four Recent Cases." Washington, D.C.: IMF (February 21).
- IMF. 2002b. "Joint Statement by IMF, World Bank and Inter-American Development Bank on Uruguay." News Brief No. 02/82 (August 4).
- IMF. 2002c. "IMF Completes First Review and Approves New Increase on Uruguay Stand-By." News Brief No. 02/87 (August 8).
- IMF. 2003. "Lessons from the Crisis in Argentina." Washington, D.C.: IMF (March 24).
- IMF. 2004. "The IMF and Argentina, 1991–2001." Independent Evaluation Office Report. Washington, D.C.: IMF.
- Kohlscheen, Emanuel. 2009. "Sovereign Risk: Constitutions Rule." *Oxford Economic Papers* 62 (January): 62–85.

- Manasse, Paolo, Nouriel Roubini, and Axel Schimmelpfennig. 2003. "Predicting Sovereign Debt Crises." IMF Working Paper 03-221 (November).
- Moser, Christoph. 2007. "The Impact of Political Risk on Sovereign Bond Spreads. Evidence from Latin America." University of Mainz mimeo.
- Moser, Christoph, and Axel Dreher. 2007. "Do Markets Care about Central Bank Governor Changes? Evidence from Emerging Markets." CESifo Working Paper No. 2177.
- Neumeyer, Pablo A., and Fabrizio Perri. 2005. "Business Cycles in Emerging Economies: The Role of Interest Rates." *Journal of Monetary Economics* 52 (March): 345–80.
- Reinhart, Carmen M., Kenneth S. Rogoff, and Miguel A. Savastano. 2003. "Debt Intolerance." *Brookings Papers on Economic Activity* 34: 1–74.
- Rijckeghem, Caroline, and Beatrice Weder. 2009. "Political Institutions and Debt Crises." *Public Choice* 138 (March): 387–408.
- Saiegh, Sebastian. 2009. "Coalition Governments and Sovereign Debt Crises." *Economics and Politics* 21 (July): 232–54.
- Santiso, Javier. 2003. *The Political Economy of Emerging Markets: Actors, Institutions and Crises in Latin America*. New York: Palgrave Macmillan.
- Sturzenegger, Federico, and Jeromin Zettelmeyer. 2006. "Defaults in the 90s." Universidad Torcuato Di Tella mimeo.
- Tabellini, Guido. 1991. "The Politics of Intergenerational Redistribution." *Journal of Political Economy* 99 (April): 335–57.
- The Economist*. 1999. "Argentina's next steps." October 21.
- The Economist*. 2001. "Time to end the agony." November 1.
- The Economist*. 2002. "Uruguay's economy. Victim of contagion." July 25.
- The Economist*. 2005. "Argentina's debt restructuring. Tough deal." May 3.
- Tomz, Michael, and Mark L. J. Wright. 2007. "Do Countries Default in 'Bad Times'?" *Journal of the European Economic Association* 5: 352–60.