

# Financial Deregulation, Private Foreign Borrowing and the Risk of Sovereign Default: A Political-Economic Analysis

---

Oya Celasun\*

Philipp Harms

---

## Abstract

It is often argued that financial liberalization and large external borrowing by the private sector bode ill for sovereign creditworthiness. In this paper, we highlight a channel through which financial liberalization reduces the risk that a developing country's government defaults on its foreign debt. We present a simple model in which a deregulation-induced surge in private borrowing raises the political costs of default and reduces a government's incentive to deny repayment

*Keywords:* International Investment, Sovereign Risk.

*JEL Classification:* F34, O16.

---

\* Celasun: International Monetary Fund (IMF), 700 19th Street NW Washington, DC 20431 USA. Email: [OCelasun@imf.org](mailto:OCelasun@imf.org). The views expressed in this paper are those of the authors and do not necessarily represent those of the International Monetary Fund, its Board of Executive Directors, or the governments the latter represent. Harms: Templergraben 64/III, 52062 Aachen, Germany. Email: [harms@rwth-aachen.de](mailto:harms@rwth-aachen.de), RWTH Aachen University and Study Center Gerzensee

## **1 - Introduction**

In many developing countries and emerging markets, the past two decades have been characterized by an increasing share of the private sector in total external borrowing. It is often argued that this evolution raises the risk of sovereign default since private-sector financial troubles may result in large public bailouts, jeopardizing government solvency despite otherwise healthy public finances (Corsetti et al. (1999), Reinhart (2008)). From this perspective, “capital flow bonanzas” hurt government creditworthiness, regardless of whether they reflect large borrowing by the private sector or a massive increase in public debt.

In this paper, we consider the political-economic forces which influence the behavior of indebted governments, and argue that a larger amount of private external borrowing may, under some conditions, reduce the risk of sovereign default. Our key argument runs as follows: public borrowing eventually leads to repayment obligations which force the government to raise taxes. Without a countervailing force, a government that maximizes its political support among the domestic population is tempted to deny repayment. We argue that enhanced private-sector access to international capital markets creates such a countervailing force, i.e. it generates a group of agents – an “entrepreneurial class” – who are particularly vulnerable to the sanctions and disruptions resulting from government default. As the size and stake of this group increases, the attractiveness of sovereign default declines. The comparative-static results we present highlight the importance of financial liberalization and institutional quality: by encouraging the expansion of the entrepreneurial class, both types of reforms create a constituency whose potential opposition lowers the risk of sovereign default. Based on these results we argue that not only the country’s total external debt but also the relative share of private and public liabilities should matter for assessing a government’s creditworthiness.

The rest of the paper is structured as follows: the next section offers a brief review of the relevant literature and highlights our own contribution. In Section 3, we present our model assumptions, characterize the equilibrium, and derive comparative-static results. Section 4 summarizes and sketches directions for future research.

## **2 - Review of the Literature**

The literature on the causes and consequences of sovereign risk

argues that, in the absence of a supra-national enforcement institution, a government's incentive to repay its foreign debt crucially hinges on the costs a country faces in case of default.<sup>2</sup> While it is quite obvious that these costs do not affect all citizens of a country in the same way, there are few studies that explicitly allow for conflicting interests with respect to sovereign default.<sup>3</sup> Notable exceptions are Saiegh (2005) and Tomz (2002). Saiegh (2005) sketches a model which is based on the Eaton/Gersovitz (1981) assumption that countries are denied access to international capital markets after a default: since agents differ in their ownership of productive assets, the net benefits from default are distributed unevenly across the population. Whether the government defaults is thus a matter of group size and political influence.<sup>3</sup> Tomz (2002) documents how the sentiment of workers increasingly turned against compliance with international repayment obligations before the Argentine default of 2001.

In this paper, we further explore the political economy of sovereign default and highlight one kind of distributional conflict that we consider particularly relevant for a government's default decision -namely, the conflict between "entrepreneurs" who borrow abroad and whose fortunes are closely linked to the government's treatment of foreign lenders, and "workers" who benefit from default through lower taxation. The notion that private-sector exposure to international capital markets raises the political costs of default is supported by the studies of Tomz (2004) as well as Arteta and Hale (2008):

---

<sup>2</sup> See Eaton and Gersovitz (1981), Bulow and Rogoff (1989), Cole and Kehoe (1997), Rose (2005). Eaton and Fernandez (1995) as well as Sturzenegger and Zettelmeyer (2006) offer excellent surveys.

<sup>3</sup> Several studies provide empirical support for the idea that "political factors" – e.g. the proximity of elections or the characteristics of the institutional environment – have a significant effect on countries' perceived creditworthiness and the likelihood of default (See, e.g., Manasse et al. (2003), Van Rijckeghem and Weder (2004), Block and Vaaler (2004)).

<sup>3</sup> Amador (2002) highlights another channel through which political considerations enter a government's default decision: if parties alternate in power, their ability to implement the Bulow/Rogoff (1989) investment scheme is limited by the incentive to overconsume. In a world in which defaulting countries face an embargo by international investors, the incumbent government may therefore choose repayment.

Tomz (2004) shows that agents' attitude towards debt repayment depend on their professional and educational background: agents for whom access to international capital markets is important support debt repayment while public employees and individuals who are dependent on public welfare payments are more likely to advocate sovereign default. The empirical findings of Arteta and Hale (2008) indicate that sovereign default worsens firms' access to international credit markets and thus hurts those who are most reliant on foreign credit.

These observations suggest a distributional conflict between agents with a large exposure to international capital markets on the one hand and workers, nonleveraged firms, and public-sector employees on the other hand. Our theoretical model formalizes this idea and identifies variables that affect default risk through their impact on private borrowing. Specifically, we show that institutional reform – in particular, financial-sector liberalization and lower corruption – enhances political support for repayment by increasing the size of the entrepreneurial class. We thus provide a theoretical underpinning to the notion that financial liberalization – apart from triggering “overborrowing” and “capital flow bonanzas” – may create political opposition to sovereign default.

### **3 - A simple model of international borrowing and default risk**

#### **3.1 Structure and assumptions**

We consider a small open economy where firms produce a tradable good whose price is normalized to one. There is a large number of risk-neutral, ex-ante identical agents with total mass one. Agents live for one period and leave no bequests.

At the beginning of every period, the government borrows an exogenous amount  $G$  at the gross interest rate  $R^G$ . A share  $\phi$  of government borrowing is used productively while  $(1-\phi)G$  is consumed by the government. We assume that there are no domestic savings, hence all borrowing – public and private – is *international* borrowing. At the end of the period, the government decides whether to pay back the loan or to default. We denote the likelihood of repayment by  $q$ .

International capital markets are populated by risk-neutral investors who have access to an asset which pays the risk-free interest rate  $R^W$ . We assume that the interest rate paid by the domestic government ( $R^G$ ) does not

exceed some finite upper boundary  $\bar{R}^G$ . Hence,  $R^G = \min \{R^W / q, \bar{R}^G\}$ .<sup>4</sup> In case of default in period  $t$ , the government is shut off from international capital markets in all subsequent periods, hence  $G_{t+j} = 0$  for all  $j \geq 1$ .<sup>5</sup> If the government does not default, it has to raise taxes  $T = R^G G$  to finance principal and interest payments. We assume that the tax burden is the same for all agents in the economy.

The representative firm uses the following technology:

$$Y_i = \theta_i \phi G L_i^\alpha \quad (1)$$

In (1),  $Y_i$  is the firm's revenue,  $L_i$  is the amount of labor employed by firm  $i$ , and  $\theta_i$  is an idiosyncratic productivity shock with two realizations:  $\theta_i \in \{0, 1\}$ . Productivity shocks are identically and independently distributed across firms and time, and the probability that  $\theta_i = 1$ , i.e. that a firm is "successful" in a given period, is  $p$ . As a consequence, a share  $p$  of firms is able to produce positive output while the rest goes out of business. If the government is unable to finance its expenditure ( $G = 0$ ) agents have access to an alternative linear production technology whose output we normalize to zero.

Once government spending has been determined, agents decide whether to become *entrepreneurs* or *workers*. An entrepreneur sets up a firm before  $\theta_i$  is realized. We assume that setting up a firm requires a fixed payment  $K$ , which should be interpreted as the cost of establishing a brand name, acquiring a customer base etc.. Since agents are born without an endowment, they have to borrow this amount on the international capital market. The interest rate an entrepreneur has to pay to foreign creditors is denoted by  $R^P$ . If the entrepreneur is "successful", i.e. if  $\theta_i = 1$ , she hires workers, pays wages as well as interest and principal on her loan, and retains the rest. At the end of the period, she sells the firm to an entrepreneur of the

<sup>4</sup> Note, that this assumption is not restrictive as long as  $q > 0$  – which is likely to be satisfied since positive government borrowing would not be possible if default were certain.

<sup>5</sup> Our main argument would still hold if we assumed that, after a default, the government is unable to borrow for a *limited* number of periods.

next cohort at a price  $V_i$ . If the entrepreneur fails – i.e. if  $\theta_i = 0$  – she becomes a worker. To allow for varying degrees of contract enforceability, we introduce the parameter  $\gamma \in [0,1]$  and assume that, in case of failure, international creditors get hold of the amount  $\gamma R^P K$ .<sup>6</sup> In the extreme case of  $\gamma = 1$ , private contracts are perfectly enforceable across national boundaries. Conversely, if  $\gamma = 0$ , a failed entrepreneur who declares “private default” is able to abscond completely, and the foreign creditor has to write off the entire loan. It follows that  $R^P$  is given by

$$R^P = \frac{R^W}{p + (1-p)\gamma}. \quad (2)$$

We assume that (foreign) borrowing is also associated with a fixed cost  $c$ . This parameter depends on the quality of the “financial infrastructure”, with lower values reflecting, e.g., a higher degree of competition in the financial sector, and a more favorable character of government regulation. Hence, “financial deregulation” is reflected by a lower value of  $c$ .

### 3.2 Entrepreneurs and workers

Given the structure of our model, the expected utility of an entrepreneur can be written as follows:

$$E[U_i^e] = p \left[ q(\pi_i - R^P K - c - T + V_i^{ND}) + (1-q)(\pi_i - R^P K - c + V_i^D) \right] + (1-p) \left[ q(w - T - c - \gamma R^P K) + (1-q)(w - c - \gamma R^P K) \right], \quad (3)$$

where  $\pi_i$  is revenue minus wages,  $w$  is the real wage,  $V_i^{ND}$  is the value of the firm if the government honors its international debt, and  $V_i^D$  is the firm value in case of default. Given our assumption that setting up a firm requires

---

<sup>6</sup> Note that we assume that successful entrepreneurs comply with their repayment obligations and that private default only takes place in case of business failure. Hence, unlike Jeske (2006), we do not consider the repayment incentives of private borrowers.

an initial investment of  $K$  and that  $G_{t+1} = 0$  if the government defaults in period  $t$ , it is straightforward to show that  $V_i^{ND} = K$  and  $V_i^D = 0$ : if the government keeps supplying productive infrastructure, aging (successful) entrepreneurs meet the perfectly elastic demand of future entrepreneurs who are willing to pay the price  $K$ , i.e. exactly the sum it would take to set up a *new* firm. In case of default, production dies down, and there is no subsequent entrepreneurial class willing to purchase old firms.

Using this result, we can reformulate (3) to get

$$E[U_i^e] = p \left[ \pi_i - \left( 1 + \gamma \frac{1-p}{p} \right) R^P K \right] - c + (1-p)w - q(R^G G - pK). \quad (4)$$

The last term in brackets succinctly illustrates entrepreneurs' attitude towards public default: on the one hand, a defaulting government does not raise taxes which allows for higher consumption. On the other hand, government default destroys firm value, and this hurts successful entrepreneurs.

The number of entrepreneurs  $n^*$  is determined by a equilibrium condition which guarantees that the expected utility of becoming a – potentially failed – entrepreneur equals the expected utility of abstaining from international capital markets:

$$p \left[ \pi_i - \left( 1 + \gamma \frac{1-p}{p} \right) R^P K + qK \right] - c - qR^G G + (1-p)w = w - qR^G G, \quad (5)$$

where the RHS gives expected utility of an agent who does not borrow. The technology given by (1) and the assumption that labor markets are perfectly competitive imply that

$$\pi_i = (1 - \alpha) \phi G L_i^\alpha, \quad (6)$$

$$w = \alpha \phi G L_i^{(\alpha-1)}, \quad (7)$$

In a symmetric equilibrium, the number of workers per firm is given by the number of agents who decided not to borrow plus the number of *failed* entrepreneurs, divided by the number of *successful* entrepreneurs. Denoting the number of successful entrepreneurs by  $m = np$ , this means

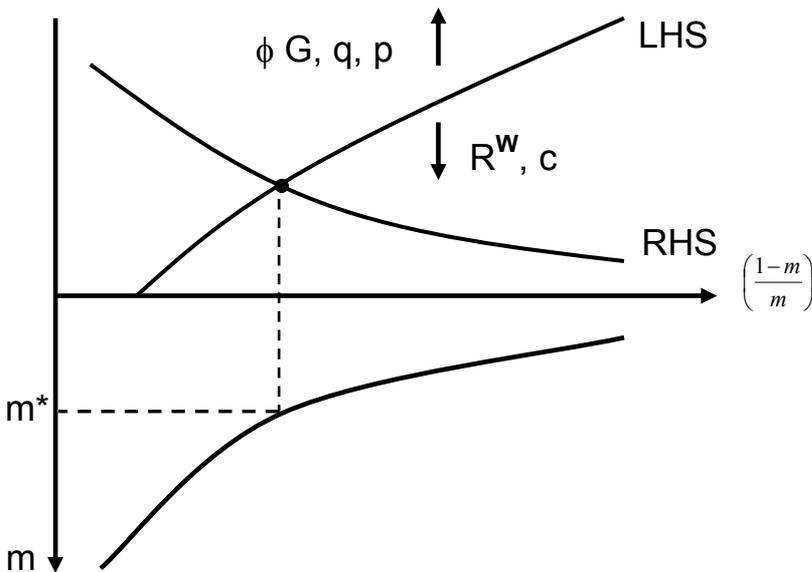
$$L_i = \frac{1-m}{m}, \quad (8)$$

Using equations (6) –(8) as well as (2), we can simplify (5) to get

$$(1 - \alpha) \left( \frac{1 - m}{m} \right)^\alpha - \frac{1}{\phi G} \left( \frac{R^w}{p} K - qK + \frac{c}{p} \right) = \alpha \left( \frac{1 - m}{m} \right)^{\alpha - 1} \quad (9)$$

Figure 1 demonstrates how the equilibrium number of entrepreneurs  $n^*$  is determined: the LHS of (9) is upward-sloping in  $(1 - m)/m$ , with the intercept given by  $\frac{-1}{\phi G} \left( \frac{R^w}{p} K - qK + \frac{c}{p} \right)$ . Conversely, the RHS is downward-sloping. The point of intersection gives the equilibrium number of workers per firm. The lower quadrant shows how to translate this value into the equilibrium number of successful entrepreneurs  $m^*$ . Dividing  $m^*$  by  $p$  yields the equilibrium number of agents who set up firms,  $n^*$ . Accordingly, the volume of *private foreign borrowing* is given by  $n^* K$ .

**Figure 1: The number of entrepreneurs**



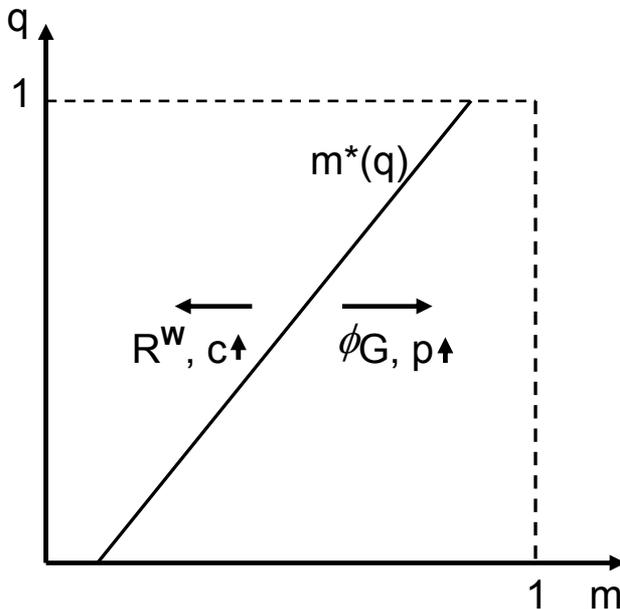
### 3.3 Comparative statics

It follows from (9) that raising  $\phi G$  or  $p$  has a positive effect on  $m^*$  whereas raising  $c$  or  $R^W$  lowers the equilibrium number of successful entrepreneurs.<sup>7</sup> Moreover,  $q$  has a positive effect on  $m^*$ : a higher likelihood that the government will honor its debt and will be able to finance public infrastructure in the next period raises the expected value of a firm and thus makes it more attractive to become an entrepreneur. This relationship is depicted by the function  $m^*(q)$  in Figure 2. Note that  $m^*(0) > 0$  and  $m^*(1) < 1$ : even if the government defaults for sure, current profits are strictly positive and the supply of entrepreneurs does not completely dry out. Conversely, diminishing returns to labor make sure that some agents will decide not to become entrepreneurs even if  $q = 1$ .

---

<sup>7</sup> While raising the likelihood of entrepreneurial success  $p$  increases  $m^*$ , the impact on foreign borrowing  $n^*K = m^*K/p$  is ambiguous. The economic explanation for this result runs as follows: on the one hand, a higher likelihood of entrepreneurial success reduces the effective costs of borrowing. On the other hand, however, a higher share of “surviving” entrepreneurs reduces the number of workers per firm and thus squeezes expected profits. While raising  $p$  may thus actually lower the volume of private foreign borrowing, the effect on  $R^P$  is unambiguous: obviously, a higher value of  $p$  results in a lower interest rate.

**Figure 2: The likelihood of repayment and the number of entrepreneurs**



### 3.4 The government's default decision

When deciding whether to default on its debt, the government maximizes a weighted sum of domestic agents' utilities. The government is thus modeled as being “opportunistic” rather than “partisan”: instead of following a certain ideology or catering to certain agents' interests it chooses the policy that maximizes its political support.<sup>8</sup> We assume that the weight of (successful) entrepreneurs in the “political support function” (Hillman 1982) is given by  $\omega m$  with  $0 \leq \omega \leq 1$ , while the weight of workers is  $(1 - \omega m)$ . By linking the two interest groups' weights to  $m$  we implicitly assume that large groups manage to overcome the collective action problems highlighted by Olson (1965), and that greater size enhances a group's political influence

---

<sup>8</sup> Persson and Tabellini (2000) survey alternative ways to model a government's incentives and decisions.

rather than reducing it.<sup>9</sup> The political support function can be motivated in various ways: in a probabilistic-voting context (Coughlin et al. 1990),  $\omega$  would reflect the concentration of group members' political preferences. In a lobbying scenario à la Grossman and Helpman (1994) it would depend on group members' ability to coordinate their financial support to the government. Note, finally, that in our setting, an increase in the size of the “entrepreneurial class”  $m$  raises the *volume* of foreign borrowing ( $mK$ ). The positive impact of a greater  $m$  on entrepreneurs' weight in the government objective function could thus also be interpreted as resulting from this group's greater financial clout.

Apart from entrepreneurs' and workers' preferences, the government takes into account the (economic and reputational) costs of default. These costs are represented by the variable  $\kappa$  which is uniformly distributed on the interval  $[\underline{\kappa}, \bar{\kappa}]$ . Note that the costs  $\kappa$  may become *negative*: this is meant to reflect other exogenous political and economic shocks that possibly induce the government to discriminate against foreign creditors. Given our assumptions, we can state that a default takes place if the following condition is satisfied:

$$\kappa < (1 - \omega m)R^G G + \omega m(R^G G - K) \quad (10)$$

The first term on the right hand side reflects workers' interests, who unambiguously benefit from a default. The second term reflects the position of (successful) entrepreneurs who are torn between the appeal of lower taxation and the desire to protect their capital gains.

The inequality in (10) implies that the government chooses to repay its debt if the costs of default exceed a threshold value  $\hat{\kappa}$  which is given by

$$\hat{\kappa} = R^G G - \omega m K \quad (11)$$

Conversely, the government defaults if  $\kappa < \hat{\kappa}$ . The likelihood of repayment is thus given by

---

<sup>9</sup> Relaxing the assumption of linearity and replacing  $\omega m$  by a function  $f(m)$  with  $f'(m) > 0$  would not affect our results.

$$q = \frac{\bar{\kappa} - \hat{\kappa}}{\Delta} \quad (12)$$

with  $\Delta \equiv \bar{\kappa} - \underline{\kappa}$ . Substituting (11) into (12), we get an equation that implicitly defines the equilibrium probability of repayment  $q^*$  :

$$q^* = \frac{\bar{\kappa} - R^G G + \omega m K}{\Delta} \quad (13)$$

Recall that the interest rate  $R^G$  charged by international investors is  $\bar{R}^G$  for  $q < \tilde{q}$  and  $R^W / q$  for  $q \geq \tilde{q}$ , with  $\tilde{q} \equiv R^W / \bar{R}^G$  and  $\bar{R}^G$  the finite (but possibly large) upper bound on the government's interest rate. In Figure 3, the equilibrium likelihood of repayment  $q^*$  is given by the point of intersection of the dotted 45-degree line and the solid line representing (13), which is first flat (for  $q < \tilde{q}$ ), then increasing and concave.

The following assumptions are sufficient for the *existence* of such an equilibrium value  $q^*$  :

**Assumption 1:**  $\bar{\kappa} > \bar{R}^G G$ .

**Assumption 2:**  $\underline{\kappa} < R^W G - \omega K$ .

Both assumptions have an obvious interpretation: Assumption 1 implies that the probability of repayment is strictly positive even if the government is charged the maximum interest rate. Assumption 2 implies that the government may deny repayment even if the interest rate is low and the costs of default are high.

Note that the model exhibits the potential for multiple equilibria, i.e. there may be more than one value of  $q^*$  that satisfies (13). The intuition behind this result is straightforward: an equilibrium where a low likelihood of repayment raises the interest rate  $R^G$  and therefore makes default more attractive for the government may coexist with an equilibrium where a default is less likely because more "optimistic" investors charge a lower interest rate  $R^G$ .

The following assumption is sufficient for the uniqueness of  $q^*$  :

**Assumption 3:**  $\bar{\kappa} > \bar{R}^G G + \frac{R^W \Delta}{\bar{R}^G}$ ,

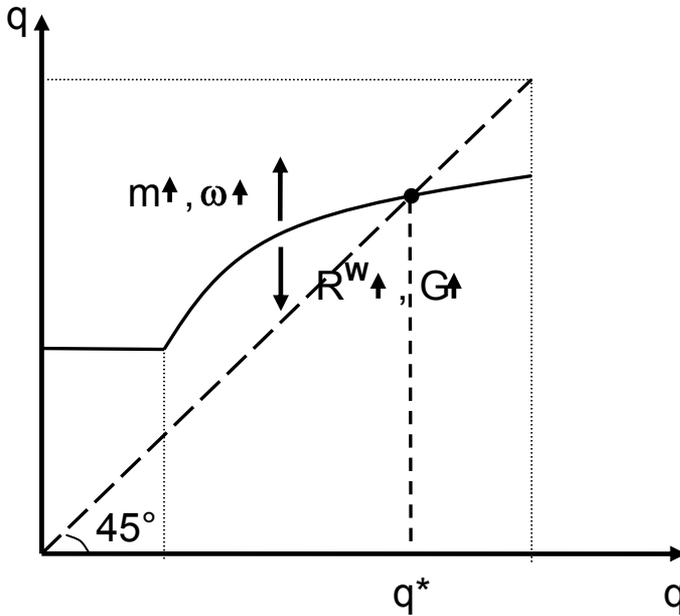
which implies that the flat part of the solid line in Figure 3 does not cut the 45-degree line.<sup>10</sup> Combined with the concavity of the non-linear part of the curve, this implies that there is only one point of intersection.

Obviously,  $q^*$  decreases in  $G$  and increases in  $m$ . The latter relationship reflects the fact that, with  $m$  increasing, the “capital costs” of default get a larger weight in the government's objective function, making it less attractive to default. This effect is magnified by a multiplier-like process, through which a higher level of  $q$  lowers  $R^G$  which further increases  $q$  etc. The relationship between  $m$  and the likelihood of repayment is depicted by the line  $q^*(m)$  in Figure 4. Note that it follows from our assumptions that  $q^*(0) > 0$  : even if there are no entrepreneurs, the costs of default may be high enough to induce the government to repay its debt. Conversely,  $q^*(1) < 1$  : even if all agents are entrepreneurs, other shocks may be strong enough to trigger default.

---

<sup>10</sup> Note that Assumption 3 implies Assumption 1.

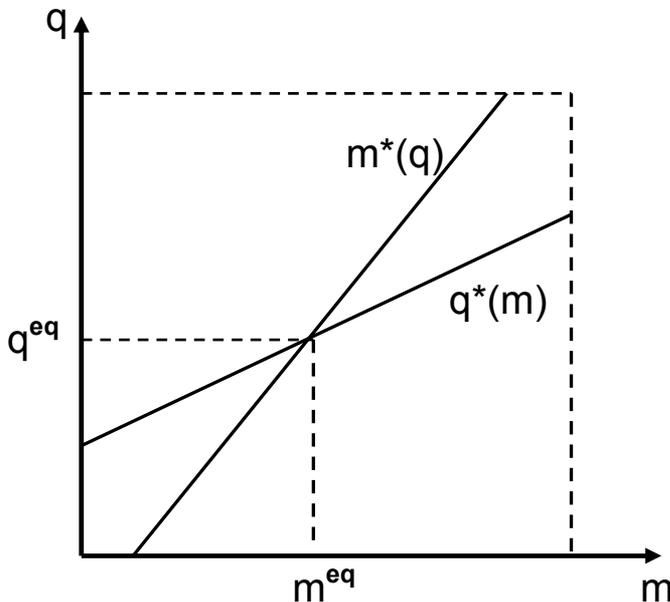
**Figure 3: The likelihood of repayment**



### 3.5 Comparative static properties of the equilibrium

In Figure 4, the equilibrium values  $m^{eq}$  and  $q^{eq}$  are given by the intersection of the two lines  $m^*(q)$  and  $q^*(m)$ , i.e. by the joint solution of equations (9) and (13). The fact that  $q^*(0) > 0$ ,  $q^*(1) < 1$ ,  $m^*(0) > 0$ ,  $m^*(1) < 1$  guarantees that  $m^*(q)$  cuts  $q^*(m)$  from below.

**Figure 4: The number of entrepreneurs and the likelihood of repayment in equilibrium**



How does this equilibrium react to changes in the exogenous variables? Most importantly, improving the financial infrastructure, i.e. lowering  $c$ , shifts the  $m^*(q)$  curve to the right: reducing the costs of borrowing makes it more attractive to set up a firm for a given value of  $q$ , raising  $m^*(q)$ . The greater number of successful entrepreneurs, in turn, makes it less attractive to default and raises  $q$ . As a result, both  $m^{eq}$  and  $q^{eq}$  increase: foreign lending by private agents increases, and this development is accompanied by an improving creditworthiness of the domestic government.

In a similar fashion, raising the weight of entrepreneurs in the government's objective function ( $\omega$ ) shifts the  $q^*(m)$  curve to the left: the

lower likelihood of default makes foreign borrowing more attractive which, in turn, contributes to a lower likelihood of default.

Finally, increasing the productive share of government spending  $\phi$  – e.g. by reducing corruption or improving bureaucratic quality – increases  $m^{eq}$  and  $q^{eq}$  by encouraging private-sector borrowing. Note, however, that raising the total volume of  $G$  has an ambiguous effect on  $m^{eq}$  and  $q^{eq}$  since, for a given value of  $\phi$ , increasing  $G$  raises the attractiveness of becoming an entrepreneur, but also the tax burden and thus the incentive to default.

### **3.6 Discussion**

While we modeled the private costs of sovereign default as resulting from a contraction of public borrowing and the associated breakdown in productivity-enhancing public infrastructure services, our theoretical framework allows for a wide array of alternative interpretations: capital losses could, e.g., result from restricted private-sector access to international lending as documented by Arteta and Hale (2008). If economic activity hinges on the availability of international credit, the consequences of government default would be the same as in our model.

Moreover, sovereign default is often associated with a massive depreciation of the domestic currency. If private sector loans are denominated in foreign currency and if goods prices do not adjust immediately, such a depreciation has a dramatic effect on firms' profitability.<sup>11</sup> This is another channel through which public default generates costs for private debtors. In fact, IMF (2002) analyzes the distributional consequences of four recent default episodes and documents that in most cases, default was associated with a sharp depreciation of the domestic currency. This depreciation “...eroded the balance sheets of banks, particularly those with significant open foreign exchange positions” (IMF 2002:15). By contrast, “... others, particularly low-leveraged firms, reaped benefits from the depreciation” (IMF 2002:16).

To summarize, our model highlights one potential channel through which sovereign default inflicts costs on the private sector. We do, however,

---

<sup>11</sup> The exposure of emerging markets to foreign-currency debt and their vulnerability to the balance-sheet effects of exchange rate swings is documented, e.g., by Eichengreen and Hausmann (2005) and Levy Yeyati (2006).

believe that our theoretical framework conveys the gist of our argument, namely that private foreign borrowing results in growing opposition against government default.

#### **4 - Summary and conclusions**

It is often argued that excessive private-sector borrowing bodes ill for government creditworthiness in developing countries. In this paper, we have brought forward a counterargument highlighting the political-economic forces behind governments' default decisions: we argue that large external borrowing by the private sector raises the political costs of default and may thus increase the attractiveness of repayment. At the core of this argument is a distributional conflict between workers and entrepreneurs - with the latter bearing the onus of restricted access to international capital markets in the wake of a government default.

A key feature of our model is that private foreign borrowing is endogenous with respect to government creditworthiness: a higher likelihood of default affects occupational choice and shrinks the “entrepreneurial class”. We have shown that removing entry barriers and enhancing competition in the financial sector as well as improving the quality of governance enhance sovereign creditworthiness by magnifying the constituency that opposes sovereign default

Our analysis should be considered a step towards better understanding the political economy of default. Empirical results by Celasun and Harms (2008) suggest that private sector borrowing is, indeed, more of a boon than a burden to government creditworthiness. Still, there remains a lot of work to be done: in particular, in terms of more explicitly modeling the repayment decisions of the private sector. The next step would be to consider private agents' repayment incentives as in Jeske (2006) and to relate them to the political-economic mechanisms highlighted in this paper. This is a challenging task for future research.

#### **References**

- Arteta, C. and G. Hale, 2008. Sovereign Debt Crises and Credit to the Private Sector. *Journal of International Economics*, 74, 53-69.
- Block, S.A. and P.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, 917-946.

- Bulow, J. and K. Rogoff, 1989. A Constant Recontracting Model of Sovereign Debt. *Journal of Political Economy*, 97, 155-178.
- Celasun, O. and P. Harms, 2008. Boon or Burden? The Effect of Private Sector Debt on the Risk of Sovereign Default in Developing Countries, *Economic Inquiry* forthcoming.
- Cole, H. and P. Kehoe, 1997. Reviving Reputation Models of International Debt. *Federal Reserve Bank of Minneapolis, Quarterly Review*, 21.
- Corsetti, G., P. Pesenti and N. Roubini, 1998. Paper Tigers: A Model of the Asian Crisis. *NBER Working Papers No. 6783*.
- Coughlin, P., D. Mueller and P. Murrell, 1990. A model of electoral competition with interest groups. *Economic Letters*, 32, 307-311.
- Eaton, J. and R. Fernandez, 1995. Sovereign Debt. In: G. Grossman and K. Rogoff (eds.) *Handbook of International Economics*, vol. III.
- Eaton, J. and M. Gersovitz, 1981. Debt with potential repudiation: theory and estimation. *Review of Economic Studies*, 48, 289-309.
- Eichengreen, B. and R. Hausmann (eds.), 2005. Other People's Money: Debt Denomination and Financial Stability. *Emerging Market Economies*, University of Chicago Press.
- Grossman, G. and E. Helpman, 1994. Protection for Sale. *American Economic Review*, 84, 833-850.
- Hillman, A., 1982. Declining industries and political-support protectionist motives. *American Economic Review*, 72, 1180-1187.
- International Monetary Fund, 2002. Sovereign Debt Restructurings and the Domestic Economy Experience in Four Recent Cases. Washington DC, International Monetary Fund.
- Jeske, K., 2006. Private international debt with risk of repudiation. *Journal of Political Economy*, 114, 576-593.
- Levy Yeyati, E., 2005. Financial dollarization: evaluating the consequences. *Economic Policy*, 21, 61-118.)
- Manasse, P., N. Roubini and A. Schimmelpfennig, 2003. Predicting Sovereign Debt Crises. *IMF Working Paper No. 03/221*.
- Olson, M., 1965. *The Logic of Collective Action: Public Goods and the Theory of Groups*. Cambridge: Harvard University Press.
- Persson, T. and G. Tabellini, 2000. *Political Economics: Explaining Economic Policy*. MIT Press.
- Reinhart, C.M. and V.R. Reinhart, 2008. Capital Flow Bonanzas: An Encompassing View of the Past and Present. *NBER Working Paper 14321*.
- Rose, A., 2005. One reason countries pay their debts: renegotiation and international trade. *Journal of Development Economics*, 77, 189-206.

- Saiegh, S. M., 2005. Income Redistribution, Political Competition, and Sovereign Debt Repudiation. *Unpublished Working Paper*.
- Sturzenegger, J. and Zettelmeyer, 2005. Default in the 1990s. Cambridge University Press, 80-108.
- Tomz, M., 2002. Democratic Default: Domestic Audiences and Compliance with International Agreements. *Unpublished Working Paper*.
- Tomz, M., 2004. Voter Sophistication and Domestic Preferences Regarding Debt Default. *Unpublished Working Paper*.
- Van Rijckeghem, C. and B. Weder., 2004. The Politics of Debt Crises. *Unpublished Working Paper*.