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Comment Frederic S. Mishkin

There are several key features of emerging market economies that make them very different from advanced economies: they have weak fiscal, monetary policy, and financial institutional frameworks that lead to high levels of transactions and liabilities denominated in foreign currencies (dollarization) and larger credit market imperfections.¹ The chapter by Batini, Levine, and Pearlman is very nice because, given the special features of emerging market economies, it asks exactly the right questions in examining macroeconomic policy issues in these economies: (a) How do financial frictions affect macroeconomic volatility and monetary policy? (b) Because of extensive dollarization, should the exchange rate have a special role in monetary policy?

In my discussion of the chapter, I will first discuss what it does, as well as

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1. For example, see Calvo and Mishkin (2003) and Mishkin (2006).

their model, describe their results, and then ask whether the results are right and what policy conclusions should we draw from them.

The Model

The chapter develops a small open economy dynamic stochastic general equilibrium (DSGE) model along the lines of Gertler, Gilchrist, and Natalucci (2007) to examine the effects of volatility and monetary policy from (a) transactions dollarization (TD), (b) credit market imperfections (financial accelerator [FA]), and (c) liability dollarization (the denomination of debts in foreign currency, often dollars, which they refer to as financial dollarization [FD]).² Their model has several unique features that distinguish it from the standard open economy model: (a) money enters the utility function in a nonseparable way so there is an effect of interest rate on aggregate supply; (b) households derive utility from both domestic and foreign (dollar) money holdings; (c) firms have some of their debt in foreign currency (liability dollarization); and (d) there is a financial accelerator because there are financial frictions.

While I applaud the basic framework of their model, I have concerns about their approach to modeling transactions dollarization using money in the utility function. I have always been skeptical of deriving the demand for money and thinking about the monetary transmission mechanism using money in the utility function. The results from this approach are very dependent on the exact form of the utility function, about which we know little. For example, in their model, utility is nonseparable in all its arguments and there are strong assumptions about cross derivatives and second derivatives that are not immediately obvious. In addition, putting money in the utility function does not always provide us with good intuition as to what is going on. An alternative way to go is transactions-based approaches, which might provide clearer intuition on the role of money, and therefore make it easier for us to evaluate results. However, embedding a transactions-based approach to the role of money may not be easy to do in their model, and transactions-based approaches can have their own problems if they make unattractive assumptions to make them tractable. Nonetheless, their use of money in the utility function casts some doubt on particular results, as I will discuss later.

The second set of issues with their modeling approach is that their results are likely to be highly dependent on the modeling assumptions, especially on their choices about the values of calibrated parameters. Let me give four examples. First, expenditure-switching effects from exchange rate changes are apparently small in their model, relative to balance sheet effects, because

2. Batini, Levine, and Pearlman use the nonstandard term “financial dollarization,” which I think is confusing because it could encompass dollarization of transactions while the authors mean for it to refer to dollarization of liabilities only.

of their calibration choices. Expenditure-switching and balance sheet effects work in opposite directions, so this feature of their model has important implications. In contrast to their paper, Céspedes, Chang, and Velasco (2004) find that in emerging market economies with small or moderate debt to net worth, exchange rate depreciation is actually expansionary in an emerging market economy because the stimulus from expenditure-switching effects are greater than the contractionary balance sheet effects. Second, the inflation measure used in the Taylor rule is a domestic rather than an aggregate measure like the consumer price index (CPI). This is quite nonstandard because most Taylor rules use aggregate inflation measures. Third, the pass-through from exchange rate changes appears to be complete in their model. Fourth, the loss function for welfare comparisons is affected by calibration choices.

The bottom line is that to really be convinced by the results, we need to see them exposed to a robustness analysis for key parameters in the model involving habit persistence, trade elasticities, shares of imported goods in investment, debt to net worth, and so forth. The authors are aware of this and indicate that they do plan to do this in future research.

Results

There are five major results derived from the model in the chapter. First, transactions dollarization is not a big deal. Transactions dollarization has little impact on volatility. Indeed, the welfare loss even falls with greater transactions dollarization because the supply-side effect from interest rate changes declines, making monetary policy more effective. Second, the financial accelerator and liability dollarization are a “lethal cocktail for welfare.” Third, the simple Taylor rule as a guide to monetary policy is only slightly suboptimal. Fourth, fixed exchange rate regimes are very bad. Fifth, in a flexible exchange rate regime, the monetary authorities should not respond to the exchange rate in their Taylor rule.

Are Their Conclusions Right?

Let’s look at each of these results in turn. The result that transactions dollarization is not very important to how the economy in an emerging market country behaves sounds right to me. Even with a different model, it is hard to think that the form of the transactions medium is a big deal to welfare. On the other hand, my skepticism about using money in the utility function as a modeling strategy makes me suspicious of the result that more transactions dollarization makes the economy better off. A different transactions-based model or different assumptions about the utility function might lead to a different result.

I strongly believe that the result that credit market imperfections and liability dollarization in emerging market economies is a “lethal cocktail”

is right on the money. Other theoretical models³ and detailed studies of financial crises in emerging market countries that I have described in my recent book (Mishkin 2006) strongly supports this conclusion. The lethal cocktail leads to two important policy conclusions that I stress in my book. First, it is imperative that emerging market countries promote reforms to improve their institutional framework—legal system, disclosure of information, and prudential supervision of the financial system. Not only are these reforms crucial to economic growth, but they also reduce lower credit market imperfections and make the economy more financially robust; that is, less susceptible to financial crises.

Second, emerging market countries need to take steps to limit *currency mismatch* (debts denominated in foreign currency when the value of production is denominated in domestic currency). One way of doing this is through prudential regulation and supervision, which can be used to restrict financial institutions from lending in foreign currency to firms whose output is denominated in domestic currency. In their model, they do not allow for indexation of debt. Reducing currency mismatch can also be promoted by encouraging debt that is indexed to inflation, as was done in Chile, which then decreases the incentives for denominating debt in foreign currency (liability dollarization). Good monetary policy that results in both low and stable inflation also can help discourage liability dollarization.

I also strongly agree with the conclusion that fixed exchange rate regimes are usually a bad idea for emerging market economies. Financial crises are far more likely in emerging market countries that have fixed exchange rates for the reasons outlined in their model. Fixed exchange rate regimes are subject to speculative attacks and if these attacks are successful, the collapse of the domestic currency is usually much larger, more rapid, and more unanticipated than when a depreciation occurs under a floating exchange rate regime. Then, as the mechanisms in the model in this chapter illustrate, fixed exchange rate regimes make an emerging market economy especially vulnerable to the twin crises of Kaminsky and Reinhart (1999), in which the currency collapses, destroys firms' and households' balance sheets, and then provokes a financial crisis and a sharp economic contraction. Supporting this view is the fact that countries exiting from pegged exchange rate regimes are more prone to higher cost financial crises and large declines in output the longer the exchange rate peg has been in place.⁴

However, there are additional reasons why fixed exchange rate regimes are likely to lead to more financially fragile economies in emerging market countries that the chapter does not explore. In their model, the level of liability dollarization is exogenous and so they do not allow for another channel

3. For example, Calvo and Mendoza (2000); Aghion, Bacchetta, and Banerjee (2000, 2001); Céspedes, Chang, and Velasco (2004); Eichengreen and Hausmann (2004); Schneider and Tornell (2004); and Caballero and Krishnamurthy (2005).

4. Aizenman and Glick (2008); Eichengreen and Masson (1998); and Eichengreen (1999).

that causes fixed exchange rate regimes to lower welfare. Fixed exchange rate regimes are likely to encourage liability dollarization.⁵ Then as Batini, Levine, and Pearlman indicate, greater liability dollarization leads to greater macroeconomic volatility and much lower welfare.

Furthermore, by providing a more stable value of the currency, an exchange rate peg can lower the perceived risk for foreign investors and thus encourage capital inflows. Although these capital inflows might be channeled into productive investments and stimulate growth, the presence of a government safety net and weak bank supervision can lead instead to excessive lending. An outcome of the capital inflow is then likely to be a lending boom, an explosion of nonperforming loans and an eventual financial crisis as is described in the case studies in my recent book (Mishkin 2006).

A fixed exchange rate regime also can also make it easier for countries to tap foreign markets for credit and so make it easier for the government to engage in irresponsible fiscal policy because it is easier for it to sell its debt. Argentina provides a graphic example of this problem (Mussa 2002). When its fiscal policy became unsustainable, it provoked a disastrous crisis that pushed it into a great depression.

Given the experience with fixed exchange rate regimes, Stanley Fischer—who was the first deputy managing director of the International Monetary Fund (IMF)—has stated that, “The adoption of flexible exchange rate systems by most emerging market countries is by far the most important emerging market crisis prevention measure.” (Fischer 2003, 19). A flexible exchange rate regime has the advantage that movements in the exchange rate are much less nonlinear than in a pegged exchange rate regime. Indeed, the daily fluctuations in the exchange rate in a flexible exchange rate regime have the advantage of making clear to private firms, banks, and governments that there is substantial risk involved in issuing liabilities denominated in foreign currencies. Furthermore, a depreciation of the exchange rate may provide an early warning signal to policymakers that their policies may have to be adjusted to limit the potential for a financial crisis.⁶

The finding in the chapter that the Taylor rule for monetary policy should not respond to the exchange rate leads the authors to make the following remarkable claim: “Emerging market central banks should not differentiate the way they set monetary conditions from the way they are set in advanced, frictionless economies.” Given the fact that exchange rate fluctuations have a major impact on firms’ balance sheets in emerging market economies because there is liability dollarization, this claim is counterintuitive. Are they right?

One caveat for their claim is that the result that the Taylor rule should not have a term involving the exchange rate may not withstand robustness tests

5. See Levy-Yeyati (2003) and Broda and Levy-Yeyati (2006).

6. For example, Mishkin (1998).

using different calibrations of their model. There is, however, a stronger reason to doubt their conclusion: the economy may be very nonlinear.

In “tranquil” times, their conclusion may well be right because in this environment, the economy may be reasonably characterized as linear and so their linear quadratic (LQ) approach, which depends on linearity, will provide the right intuition. Not responding to the exchange rate in this environment also makes a lot of sense because, as is emphasized in Mishkin and Savastano (2001), a focus on the exchange rate may lead to a weakening of the inflation target as a nominal anchor.⁷

The conclusion that the exchange rate should not have a special role in the conduct of monetary policy in emerging market countries, however, is likely to be very wrong in a nonlinear world with sudden stops (Calvo 2006), which Batini, Levine, and Pearlman do not model at all. In a sudden stop episode when capital abruptly stops flowing into the country, the normal interest rate Taylor rule, which Calvo (2006) calls “interest rate tweaking” may not work. Interest rate manipulation may not have the usual effect on the exchange rate in these kinds of episodes, with the result that the value of the currency would collapse in a nonlinear way, leading to huge negative balance sheet effects that cause a financial crisis and an economic collapse. In situations like this, it might make sense to temporarily suspend the interest rate rule and conduct foreign exchange rate interventions to prop up the exchange rate.

The bottom line is that benign neglect of the exchange rate could be bad policy when a country faces a sudden stop, but in normal, more tranquil times, I am sympathetic to their view that the monetary authorities in emerging market countries should not focus too much on the exchange rate.

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7. See Bernanke et al. (1999); Mishkin and Savastano (2001), and Jonas and Mishkin (2005) for examples.

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