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Bailouts, moral hazard and banks' home bias for Sovereign debt ☆

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ABSTRACT

We show that an increase in banks' holdings of domestic Sovereign debt decreases the ability of domestic Sovereigns to successfully enact bailouts. When Sovereigns finance bailouts with newly issued debt and the price of Sovereign debt is sensitive to unanticipated debt issues, then bailouts dilute the value of banks' Sovereign debt holdings rendering bailouts less effective. We explore this feedback mechanism in a model of financial intermediation in which banks are subject to managerial moral hazard and ex ante optimality requires lenders to commit to ex post inefficient bank liquidations. A benevolent Sovereign may desire to enact bailouts to prevent such liquidations thereby neutralizing lenders' commitment. In this context, home bias for Sovereign debt may arise as a mechanism to deter bailouts and restore lenders' commitment.

1. Introduction

European banks may have strong incentives to hold European Sovereign debt due to regulatory advantages in capital requirements, but Basel III regulations provide little to no additional advantages in favor of home-country debt. Since the beginning of the European debt crisis, however, banks' holdings of domestic Sovereign debt have increased dramatically across most of Europe.[1] Recently, policymakers have expressed concern that banks' increased bias towards home-country debt—so-called home bias—may frustrate their efforts to restrain financial segmentation, one of the main perceived causes of the prolonged economic slowdown in Europe which began in 2010.

A political economy view argues that home bias for Sovereign debt emerges because Sovereigns are more likely to default on foreign holdings than on domestic holdings (see Guembel and Sussman (2009) for a recent example). In particular, when Sovereign debt is largely held domestically and selective defaults are not feasible,[2] Sovereigns have strong incentives to repay their debt which allows them to sustain larger debt positions. In this sense, Sovereigns benefit from home bias.

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[1] See Asonuma et al. (2015) and Broner et al. (2014).

[2] Either because of the presence of secondary markets as in Broner et al. (2010) or because of imperfect information on domestic exposures as in Mengus (2014).

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Nevertheless, if the private opportunity cost of holding domestic Sovereign debt is high, the financial sector may have no incentive to acquire this debt. In this case, Sovereigns must use regulation to induce the financial sector to do so (as in Chari et al., 2014; Uhlig, 2013 for example).

In this paper, we analyze a complementary mechanism in which banks' home bias disciplines the Sovereign's temptation to enact bailouts and this home bias may be in the banks' own interest. By acquiring domestic Sovereign debt, banks link the value of their assets in part to the credit risk of their domestic Sovereign. Following an adverse shock to banks' private investments, the Sovereign may be tempted to enact a bailout. If (i) such a bailout is financed by new debt issues and (ii) the price of Sovereign debt is sensitive to unanticipated debt issues (i.e. increases in debt not already factored into the current debt price), then the bailout may negatively impact the credit risk of the Sovereign which in turn negatively impacts the value of banks' assets. As a consequence, Sovereigns may need to enact larger bailouts when banks exhibit home bias than would be otherwise necessary.

We explore the consequences of this mechanism in a model in which the Sovereign's temptation to intervene in domestic financial markets following adverse shocks, via bailouts, limits the ex ante efficiency of the financial sector. In this context, home bias may emerge as a strategy to reduce the ability of the Sovereign to enact bailouts and thereby impose discipline on domestic policymakers' temptation. Therefore, the financial sector has its own incentives to acquire domestic Sovereign debt in favor of more rewarding private assets. We conclude that banks' home bias may be an unintended consequence of domestic financial bailout policies. Surprisingly, we find that this argument helps to rationalize some salient patterns of banks' asset choices and resulting government interventions during the recent European Sovereign debt crises.

We study the link between bailouts and banks' home bias by developing a dynamic model of intermediation subject to moral hazard as in Holmstrom and Tirole (1998) that incorporates a Sovereign with discretion to intervene ex post in domestic financial markets. In this model, ex ante investment choices of a bank (made jointly by its creditors and its owners) impact optimal ex post interventions of the Sovereign. We show that the bank optimally chooses to bias its investment portfolio towards domestic Sovereign debt and away from higher return private investments or foreign Sovereign debt in order to limit ex post domestic interventions by the Sovereign.

In our model, as in Calomiris and Kahn (1991) or Diamond and Rajan (2001), bank runs, or bank liquidations, in which bank creditors decide to not re-finance the bank serve as a useful disciplining device to resolve the bank owners' moral hazard problem. When these liquidations are ex post inefficient, a benevolent Sovereign who lacks commitment has an ex post incentive to intervene and prevent the liquidation with a bailout. If such bailouts are expected to succeed, creditors correctly anticipate that the threat of liquidation is empty. Thus, as in Farhi and Tirole (2012) and Chari and Kehoe (2013), bailouts limit the capacity of creditors to resolve the bank's moral hazard problem and worsen ex ante efficiency of the bank. However, in contrast to them, we show that market mechanisms may suffice to impose discipline on the Sovereign's lack of commitment so that ex ante regulations are unnecessary.[3]

The Sovereign's ex post incentive to bailout the bank motivates private agents to pursue strategies that prevent the Sovereign from successfully enacting bailouts. We show that investing in domestic Sovereign debt is one such strategy. The basic idea is that if the Sovereign issues external debt to finance a bailout, it concurrently lowers the value of banks' holdings of domestic debt and imposes capital losses on the very banks it is trying to rescue. If banks hold domestic Sovereign debt and the price of this debt is sensitive to the size of the bailout, banks' losses on domestic debt may be sufficient to render ex post bailouts ineffective. As a result, bailouts do not occur in equilibrium. Domestic Sovereign debt, in contrast to other assets, has the feature of generating banks' capital losses contingent on the bailout policy of the Sovereign. In this sense, home bias is an optimal mechanism to discipline ex post public interventions.

Our theory suggests regulations on banks' asset holdings are not needed to incentivize banks to hold domestic issues in contrast to findings in Chari et al. (2014) and Uhlig (2013). Moreover, restrictions preventing banks from acquiring domestic Sovereign debt may have unintended, negative consequences on their welfare. In our model, such restrictions limit the ability of banks and the financial sector more broadly from imposing discipline on the Sovereign.

The result of optimality of banks' home bias relies on two conditions: (i) bailouts are financed by debt and (ii) the price of debt is sufficiently sensitive to unexpected debt exposures. In other words, bailouts require sufficiently large transfers of resources from the government to the financial sector so as to have a meaningful impact on the default risk associated with the government. Moreover, unexpected changes in government default risk impose losses on banks' balance sheets; that is, changes in government default risk are not selective in the sense that they are not only imposed on foreign holders of domestic Sovereign debt.

We view these assumptions in our model as motivated by and in line with recent empirical evidence. Acharya et al. (2014) find that Sovereign credit risk increases considerably after government bailouts suggesting that bailouts induce large changes on the Sovereign's balance sheet. Gennaioli et al. (2014) provide evidence that domestic banks' balance sheets deteriorate when the domestic Sovereign defaults on its debt and that Sovereign default is less likely in countries with a high degree of home bias.

To examine the relationship between changes in Sovereign default risk and home bias in our model, we analyze two stylized models of Sovereign default. In the first model, increases in Sovereign Debt are *unbacked* in the sense that increases in Sovereign debt are not accompanied by changes in the ability of the Sovereign to raise revenues. In the second model, increases in Sovereign debt are *partially backed* in the sense that increases in Sovereign debt are accompanied by increases

[3] Kahn and Santos (2015) note that regulations themselves can be subject to time-inconsistency problems.

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