



# Sovereign default risk and decentralization: Evidence for emerging markets

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## ABSTRACT

We study the impact of decentralization on sovereign default risk. Theory predicts that decentralization deteriorates fiscal discipline since subnational governments undertax/overspend, anticipating that, in the case of overindebtedness, the federal government will bail them out. We analyze whether investors account for this common pool problem by attaching higher sovereign yield spreads to more decentralized countries. Using panel data on up to 30 emerging markets in the period 1993–2008 we confirm this hypothesis. Higher levels of fiscal and political decentralization increase sovereign default risk. Moreover, higher levels of intergovernmental transfers and a larger number of veto players aggravate the common pool problem.

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## 1. Introduction

Several government bailouts were to be observed in decentralized countries in the past, where significant shares of subnational government liabilities were transferred to the federal government. For instance, several bailouts of overindebted subnational governments occurred in Argentina in the 90s (Nicolini et al., 2002), in Brazil since the late 1980s (Bevilaqua, 2002), in Bolivia at the beginning of the 2000s (International Monetary Fund, 2006), and in Mexico in the second half of the 90s (Trillo et al., 2002). A major bailout in Brazil occurred, for example, in 1997, when subnational debts of about 12% in relation to GDP were restructured and partly forgiven by the federal government (Bevilaqua, 2002). Subnational government bailouts do, however, occur not only in developing countries, but also in OECD countries such as Australia, Germany, Italy, and Sweden (von Hagen et al., 2000) and in Spain (Sorribas-Navarro, 2011).

The problem with these bailout policies is that a common pool problem is created at the lower levels of government. Subnational governments anticipate that in the long run their public debt can be shifted to the entire federation, because the federal government cannot credibly rule out subnational government bailouts (Bordignon et al., 2001; Goodspeed, 2002). Thus, subnational governments view public debt as a common pool resource. The benefits of local tax cuts or the provision of public services financed through borrowing accrue locally, whereas the burden of funding accrues in the long run nationwide. Through this imbalance between local benefits and nationwide funding the overall costs of public provision are not fully internalized at the subnational level (Weingast et al., 1981). Each local government considers only its share in the nationwide tax base and disregards the externality to the other local governments, which emerges through its spending and taxing decisions. This setting of decentralized fiscal decisions and indirect access to nationwide revenue sources through borrowing biases the fiscal policy decisions at the subnational level to overspending and/or underutilization of

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their own revenue sources, which contributes to larger fiscal deficits and a build-up of subnational public debt (Hallerberg and von Hagen, 1999; Velasco, 2000). This common pool problem leads to lower fiscal discipline and unsustainable debt levels in decentralized countries. The funding of subnational governments through intergovernmental transfers may even worsen the common pool problem by increasing subnational government's perception of possible bailouts. Furthermore, more veto players in a decentralized political system may aggravate fiscal problems by delaying or impeding the implementation of fiscal consolidation measures (Tsebelis, 1995; Schaltegger and Feld, 2009).

Several interesting studies have empirically analyzed the impact of fiscal decentralization on public budget deficits. Using mixed samples of developing and developed countries, several papers find that a higher degree of decentralization deteriorates the fiscal situation of the government (de Mello, 2000; Fornasari et al., 2000; Rodden, 2002), while Phlekanov and Singh (2007) find insignificant effects. Considering OECD and non-OECD countries separately de Mello (2000) finds that in developing countries fiscal decentralization increases fiscal deficits, while in developed countries decentralization may improve the budget balance for the federal government. For OECD countries, Baskaran (2010) finds that decentralization reduces fiscal deficits, while Thornton and Mati (2008) find no significant impact. Using a mixed sample of developed and developing countries, Neyapti (2010) finds that decentralization reduces fiscal deficits. The positive impact of fiscal decentralization may arise as local governments have better local information and may therefore better allocate fiscal resources at the local level than the central government. Moreover, decentralization may improve tax compliance as local governments are viewed as more accountable and transparent to the local taxpayers. Neyapti (2010) consequently argues that the fiscal disciplining effect of decentralization depends on the quality of institutions of a country.

We study the impact of decentralization on sovereign default risk, i.e. the risk that a government will not fully pay back public debt. In the literature, several determinants of sovereign default risk have been identified, such as, high public debt levels (Edwards, 1984, 1986; Dailami et al., 2008; Manasse and Roubini, 2009); political business cycles (Block and Vaaler, 2004); the design of the political system (van Rijckeghem and Weder, 2009; Saiegh, 2009; Kohlscheen, 2010); fiscal deficits (Schuknecht et al., 2009; von Hagen et al., 2011); more volatile economic fundamentals and financial markets (Hilscher and Nosbusch, 2010); and a poor quality of institutions (Faria et al., 2011).

We contribute to the literature by analyzing the impact of fiscal and political decentralization on sovereign default risk. Theory predicts, and several empirical studies confirm, that decentralization leads to fiscal deficits, a build-up in subnational debt levels, and (in the long run) to bailouts of subnational governments by the federal government. If investors anticipate these adverse effects of decentralization, we would expect that decentralized countries have higher levels of sovereign default risk. We test this hypothesis using a panel of up to 30 emerging economies in the period 1993 to 2008. We use the Emerging Markets Bond Index (EMBI) spreads to indicate the sovereign default risk of a country, which measures the difference between the return on a country's U.S. dollar-denominated sovereign bonds minus the return on U.S. treasuries.

We focus on emerging markets rather than on developed countries for several reasons. First, the EMBI is only available for emerging markets. EMBI spreads are not affected by exchange rate risk and are thus a relatively good measure for sovereign default risk in a cross-country setting. Second, except for the current financial crisis in the eurozone, sovereign debt crises have been a developing countries' problem in the past and thus sovereign yield spreads should have more variation for an emerging market sample. Third, the relatively poor quality of institutions observed in developing countries may amplify the moral hazard effects of decentralization and mitigate possible positive effects of decentralization on the sustainability of public finances (Neyapti, 2010).

Our results suggest that decentralization leads to higher sovereign default risk in emerging economies. First, we find that higher levels of decentralization (measured by expenditure and revenue decentralization) increase sovereign yield spreads, suggesting that sovereign bond investors take the extent of de facto fiscal decentralization into account when evaluating sovereign default risk. Using interaction models, we find that the impact of fiscal decentralization on default risk is more pronounced for countries with a small public bond market. Second, we find that intergovernmental transfers even increase sovereign default risk by providing incentives to implement unsustainable fiscal policies at the subnational level. Third, higher levels of political decentralization, such as (partly) autonomous legislation at subnational levels, also increase sovereign default risk, suggesting that the de jure ability of subnational governments to build up debt at the (long run) expense of the federal government scares investors. Finally, we find weak evidence that a larger number of veto players in a decentralized political system increase sovereign default risk, which lends support to the hypothesis that delayed or impeded fiscal consolidations can lead to unsustainable debt levels and, consequently, increase the risk of debt default.

## 2. Literature

### 2.1. Empirical literature on the determinants of sovereign default risk

Since sovereign debt defaults are associated with losses for investors, it is crucial for them to estimate sovereign default risk and to include this risk into the prices of sovereign bonds. Existing empirical studies of sovereign default risk have either focused on the incidence of actual debt defaults (Manasse and Roubini, 2009; Saiegh, 2009; Van Rijckeghem and Weder, 2009; Kohlscheen, 2010) or on sovereign default risk reflected in bond prices (Edwards, 1986; Mauro et al., 2002; Block and Vaaler, 2004; Dailami et al., 2008; Schuknecht et al., 2009; Hilscher and Nosbusch, 2010; Faria et al., 2011).<sup>1</sup> Most studies use macroeconomic variables that determine the solvency of the government in order to study the determinants of sovereign default risk or actual debt defaults. In his seminal papers, Edwards (1984, 1986) finds that a higher debt to GNP ratio, a lower foreign exchange reserve to GNP ratio, and a lower investment to

<sup>1</sup> Sturzenegger and Zettelmeyer (2008) estimate recovery values ranging between 30% and 75% for the debt restructurings in Russia, Ukraine, Pakistan, Ecuador, Argentina, and Uruguay in the period 1998–2005.

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