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Debt composition and balance sheet effects of exchange rate depreciations: a firm-level analysis for Chile

José Miguel Benavente[a], Christian A. Johnson[b], Felipe G. Morandé[a,*]

[a]*Department of Economics, University of Chile, Diagonal Paraguay 257, Santiago, Chile*
[b]*School of Business, University Adolfo Ibañez, 3485 Presidente Errázuriz Ave., Santiago, Chile*

Abstract

By studying the behavior of foreign currency borrowing, maturity, sales and the investment decisions of firms listed in the Chilean Stock Exchange from 1994 to 2001, this paper assesses whether in the aftermath of the Asian crisis of the late 1990s the depreciation of the local currency (Chilean peso) affected these firms' real and financial decisions. At issue is the contrast between a negative net-worth effect and a potential expansionary competitiveness effect for the tradable sector. We find that there exists little evidence that devaluations cause a positive impact on investment and sales for firms with dollar denominated debt. The maturity structure of Chilean firms is mainly explained by the size of the companies. Large firms will have a debt structure biased to higher maturities. Analyzing dollar denominated debt composition the evidence shows that larger firms maintained a higher proportion of dollar denominated debt reflecting the development of the financial sector in Chile.

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1. Introduction

After six years of continuous real appreciation and virtual stability of the nominal exchange rate, Chile started to experience a significant nominal and real depreciation

*Corresponding author.
E-mail addresses: fmorande@econ.uchile.cl (F.G. Morandé), jbenaven@econ.uchile.cl (J.M. Benavente), chjohnson@uai.cl (C.A. Johnson).

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in early 1998 that in a matter of two years put the peso around two thirds of its 1997 real value. The Asian crisis first and the Russian moratorium and the Brazilian devaluation later were the main foreign triggers that ignited such an abrupt change in trend in an economy that was clearly overheated at that time.

Much has been debated on the effects of this abrupt depreciation could have had on firms' financial health. It has been commonly argued that much of the early efforts of the Central Bank of Chile to prevent a more intense depreciation by increasing domestic interest rates were motivated by its intention to avoid a financial collapse of firms highly leveraged specially in dollars. Indeed, although there was not much available information on currency mismatches at the firm level, in 1998 there was the suspicion that this could be a serious problem after a long period of nominal exchange rate stability, high economic growth and increasing access to foreign funds. In retrospective, however, that risk proved to be much lower than feared.

When sudden currency depreciation occurs, much of the discussion focuses on the macroeconomic determinants and consequences instead of its microeconomic aspects. However, private debt in foreign currency may be an important factor behind a currency crisis: a devaluation increases the value of dollar denominated debt lowering firm's patrimony, especially if those firms do not have their main income streams in foreign currency. Nevertheless, this negative income effect could be offset if firms have its main source of income from exports, avoiding substantial currency mismatches between asset and liabilities. Hence, currency depreciation may cause a contraction of investment for dollar-indebted firms if the negative wealth effect dominates the expansionary competitiveness effect.

The macroeconomic monetary policy implication of a currency crisis is different depending on whether the impact of the depreciation on output is expansionary or contractionary. In the event that the competitiveness effect dominates over the leverage in dollar debt, the defense of the domestic currency that typically central bankers aim to (as the Central Bank of Chile did) will not make much of a sense because the depreciation will expand instead of reducing output. In the other case, in which depreciation has a negative effect on firms' net wealth the central bank implementation of tighter monetary policies would be more justified.

As was noted by Bleakley and Cowan (2002), to evaluate whether the debt-effect dominates over the competitiveness effect is an empirical issue, requiring evidence directly from firms.

There are two studies using Chilean data that analyze financial activities by firms during episodes of financial crisis or expansions. Firstly, Gallego and Loayza (2000) study the effect of developments in Chilean financial markets on firms' financial structure based on annual balance sheet data available from 1985 to 1995. They choose this period because it corresponds to a wave of financial liberalization and to a significant stock market expansion.

After analyzing the main government policies towards financial markets they found remarkable changes in size, activity and efficiency of the banking sector. They also found that firms' cash flows and the level of indebtedness influence firms' investments although internal cash-flow and debt-to-capital ratio did not.