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## **Comment**      Dante B. Canlas

The Doi, Ihori, and Mitsui chapter (DIM henceforth) takes off from some down-to-earth facts about the Japanese government's budget deficits and the existing maturity structure of its bonds and other government debt papers. The backdrop is the collapse of the so-called bubble economy in the early 1990s, the aftermath of which has been a prolonged economic slump marked by modest and spotty episodes of recoveries.

The authors attempt to assess the sustainability of Japan's debt policy by using the theory of optimal fiscal and monetary policy to assess the story behind the government's actual fiscal policy choices. From the perspective of a class of models that shares this theoretical platform, the writers try to extract a consistent set of efficiency and welfare principles that could offer guidelines about the future conduct of fiscal and monetary policy.

The usual starting point for the theory that is put to work in the DIM chapter is a government that consumes fixed amounts of goods and services. Prices and quantities are determined competitively. At some point in time, the fiscal authority may decide to increase the existing pattern of government spending to be financed not by a tax increase but by issuance of government debt. This debt may be in the form of interest-bearing bonds or noninterest bearing money. In this setting, the fiscal authority determines the level of the public debt while the monetary authority, the composition of that debt. The degree of independence enjoyed by the monetary authority from the fiscal authority largely determines whether an income tax at some future date or an inflation tax finances the budget deficit.

Theoretically, one can assume, following Frank Ramsey's (1928) canonical growth model, the presence of a central planner, with the fiscal and monetary authorities viewed as acting in a cooperative way. Both authorities take their cue from the central planner who maximizes a social welfare

function with discounted future utilities, and who recognizes the constraints posed by the existing production technology and the government budget. The constrained maximization yields the efficiency and optimality principles that in principle could also be delivered by a system of competitive markets with rational firms and consumers guided by a decentralized price system. The equilibrium situation may be described, using Robert Lucas's words (1986, 117–34), as an “evenly rotating system” through time, where price ratios adjusted for the given tax rates equal the ratios of the marginal rates of substitution for all the commodities taken pairwise. In case the fiscal and monetary authorities do not cooperate, then the situation may be modeled as a game wherein the players behave strategically; multiple equilibria may result, some of which are not Pareto optimal.

Today, there is a large body of aggregative theoretical models that may be regarded as extensions or modifications of the theory of optimal fiscal and monetary policy that I have just roughly described. I would regard the DIM chapter, which presents a number of interrelated models, as belonging to this genre. For example, let me draw attention to the first model of debt management that the authors present in section 11.3.2. The model imagines a world with households, firms, a fiscal authority, and a monetary authority. Households supply labor and form labor unions that possess wage-setting powers. The writers then posit a well-behaved production technology and a short-run aggregate supply function similar to that of Robert Lucas (1973). The two authorities act in a cooperative manner and behave so that a social loss function is minimized subject to the various constraints that the agents in the model confront. Efficiency and optimality conditions, perhaps second-best, governing inflation, tax rates, and government purchases are derived.

I would like to raise two questions in relation to this basic lead-off model of the DIM chapter. One, does it succeed in deriving a unified and consistent set of welfare-theoretic principles? I have some doubts and I hope the authors can help me out of my quandary. While the first-order conditions may be precise enough, I'm not sure about the propositions or intuitions the authors offer. Consider, for instance, their statement on maintaining “the neutrality of bonds toward social welfare (social loss).” It is unclear whether this is a proposition that flows out of their first-order conditions or is merely an expression of opinion.

The concerns that I have about the basic DIM model may be products of my own severe bounded-rationality affliction. The authors have assembled a seemingly hybrid model that combines insights from some celebrated papers, both descriptive and normative, on optimal fiscal (e.g., taxation, public debt management) and monetary policy. But major differences in the analytical frameworks of these papers exist; it would not do to pick one principle here and another there, and still hope to produce a unified and mutually consistent set of principles. For example, if tax smoothing is the

preferred fiscal policy choice, then tax rates ought to remain the same across time and across states of nature. But suppose debt financing using money prevails; then the inflation tax may have to be followed by an income tax (or consumption tax) to try to induce a rate of deflation that restores the value of people's cash balances in real terms. Time inconsistency results as the constant tax rate is abandoned at some future date.

My second and final question is this: do the efficiency and optimality conditions offer useful guides for the actual conduct of fiscal and monetary policy in Japan? In the concluding part of the chapter, the authors suggest a smoothing rule. The mechanics of the proposed rule have to be spelled out in detail. Moreover, the authors have to go beyond saying, "it is indispensable to restrain the increasing trend of reliance on government debts." Japanese politicians and bureaucrats have known this all along. Why? Will the Japanese, particularly, the elderly, not willingly hold those bonds anymore? At the most rudimentary level, some quantitative estimates of the effects of alternative modes of debt financing on the consumption and saving behavior of Japanese would be of help in this regard.

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