BOOK REVIEWS

Emancipating the Banking System and Developing Markets for Government Debt by Maxwell J. Fry, London, Routledge, 1997, xviii + 280 pp.

A. Background, Theme, and Structure

The author of this book, Maxwell Fry, is a professor at the Birmingham University in the United Kingdom. He is well known as the author of *Money, Interest, and Banking in Economic Development* (Baltimore, Md.: Johns Hopkins University Press, 1991).

This book is based on Professor Fry's paper presented to the Third Central Bank Governors' Symposium, which was held by the Bank of England in 1996, as well as on discussion at the symposium. The first symposium in this series was convened in 1994, commemorating the tercentenary of the Bank of England. This symposium, which has since been held every year, is attended by central bank officers and economists, who meet to discuss problems faced by central banks in developing countries. The proceedings are published and made available to the public.[1]

At past sessions of the symposium, agreement was reached on the following: The larger the share of central bank financing in fiscal deficits and the larger the share of fiscal deficits in the banking sector's lending, the higher are inflation rates and the lower are growth rates. Reacting to this notion, Eddie George, Governor of the Bank of England, asked on behalf of the participating governors of central banks, "how should a government best meet its borrowing requirements?" The question became the main theme of the third symposium. With this understanding, the book under review intends to analyze and to discuss concrete prescriptions for this question.

Chapter 1, Part I, titled "Why Develop Markets for Government Debt?: Overview and Summary," explains the author's concerns and purposes, and provides a summary of the whole volume. Chapter 2, "Debts, Deficits, Inflation and Growth," presents the theoretical framework used in this book. Part II gives factual accounts as well as theoretical explanations about the financing means that developing governments are prone to depend upon when faced with the pressures of fiscal deficits. A conclusion is reached, from discussion in Parts I and II, that government deficits should be financed by financial and capital markets in order to protect the independence of financial policies from the pressures of fiscal deficits. Part III, "Developing Voluntary Domestic Markets," goes on to discuss ways and means of developing financial and capital markets, and presents concrete and practical prescriptions.

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[1] The results of the first symposium were published as Forrest Capie, Charles Goodhart, Stanley Fisher, and Norbert Schnadt, *The Future of Central Banking: The Tercentenary Symposium of the Bank of England* (Cambridge: Cambridge University Press, 1994) and those of the second as Maxwell J. Fry, Charles Goodhart, and Alvaro Almeida, *Central Banking in Developing Countries: Objectives, Activities and Independence* (London: Routledge, 1996).

B. *Theoretical Framework*

1. *Theoretical framework*

In Chapter 2, the relationship between the government debt and the fiscal deficit is described by the following equation:

$$B_t = B_{t-1} + r \cdot B_{t-1} + X_t,$$ (2.1)

where B = government debt, r = interest rate, X = primary deficit, namely, government expenditure (minus interest paid) minus fiscal revenue, and t = time period.

Reformulating equation (2.1) to indicate the variable in GDP ratio, the change over time of government debt is shown by the following:[2]

$$\frac{db}{dt} = x + (r - \gamma)b,$$ (2.3)

where b = ratio of government debt to GDP, x = ratio of primary deficit to GDP, and γ = growth rate.

For the ratio of government debt to GDP to stay constant, db/dt should be zero. Therefore, equation (2.3) is rewritten as:

$$x = (\gamma - r)b.$$ (2.4)

Equation (2.4) is the core of the analytical framework of this book. It shows that when the interest rate on government debt (r) is higher than the GDP growth rate (γ), the primary fiscal deficit should be negative, in other words the government should have a fiscal surplus if the ratio of government debt to GDP (b) can only stay constant. Otherwise, the ratio of government debt to GDP will continue to rise, leading to fiscal bankruptcy. It follows from the above that the basic policy needed to avoid such an adverse eventuality is to reduce government expenditures and increase tax revenues.

Such policy choices are easier said than done in many developing countries. In reality, then, how are these countries managing to avoid fiscal bankruptcy? A first measure used is accelerating inflation. This acts as taxation on the people's money holding in the form of inflation. A second is lowering real interest rates by means of financial repression. This amounts to lowering the borrowing cost of the government or fiscal deficit. A third measure is to rely on foreign loans.

2. *Agreement under the Maastricht Treaty*

Such fiscal deficit financing measures have been taken not only in developing countries but also by several developed countries, if to a lesser degree. The author sheds light on this by examining government debt and fiscal deficit ceilings as agreed to under the Maastricht Treaty (p. 36). The treaty set the maximum government debt/GDP ratio at 60 per cent and maximum overall or conventional deficit ratio at 3 per cent. The annual GDP growth rate calculated from these ceilings, using equation (2.4), is 5 per cent. Since the actual average growth rate of EU countries is 2.5 per cent, half this figure, the author notes that this figure is unrealistic.[3]

[2] In a stable state, $b_{t-1} = b$ and $x_t = x$.

[3] If the fiscal deficit the Maastricht Treaty assumes does not presuppose inflation but includes government interest payment, $x + rb = \gamma b$ is induced from equation (2.3) for a stable state. If $x + rb = 0.03$ and $b = 0.6$, the GDP growth rate (γ) is 5 per cent.

However, if inflation is assumed at 3–4 per cent, the government deficit/GDP ratio of 3 per cent would remain constant given the actual GDP growth rate of 2.5 per cent, taking a debt/GDP ratio of 50 per cent, a level lower than the treaty ceiling of 60 per cent.[4] The author thus considers that indirect taxation by an annual inflation rate of 3–4 per cent is assumed by the treaty.

3. *Verification through statistical data*

Using the above theoretical framework, the author examines relationships between government deficits and various variables, using 1979–93 data from 111 countries. These countries are divided into the OECD and developing country groups. For each group, primary deficit/GDP ratios in a steady state are calculated by equation (2.4) from the 1979–93 data shown in Table 2.2 (p. 34). Equation (2.4) shows the conditions within which government debt/GDP ratio can remain constant. This equation means that if the indicated primary deficit/GDP ratio is not honored, the government debt/GDP ratio will increase, leading to fiscal bankruptcy. The calculations show the following: for OECD countries, the deficit/GDP ratio must be −0.39 per cent, meaning that the government must maintain a surplus equal to 0.39 per cent of GDP in order to keep the debt/GDP ratio stable; for developing countries, the required deficit/GDP ratio is 1.17 per cent, meaning that they can run fiscal deficits to that extent (p. 36).

From the above we learn that the conditions required to maintain debt/GDP ratios stable are severer for OECD countries than for developing countries. Unexpected as this conclusion may be, it reflects the higher growth rates (γ) and lower real interest rates (r) in developing countries than in OECD countries.

4. *Problems of the theoretical framework*

In regard to the theoretical framework of this book, it should be pointed out that in the model used here, the aim is to obtain the range of fiscal deficits that would remain constant, irrespective of the initial government debt level. It is therefore clear that if the permissible level of government debt/GDP ratio is higher than the current ratio, the level of fiscal deficit consistent with the permissible level is accordingly higher. In fact, the government debt/GDP ratios of OECD countries are lower than those of developing countries. Considered this, the fiscal constraints on OECD countries should be milder than they are calculated here.

A major flaw of this theoretical framework, in fact, lies in the fact that the author neglects the initial government debt/GDP ratio as he proceeds to calculate the margin of fiscal deficit needed to satisfy the constraining conditions that can keep the initial debt/GDP ratio constant. It should be pointed out that fiscal constraints differ greatly between low-debt countries with no initial government debt and high-debt countries whose initial government debt level is already high. If we want to identify fiscal constraints on a country at different points

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[4] In case the deficit to GDP ratio stipulated in the Maastricht Treaty includes inflation, then the ratio of fiscal deficit to GDP inclusive of interest payment, calculated from $x + rb = X$, is 1.3 per cent and the ratio of inflation taxation to GDP 1.7 per cent, under the given conditions of GDP growth of 2.5 per cent and $b = 50$ per cent. The ratio of inflation taxation to GDP being $b \times$ inflation rate, the inflation rate then is 3.4 per cent.

in time, merely calculating a stable state of debt/GDP ratio is certainly not appropriate.

The relevant issue is not merely whether the government debt/GDP ratio is stable or not. Even if the ratio goes up, this is not necessarily a problem in itself. The question is at what level the government debt stabilizes and whether that level is tolerable for the country concerned. As it fails to answer these questions, this theoretical framework cannot provide useful policy hints.

C. The Temptation of Taxation through Inflation, Financial Repression, and Overseas Borrowing, and the Consequences of These Measures

Part II describes how fiscal deficits in developing countries are met by central bank financing, financial repression, and/or borrowing from overseas sources. The effects of these measures are also explained.

Let me take up the central bank financing of government deficits first. In OECD countries, the reliance on central bank financing has fallen historically. In recent years, central bank financing has had minus net figures in OECD countries (meaning that the governments borrow less from the central banks than they deposit in them) (p. 57, Table 3.2). By contrast, in developing countries central bank financing remains at a high ratio of 35.4 per cent of GDP (1989–93 average). The ratio has become even higher in recent years compared to the second half of the 1980s. This demonstrates the fact that in these countries a large part of the government deficits are financed by the central banks. This causes an increase in additional money supply and inflation, and eventually negatively affects saving and economic growth.

Second, Part II, which examines situations in developing countries, shows how governments alleviate fiscal constraints by lowering real interest rates through financial repression, thus reducing the cost of government debts. Real interest rates, as an average for developing countries, take a negative value (p. 71, Table 4.1).[5] Another interesting fact is that real interest rates in developing countries are widely dispersed, the highest hitting 240 per cent and the lowest minus 224 per cent per annum.[6]

Using the traditional McKinnon-Shaw model, the author explains how financial repression in real terms negatively affects fund allocation. He attempts on this basis to statistically confirm that repression of real interest rates, or a low interest rate policy, hampers saving and lowers the growth rate. On the other hand, he examines cases in some developing countries where pathologically high real interest rates work to the detriment of economic growth. This second analysis seems to be influenced by J. E. Stiglitz's recent argument about imperfect information and adverse selection. In this argument, the interest rate, saving, and growth have a positive interrelationship to each other when the real interest rate has a negative or slightly positive value (therefore the termination of financial repression spurs saving and growth) but can have a mutually negative relationship if the real interest rate is higher than the slightly positive level (a rising interest rate invites adverse selection

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[5] Though the median oscillates between minus and plus. Whatever the case, this shows that financial repression is being carried out on a large scale in developing countries.

[6] Unlike those for OECD countries, data from developing countries show a large dispersion. In analyzing developing country data, the author occasionally uses medians in order to avoid troubles emerging from this.

and thus obstructs growth). But the equation used to explain the above relationship has only little statistical significance (p. 88, equation 4.7).

Third, the author discusses borrowing from overseas sources as a means of financing fiscal deficit. At a glance, this measure would seem better than central banks' financing through inflation or financial repression. But the author concludes that both are the same inter-temporal budget constraint problems, therefore, overseas borrowing basically has the same weaknesses as borrowing from domestic sources.

Government and government-guaranteed foreign debt as a per cent of GDP in developing countries jumped from 25.9 per cent in 1979–83 to 56.1 per cent in 1989–93 (p. 105, Table 5.1). From the experience of the debt crisis of developing countries in the 1980s, the author concludes that if the ratio of foreign debt to GDP exceeds the 50 per cent level, any further increase in foreign debt will exert negative influence on the economy (p. 104). Using pooling data of developing countries, he makes an estimation on the assumption that a nonlinear relationship exists between foreign borrowing, on the one hand, and inflation rate, saving, and economic growth, on the other. The reason for the equation being nonlinear is that foreign borrowing, if it is not too large, will exert only a very small influence on the above variables, but will have exponentially increasing negative effects on them if borrowing becomes large. The results of this estimation, too, fail to be fully convincing from a statistic point of view (pp. 113–15, equations 5.5, 5.6, and 5.7).

D. Fostering Government Securities Markets

The policy prescription the author derives from the above is that governments should encourage securities markets, and should finance their deficits through the market. For this to be done, practical problems involving ways to foster such markets must be tackled. Part III of this book discusses precisely this question.

The author points out that there are two important tasks of the government related to the development of securities markets. The first is to carry out fiscal reform. At the moment, a number of developing countries depend on taxation through inflation and financial repression. Securities markets cannot be developed well unless these practices are rectified. The second is the formation of state bond prices. In other words, decisions of interest rates should be left to the market. Clean auctions should be maintained for this purpose.

These policies of course will cause the costs of government finance to go up and thus will eventually make tight fiscal policy inevitable. This kind of policy involves both pain and a delay before any positive effects begin to be felt by politicians and by the populace. Therefore, any shift to this type of fiscal policy is likely to meet political resistance even among monetary authorities in the government concerned. The key to solution is to effectively persuade opponents. A questionnaire distributed to central bank officials before this symposium in fact included a question on this point. The question was "How have you persuaded political actors?" Responses to this question as well as the author's comments, however, were uninspiring. Justifications cited by respondents for market-channeled deficit financing were (1) lowering inflationary pressure, (2) making the central bank's market-channeled financial policy more effective, and (3) increasing the independence of the central bank (p. 132). Readers who expected more persuasive and concrete prescriptions would be disappointed. In the discussion in Part III, in particular, the central bank officers' debates

at the symposium as well as their responses to the questionnaire were not fully and effectively utilized. But on second thought, I am reminded of the stark reality that there is no almighty discursive tool to persuade all political actors. Perhaps central bank officers have no choice but to do their best to persuade local political actors in manners appropriate to the local situations.

E. Summary

One of the distinctive points of this book is that it shows both theoretically and empirically the serious negative influences national economies suffer when governmental authorities succumb to the temptation of financing fiscal deficits with undue reliance on taxation through inflation, financial repression, and/or overseas borrowing. The theoretical framework used in this book is clear and simple, so financial practitioners with no theoretical expertise can easily follow the argument. Most of the positive analyses in this book attempt to verify a series of very simple relational equations against a vast volume of pooling data. Naturally such equations tend to have less statistical significance. Though it has a definite advantage of showing estimation results and causalities in a clear and simple manner, this methodology certainly cannot escape the criticism that precision and statistical persuasiveness are sacrificed. But simplicity has its own advantage. This book can be considered a success, therefore, if by presenting analysis in this simple form it helps to make financial officials in developing countries aware of the horrible consequences of easygoing deficit financing.

Another distinctive aspect of this book is that it has brought into tense interaction the economic analyses of economists and the practical policy concerns of central bank practitioners. The questionnaire sent to the eight central banks on the occasion of this symposium was similarly motivated. This concern has made this book not simply a theoretical work on government finance, but rather a book that can lead to economic analyses directly based on the real policy issues. Readers therefore might expect this book to present more concrete and practical prescriptions along with its theoretical analysis. Unfortunately, however, like previous similar attempts, it is not fully successful in this particular respect.

This book dares to undertake an orthodox economic analysis of the most serious problem faced by the developing countries' financial authorities—fiscal deficit and proper methods for financing them. I fully appreciate the author's effort. But I felt that concrete countermeasures are not fully discussed and persuasive policy suggestions are absent. This may only reflect my overly expectation of the book as well as of the symposium on which it is based.

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