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FISCAL POLICY, GOVERNMENT INSTITUTIONS,  
AND SOVEREIGN CREDITWORTHINESS

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# **Fiscal Policy, Government Institutions, and Sovereign Creditworthiness**

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## **I. Introduction**

The international financial crisis has brought to the forefront the role of fiscal policy and institutions in restoring confidence in financial markets. This raises a number of critical questions. First, how do financial markets react to fiscal policy shocks, such as changes in government spending or taxes? Second, do financial markets differentiate between current-expenditure-based and revenue-based adjustments? Third, do financial markets discriminate between tax-financed and debt-financed spending? Fourth, to the extent that institutions shape fiscal outcomes, a critical question is whether fiscal variables interact with the political institutions to affect financial markets. Finally, do political institutions have some independent influence on financial markets beyond the fiscal and economic outcomes they shape?

## **II. Analytical framework**

To investigate these questions, we use a conceptual framework that builds on the theory of sovereign risk pricing (Edwards, 1984) and the theoretical debate on whether the private sector's response to fiscal adjustment depends on the composition of fiscal adjustment (Alesina and Perotti, 1997) and institutions that shape the fiscal outcome (Persson and Tabellini, 2000). More specifically we introduce fiscal policy and institutions variables into the empirical model of sovereign risk pricing. We then derive a testable equation for spreads, which we estimate using panel data techniques (see Akitoby and Stratmann, 2008 and 2009).

The data set for the dependent variable is the stripped spread obtained from the Emerging Markets Bond Index Global (EMBI Global). The EMBI Global tracks total returns for traded external debt instrument in emerging markets issued by sovereign and quasi-sovereign entities and covers 32 countries.

For the choice of political institution variables, we consider the political system (presidential versus parliamentary); political constraints (Henisz, 2000); the Freedom House indexes of

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<sup>1</sup> This article is based on Akitoby and Stratmann (2008 and 2011).

political rights and civil liberties; the Kaufmann voice and accountability index; the democracy index (Polity) produced by the University of Maryland; the democratic accountability index of the International Country Risk Guide (ICRG); the ICRG political risk index; and whether there is an election in a particular year. Since many of these institutions are highly correlated, we will estimate separate regressions for each. For the fiscal variables, we include government revenues, current expenditures, and government investment.

As for additional control variables, previous studies point to a large number of variables as possible determinants of sovereign risk. We aim for a parsimonious empirical model, capturing the key indicators of liquidity, solvency, and macroeconomic fundamentals. We therefore include the ratio of total debt outstanding to gross national income (GNI). This measure is a key indicator of a country's long-run solvency. Higher debt-to-GNI increases the default probability, and hence the sovereign risk. This variable is predicted to be positively associated with the spread.

Other control variables include the ratio of foreign exchange reserves to GDP, the inflation rate, the output gap, default history, and the regional spread index. Foreign exchange reserves-to-GDP is expected to reduce spreads, because it is a measure of a country's capacity to service external debt. The inflation rate is a key indicator of economic stability. Monetization of fiscal deficits can lead to high inflation, which reduces growth by raising the cost of acquiring capital. For this reason, higher inflation will tend to increase sovereign risk. We include the output gap to control for the economic cycle and monetary conditions because recent work has shown that the timing and type of fiscal adjustment also depend on the economic cycle. We include a country's default history as one of the control variables and hypothesize that it has a positive coefficient because defaults increase risk. Another control variable is a regional spread index that controls for contagion effects; the regions are Africa, Asia, Europe, and Latin America. All regressions include country and year fixed effects.

### **III. Key findings**

How do financial markets react to fiscal policy shocks, such as changes in government spending or taxes? We find that revenue increases and current spending cuts reduce spreads. The impact of government investment is not statistically significant. Thus the size of public investment may not matter to investors. Quality of public investments may matter, but our data do not speak to this issue. Overall, these findings support the hypothesis that government revenues and current spending decisions affect financial markets.

Do financial markets differentiate between current-expenditure-based and revenue-based adjustments? Contrary to the established view, financial markets favor revenue-driven adjustments more than current-spending-driven adjustments. Deficit-reducing tax increases of 1 percentage point lower interest rates on sovereign bonds by 20 percent, while a similar reduction in current spending lower interest rates by only about 10 percent. Financial markets also react to the composition of spending, with cuts in current spending lowering spreads more than cuts in investment.

The result on the merits of spending-based versus revenue-based fiscal adjustments is consistent with the hypothesis that the three channels on which the success of spending-based fiscal adjustments rests—labor markets, expectation, and credibility—may not work well in emerging economies. First, in emerging economies, the transmission through labor markets may be hampered by labor-market segmentation, the dominant role of government employment and regulation, and the low degree of labor mobility across sectors. Moreover, wage earners in emerging economies represent a smaller proportion of total employment than in industrialized countries. Second, the expectation channel may be ineffective as liquidity constraints inhibit consumption smoothing. Finally, the credibility channel may not be effective if the social returns on government spending in developing countries are perceived to be higher than in developed countries.

Do financial markets discriminate between tax-financed and debt-financed spending? Financial markets do prefer the former to the latter. A one percentage point increase in current spending lowers spreads by 9.5 percent if financed by taxes, but will raise spreads by about 8.5 percent if financed by debt. If a country finances current spending by raising revenue, the increase in revenue will reduce the spread, thereby offsetting the impact of increasing current spending on spreads; whereas, in the case of the debt-financed current spending, the increase in the country's indebtedness will further heighten the country risk. Put differently, tax-financed current spending is not equivalent to debt-financed current spending, as far as the impact on spreads is concerned. We find that a one percentage point increase in debt-to-GNI leads to about a 1 percent increase in spreads, which implies that countries with higher debt are penalized in international markets. Similarly, like Edwards (1986), we also find that financial markets are sensitive to changes in reserves, evidence that liquidity concerns are important in the international investor's decision. A one percentage point increase in reserves-to-GDP causes the spreads to fall by about 4.5 percent. The magnitudes of the estimated coefficients on the debt and reserves indicate that each percentage increase in reserves is four times as effective in reducing spreads as each percentage reduction in debt.

Do fiscal variables interact with political institutions to affect financial markets? For example, for the same fiscal outcome, do market participants differentiate between right- and left-wing governments, or between majoritarian and proportional electoral systems? We find strong evidence that financial markets penalize left-wing regimes that undertake spending-driven expansion. The penalty is estimated at about 3 percent higher interest rates. This may be because right-wing governments are often associated with fiscal conservatism and a smaller government size while left-wing governments are often associated with a larger government and broader social transfer programs. The findings also show that financial markets reward left-wing governments by more than right-wing governments when government revenues increase. Put differently, right-wing governments get lower benefits from a revenue-based consolidation. One reason for this could be that government spending is already low when the government is conservative; so that the marginal benefit from consolidation is less than if government spending is high.

With regard to the differentiation between majoritarian and proportional electoral systems, the results show that financial markets penalize majoritarian regimes—as opposed to

proportional regimes—that undertake spending-driven expansion, presumably because these regimes are often associated with larger government and broader transfer programs. This finding is also consistent with the view that the majority-rule countries tend to have what is called in the United States “pork barrel” spending, which is spending targeted to electoral districts. Financial markets may believe that “pork barrel” spending increases when current expenditures and government investment rise. Much of what may be contained in the category of government investment (building roads and bridges) may have low returns under a majoritarian system when it is spending targeted to districts or swing states.

Finally, do political institutions have some independent influence on financial markets beyond the fiscal and economic outcomes they shape? We find that political institutions matter for financial markets. The findings are robust to a wide range of indicators of institutional quality. First, democracy, regardless of how it is measured—the Kaufmann voice and accountability index, the Freedom House index of political rights, the Polity index, or the ICRG democratic accountability index—lowers spreads. The effects of democratic institutions are substantial. For example, a one standard deviation in the ICRG democratic accountability index decreases spreads by about 25 percent. More civil liberties also lower spreads because civil liberties foster democracy. A one-point reduction in political rights, as measured by the Freedom House index on a one to six scale, reduces spreads by 8.5 percent, and the same reduction in civil rights reduces spreads by 19 percent. These results forcefully suggest that financial markets are giving a premium to democratic regimes. Put differently, the markets tend to penalize nondemocratic regimes by charging them relatively higher interest rates. Because financial markets affect economic development through better resource allocation and risk diversification, our findings seem to suggest that democracy also matters for growth. Since we find that more government accountability, as measured by the ICRG index and the Kaufmann index, lowers spreads, our results lend support to the view that checks and balances increase creditworthiness.

We find a negative and statistically significant sign on the ICRG political risk variable. This shows that lower political risk reduces spreads, which confirms the widely held view that financial markets dislike political risk. We also find some evidence that sovereign borrowing costs tend to be higher in election than in off-election years. This corroborates Block and Vaaler’s (2004) finding that rating agencies and bondholders view elections negatively, presumably because elections are associated with uncertainty about the future.

#### **IV. Policy implications**

This study suggests a number of policy implications for countries seeking to lower their borrowing cost on international capital markets. First, a country can pursue either revenue-based or expenditure-based fiscal adjustments, when fiscal adjustment is required to reassure financial markets. However, a country would be better off pursuing revenue-driven fiscal adjustments, whenever the labor market, the expectation, and the credibility channels are not present. Second, a country would be better in cutting current spending instead of public investment, because financial markets pay attention to the composition of fiscal

consolidation. Third, since financial markets view high debt ratios negatively, reductions of debt through appropriate fiscal policy and debt management can lower spreads. Fourth, given the importance that the capital market attaches to the reserves-to-GDP ratio, government can aim at increasing their foreign reserves position through appropriate macroeconomic and structural policies. Finally, a country would be better off if it strengthened checks and balances and democratic accountability.

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