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Fiscal deficits, banking crises and policy reversal in a semi-open economy☆

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ABSTRACT

We study the effect of domestic policies and external shocks in a semi-open economy characterized by incomplete liberalization of the financial sector. We argue that in such transition economies stabilization programs can have a negative impact on the fiscal imbalances, offsetting to some extent the very achievement of the stabilization program. We develop a simple general equilibrium model which allows propagation of shocks in the presence of government guarantees and imperfect capital mobility. We also empirically test the impact of positive foreign interest shock on the Indian economy using a reduced form VAR approach. The econometric evidence, though broadly consistent with the main predictions of the model, suggests no significant impact of foreign interest rate shock on output and credit. We conclude that incomplete liberalization of the financial sector in transition economies has two effects. It reduces i) exposure to external financial shocks (like the current credit crisis) and ii) ability to deal with real sector shocks (which may arise from global recession in the medium term) due to endogenous policy reversals and presence of government guarantees.

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1. Introduction

The global credit crunch of 2008–09 is mainly attributed to rapid even uncontrolled, deregulation of an already substantially free financial sector. In the aftermath of the crunch, while the major industrialized nations went into deep recession with global, output and world trade falling for the first time in several decades, the major developing economies like India experienced a much smaller drop in growth rates from which they have already started recovering. Thus, real GDP growth rate in India fell from 9.2% in 2007–08 to 6.7% in 2008–09 but recovered to 7.2% in 2009–10. It is forecasted to rise further in 2010–11. However, this does not mean that the full impact of the credit crunch on such economies has worked itself out. Thus the fiscal stimulus put into effect by the Government of India as well as efforts by the Reserve Bank of India (RBI) to recapitalize commercial banks could lead to a substantial exacerbation of the fiscal deficit (the Central government's fiscal deficit more than doubled from 2.6% of GDP in 2007–08 to 5.9% in 2008–09 and rose further to 6.5% in 2009–10). Any further shocks and/or continued sluggish growth of the global economy may require India to make further adjustment in the future which may yet have an adverse impact on the Indian economy. This paper models and analyzes the endogeneity of this subsequent adjustment in the context of an economy like India's.

So far as the short run impact on the Indian economy is concerned Joseph Stiglitz, while emphasizing the advantages of the market economy, has argued that incomplete market liberalization, along with a number of checks imposed by (RBI) on banks to de-risk their exposure from the realty sector will reduce India's exposure to the current financial crisis. He further suggests a coordinated fiscal and monetary response to the crisis. Underdeveloped financial sector in developing economies with imperfect capital mobility rely heavily on government payments for liquidity. These payments are part of implicit government guarantees given to banks. In the case of India, where around 80% of deposits are held by public sector banks, the government is implementing recapitalization policies to infuse money in state-run banks to raise their capital adequacy and better prepare them for the credit crunch. The cost of this fiscal response (bailouts) combined with underdeveloped financial sector further deteriorates the ever increasing fiscal deficits and could have significant adverse effect on economic growth in the medium term.

A stable fiscal environment is considered essential for sustained long-run economic growth and is, hence, a primary government objective in most developing countries. When a country is faced with a high budget deficit that threatens public debt sustainability, the literature emphasizes the need to adopt remedial policy measures including fiscal adjustment through expenditure cuts, tax hikes and related reforms (Blanchard and Perotti, 1999; Romer and Romer, 2002). In the particular case of developing countries, however, hard

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choices may have to be made between fiscal consolidation and steady short to medium term growth of the financial and real sectors of the economy. Another important issue is the intertemporal sustainability of the fiscal deficit, i.e., will consolidation have a long lasting effect or will the fiscal deficit eventually reappear, necessitating further policy adjustments?[1]

This paper constructs a model that incorporates this tradeoff in the presence of government guarantees. Under certain conditions which are likely to prevail in some developing countries, negotiating this tradeoff necessitates an endogenous policy reversal. Such policy reversal has occurred in the case of India and we show that the aforementioned conditions for this are satisfied in the Indian case.

We consider a semi-open developing economy with the following stylized characteristics: a) transaction costs of lending are high, b) the exchange rate is managed, c) capital is imperfectly mobile across international boundaries, and d) there exist contingent liabilities or government guarantees. These conditions are broadly representative of the Indian financial sector. We then analyze the impact of stabilization policy on key macroeconomic variables as well as the profitability of the banking sector. In such an economy a stabilization policy is undertaken in response to high deficits. Without loss of generality, this policy is assumed to take the form of monetary restraint[2] introduced as an exogenous change in a general equilibrium macroeconomic model with optimizing banks, firms and household workers with endogenous government policy. The model predicts the effects of this change on the endogenous choice variables of each of the participants and, in particular, the profitability of the banking sector. Under certain circumstances these changes may induce an endogenous policy reversal on the part of the government. Naastepad (2002), in a CGE framework, analyses the impact of stabilization policy for India. However the main focus of their model is on impact of government budget on production and prices whereas we focus on the impact of government guarantees on stabilization effort.

The principal objective of this paper is to develop a stylized model of the interaction between the fiscal and banking sector in the presence of government guarantees. This model permits endogenous policy reversal during a period of stabilization characterized by fiscal and/or monetary restraint.[3] Subsequently the empirical predictions of this model are tested using Indian data.

The model developed in this paper highlights the monetary transmission mechanism through the bank lending channel and thus fits in with the literature which emphasizes the importance of banks in the monetary policy transmission. This literature argues that if banks are the main source of credit generation or if bank loans are imperfect substitutes for other assets in the economy, monetary policy can be effectively and independently transmitted through changes in bank loans (Kashyap and Stein, 1994). This literature can be divided into two main strands: the first comprises some early analyses (e.g., Brunner and Meltzer, 1964; Modigliani, 1963; Tobin, 1969) and includes general equilibrium models of financial intermediation with imperfect substitutability across assets. The main argument of these studies is that since bank loans are imperfect substitutes for other assets, interest rates in the economy will not change instantly (indicating the existence of "price stickiness") and hence monetary policy may remain effective.

The second strand of this literature comprises more recent studies that focus on the importance of gaps between the expected returns of lenders and the cost faced by borrowers the so-called "external finance premium" (henceforth called the premium) (Bernanke and Gertler, 1995). These gaps can arise due to imperfections in the credit market: moral hazard and the costs of monitoring loans (Pankki, 2003; Sinn, 2001), no deposit insurance (Webb, 2000), transaction costs (Edwards and Vegh, 1997), other adjustment costs (Elyasiani et al., 1995) and regulated interest rate regimes (Demetriades and Luintel, 1996). Any monetary policy measure, say an increase in the interest rate, will increase the premium, thereby increasing the cost of borrowing and hence lowering investment and real activity. Hence these gaps tend to move in the direction of monetary policy and have a magnifying effect. On similar lines the theoretical framework in this paper is characterized by lending and deposit spreads as the main driving forces of the model.

In trying to explain the role of government guarantees the current theoretical framework is related to the literature on government guarantees which has mainly focussed on the South East Asian financial crisis (Alejandro-Diaz, 1985; Burnside et al., 2001; Corsetti et al., 1998; Dooley, 2000; McKinnon and Pill, 1998 among others). Thus, Burnside et al. (2001) discuss a framework in which banks are reluctant to hedge their exchange rate risks arising from foreign borrowing because of the presence of government guarantees. They further develop a framework in which government contingent liabilities are transformed into actual liabilities, fulfilling existing expectations. However, their model is not credit constrained and they do not consider any other distortions in the economy.

In order to understand recent experiences of policy reversals in India, it is imperative to model a banking sector which is simultaneously subjected to credit market distortions and government policy like the presence of government guarantees. The model used in this paper provides such a framework. Hence this paper is a substantial extension of the extant literature to make it more applicable to the observed empirical regularities and policy framework of selected developing countries, particularly India.

The model is an extension of the framework used by Edwards and Vegh (1997)[4] who discuss the magnification of macroeconomic disturbances via the banking sector thereby emphasizing the 'bank lending channel'. It is argued that in the case of developing economies banks are not mere 'propagators' of the crisis but may actually be the cause. In addition to the above, and as mentioned earlier, this approach enables an endogenous policy reversal to be modeled in respect of the government's stabilization efforts. In particular, the empirical analysis demonstrates that the impact of foreign financial shocks, i.e. interest rate rises on output and domestic credit is insignificant. However, in the medium term when on-going global recession will translate into a real-sector shock leading to higher deficits, the proposed theoretical framework demonstrates that a banking system like India's with unlimited government guarantees will be less able to deal with these real sector shocks. Thus the impact of the current recession on India's growth rate may yet be significantly adverse in the medium term.

The plan of this paper is as follows. Section 2 develops a general equilibrium model with four agents, households, firms, banks and government, satisfying the above mentioned characteristics of a developing semi-open economy. Section 3 characterizes the equilibrium by simulating the effects of some exogenous shocks to the economy. Section 4 empirically tests the transmission mechanism of the model using Indian data. As is the practice in the literature, a reduced form VAR approach and impulse response function (IRF) are used to investigate the impact of an exogenous shock to the economy. Section 5 concludes.

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[1] An important question becomes whether public debt is sustainable over a long horizon. In the particular case of India this question is answered in the affirmative in (Jha and Sharma, 2004).

[2] It will be shown in Section 2 that this is equivalent to a restrictive budgetary policy.

[3] For a review of the history of recent policy reversals in India see Virmani (2005).

[4] This paper focuses on one of the extensions suggested by Edwards and Vegh (1997): *"....the government's role in providing the credit to the banking sector in moments of distress appears as an important item on the agenda".*

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