Book Review of *Boom-Bust Cycles and Financial Liberalization* by Aaron Tornell and Frank Westermann
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1. Introduction

In the late 1980s and early 1990s, under the auspices of the Washington Consensus, a number of developing countries embarked on the path to financial liberalization. Following the East Asian crisis, however, these policy initiatives have come under heavy scrutiny and become the subject of heated debate in policy and academic circles around the world. Proponents of financial liberalization claim that by allowing capital to flow from rich to poor countries, financial liberalization generates economic growth. Critics of the policy argue that international portfolio equity and debt flows are myopic and flee emerging economies at the first sign of trouble. The crises that ensue impose massive costs, making financial liberalization a hard choice to justify. In the aftermath of these crises, the Washington Consensus has given way to "Washington Confusion" about financial reforms in the developing world (Rodrik, 2006).

Boom-Bust Cycles and Financial Liberalization by Aaron Tornell and Frank Westermann is a timely and balanced contribution to the highly-polarized debate. The authors argue, quite sensibly to my mind, that the view that financial liberalization is detrimental to economic development ignores the fact that liberalized capital markets may have played an important role in financing growth in developing economies. With this starting point in hand, the authors embark upon an ambitious journey to demonstrate that financial liberalization is a critical ingredient in the recipe for economic growth. At the same time, their analysis attempts to reconcile this with the view that, if not done right, financial liberalization can be accompanied by financial fragility and the occasional crisis. This is no mean feat.

The first part of the book presents a description of stylized facts about macro-variables related to financial liberalization, growth and crises. The authors begin by documenting a surprising fact—most of the fastest growing developing economies in the last two decades have also experienced lending booms and busts. In comparison to the post-war business cycles in the G-7 nations, the large fluctuations experienced by developing countries with open capital markets and strong credit growth resemble 'the Roaring Twenties followed by the Great Depression.' By contrast, countries with more stable credit growth have exhibited, on average, the lowest growth rates. Paradoxically, the authors argue, factors that contribute to financial fragility appear to be a source of long-term growth as well.

A natural question thus arises. How can we explain the positive link between long-run growth and the severity of the boom-bust cycles in developing economies? Tornell and Westermann argue that a strong credit channel is a key determinant of both long-run growth and the observed large fluctuations in such growth in economies that undertake financial liberalization. This is the subject of the remainder of the book.

The second part presents a theoretical framework to explain how credit market imperfections prevalent in the liberalizing economies can account for the observed empirical patterns. The authors then go on to examine the normative question of whether financial liberalization is a good idea even if it leads to financial fragility. The final part provides microeconomic evidence of the credit market imperfections that drive the results arising from the theoretical framework.

2. Sectoral Asymmetries and the Transmission Mechanism

Tornell and Westermann make an important point—fluctuations and crises in emerging markets are better understood as sectoral phenomena. Their goal is to disentangle these sectoral effects to examine transmission mechanisms that generate boom-bust cycles in emerging markets. They argue correctly that aggregate data mask these patterns.

The authors focus on a fundamental asymmetry between the tradable and non-tradable sectors to make their case. While the tradable sector can finance itself on international financial markets, the non-tradable sector has restricted access to international finance before liberalization. Financial liberalization provides firms in the non-tradable sector with access to international capital. The easing of credit constraints allows the non-tradable sector to grow. As a result, the demand for the tradable sector goods also goes up and an economic boom results.

To explain economic busts within the same framework, the authors argue that in emerging markets, institutional problems abound. Importantly, in the non-tradable sector, contract enforceability problems ("bad markets") and systemic bailout guarantees ("bad policy") lead to excessive credit risk taking and currency mismatch problems (dollar denominated debt and local currency revenues). To show this, they consider the impact of an adverse domestic interest rate shock. The tradable sector is insulated from the shock because it has continued access to international capital markets. In the non-tradable sector, however, net worth constraints kick in, and are exacerbated by the adverse impact of currency mismatch on firm balance sheets. Credit dries up, the non-tradable sector contracts, domestic demand for tradable goods falls and we have a bust.

A key aspect of the amplifying mechanism in *Boom Bust Cycles…* is that adverse domestic interest rate shocks are exacerbated by currency mismatches on non-tradable firm

balance sheets. Non-tradable firm assets are denominated in the local currency, whereas their liabilities are denominated in a foreign currency. It is worth noting that foreign currency-denominated liabilities suggest that these firms are borrowing at some international interest rate with, perhaps, a premium attached.

While the adjustment mechanism described in the text is successful in explaining booms, it is, perhaps, a little less successful in delivering busts. The mechanism that delivers the credit boom and an increase in economic growth relies on domestic firm access to international capital markets. The credit bust and decrease in economic growth, in contrast, are triggered by an increase in the domestic lending rate that has an adverse effect on the non-tradable sector's net worth, credit constraints kick in and the sector contracts. Following financial liberalization, how do domestic interest rate shocks affect firms (tradable or non-tradable) that are borrowing at foreign currency-denominated interest rates?

Relying on the domestic interest rate to trigger the bust suggests that there is some capital market imperfection that restricts non-tradable firm access to international capital markets. If, for instance, domestic banks tap into international capital markets following financial liberalization and provide credit to non-tradable firms at a domestic interest rate (and not a foreign currency-denominated rate), then, following a domestic interest rate hike, net worth constraints kick in for non-tradable firms, the non-tradable sector contracts and so on. In this case, however, a dilemma arises. It is hard to explain a currency mismatch on non-tradable firm balance sheets if these firms' borrowings are denominated in the local currency. Alternatively, if non-tradable firm debt is foreign currency denominated and at an international borrowing rate albeit with a premium, and capital-markets are open, a currency mismatch can be generated but not a role for the local currency-denominated domestic lending rate.

In a situation where domestic banks can lend at both a domestic lending rate and a foreign currency-denominated rate (as is the case in many emerging markets), it would be useful to know what the authors have in mind when it comes to a shock to the domestic interest rate. This is particularly important since the domestic interest rate shock is such a key part of the adjustment mechanism that triggers the bust. It is also worth noting that, following financial liberalization, the differential between the local currency-denominated lending rate and the foreign currency-denominated rate, is the expected devaluation risk.

In east Asia, for instance, domestic banks borrowed heavily from international banks on a short-term basis and lent to domestic firms, to the extent that domestic banks lent to non-tradable firms, and took on a fair amount of exchange rate exposure since firm borrowings were dollar-denominated while their revenues were in the local currency. Domestic banks also had a maturity mismatch (short-term borrowing and long-term lending) on their hands. During the crisis, foreign investors pulled out of domestic stock markets, foreign banks stopped rolling over the short-term loans and exchange rates collapsed.

With restricted access to international capital markets, domestic interest rates rose, exacerbating the currency and maturity mismatch on the banking sector's balance sheets, credit dried up, and the non-tradable sector suffered disproportionately during and in the aftermath of the crisis. Note that it is the real exchange rate devaluation that increased the domestic currency value of foreign currency-denominated debt and weakened non-tradable firm balance sheets, resulting in borrowing constraints. The tradable sector, on the other hand, suffered less to the extent that it had continued access to international capital markets. In fact, theory suggests that tradable firms become more profitable if the sector gains a competitive advantage from the exchange rate devaluation.

3. Equity and Debt Market Liberalizations

It would have been helpful if the authors had clarified the definition of financial liberalization more explicitly. Financial liberalization encompasses a wide range of policy measures, ranging from policies that put an end to domestic financial repression in the form of interest rate ceilings to the removal of barriers to international capital flows through various forms of capital account liberalization. The relationship between different financial liberalization measures and their impact on the credit channel proposed by Tornell and Westermann is not obvious.

To see this, observe that while equity and debt market liberalizations fall under the umbrella of financial liberalization, they can act upon the expansion of credit and economic growth through very different channels. The empirical analysis in *Boom Bust Cycles and Financial Liberalization* uses equity market liberalization dates as an indicator of changes in openness. However, the theoretical model the authors offer relies on international debt markets, domestic borrowing constraints for non-tradable firms, and domestic interest rate shocks to generate the booms and busts in credit and economic growth. Thus, the theoretical link between the adjustment mechanism and equity market liberalizations is not immediately apparent.

Equity market liberalizations allow foreign investors to hold and trade stocks on domestic stock markets. Inflows of foreign capital following the liberalization of domestic stock markets drive down the cost of capital for all firms in the economy by driving down the domestic interest rate. As the cost of equity falls, capital becomes cheap and investment goes up leading to economic growth, so an economic boom can be explained within this framework. Following equity market liberalizations, however, the cost of equity is pinned down by international benchmarks—based on a world risk-free rate and an international risk premium rather than the

domestic interest rate (Stulz, 1999). It is not clear where a domestic interest rate shock that drives the bust according to Tornell and Westermann figures in this picture.

4. Conclusion

In conclusion, I found the book to be an extremely informative read and one that provides a unique perspective on the controversies surrounding financial liberalization in developing countries. The authors do a service to the profession by documenting key stylized facts to inform the debate. In doing so, the authors make the important point that countries that undertook financial liberalization grew faster than those that did not. The authors pursue a laudable goal in trying to disentangle the asymmetries in the sectoral responses to financial liberalization and generating both booms and busts within a unified theoretical framework. I recommend this book as a must-read for graduate students and researchers in international and development economics.

References

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