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Corporate leverage and currency crises ☆

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Abstract

Currency crises can arise because it is optimal to bail out financially distressed exporting firms through a currency depreciation. Exporting firms will not undertake profitable investments when high leverage causes debt overhang problems. A currency depreciation increases the profitability of new investments when revenues are foreign-currency denominated and domestic-currency costs are nominally rigid. Ex ante, currency depreciation leads to excessive investment in risky projects even if safer, more valuable projects are available. However, currency depreciation is optimal ex ante if the risky projects have higher expected returns and if firms must rely on debt financing because of underdeveloped equity markets. © 2002 Elsevier Science B.V. All rights reserved.

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1. Introduction

Currency crises have been a frequent phenomenon in recent years. During the past decade, there have been major crises in Europe (the crisis of the Exchange Rate Mechanism), in Latin America (the Tequila crisis), and most recently in Asia. Moreover, these crises are difficult to abscribe solely to incompetent macroeconomic policies. In particular, the Asian currency crisis in 1997–1998 was unexpected and its magnitude a shock. By conventional fiscal measures, the governments of the afflicted countries were not in bad shape at all at the beginning of 1997. Only a couple of years earlier, the very same countries were held as good examples of prudent macroeconomic management by the World Bank. Their budget deficits were not excessive even though the growth of these economies had slowed somewhat during 1996. Current account deficits were large in some countries (Thailand and Malaysia), but in others (Korea and Indonesia) they were very modest. Indeed, Krugman (1999) concludes that there was not a strong case to be made for currency depreciations for macroeconomic reasons. Radelet and Sachs (1998) go even further and blame the magnitude of the crisis on financial panic in the currency markets, aggravated by bad advice from the IMF.

This paper provides a view of currency crises, based on excessive indebtedness and low profitability in the corporate sector, that is applicable to the Asian crisis as well as to some extent to the earlier European and Latin American crises. The argument proposed in this paper is that restoring investment incentives in financially distressed exporting firms through a currency depreciation is optimal ex post for an economy. In our model, the economy consists of profit-maximizing exporting firms, whose products are sold in the world markets. These firms can choose either safe or risky business strategies that can be financed either with debt or equity. If the firms choose the risky strategies, they can attain very high profits with some probability . If the chosen strategies fail, the exporting firms can partially recover their losses by investing in profitable new business opportunities. If the firms have been financed with debt, however, they will not undertake the new investments because of debt overhang problems, i.e., because the new investments would only benefit the creditors.

The government would like the new investments to take place, because they would increase the amount of real income for the economy, net of opportunity costs. In our model, the domestic currency is initially pegged to the foreign one. The government can make investments feasible by not defending the currency and thus letting it float. The resulting equilibrium currency depreciation will increase the profitability of new investments when revenues from the new investments are denominated in a foreign currency and when costs denominated in the domestic currency are sticky. If the exporting firms have been financed with equity, the new investment opportunities are feasible and the investments will always take place, and hence there is no need for currency depreciation. However, exporting firms in this model have an incentive to finance their risky projects with debt instead of equity, even if equity financing is readily available, thus forcing a currency depreciation. Moreover, there is no need for a depreciation if the amount of debt can be renegotiated privately between firms