Available online at www.sciencedirect.com
ScienceDirect
Journal of Policy Modeling 33 (2011) 381–394
Journal of Policy Modeling
www.elsevier.com/locate/jpm

# Financial liberalization, exchange rates and stock prices: Exogenous shocks in four Latin America countries☆

Panayiotis F. Diamandis*, Anastassios A. Drakos

*Department of Business Administration, Athens University of Economics and Business, 76, Patission Street, GR-10434 Athens, Greece*

Received 10 March 2010; received in revised form 10 October 2010; accepted 10 November 2010
Available online 26 November 2010

## Abstract

This paper provides an analysis of the long-run relationships and short-run dynamics between stock prices and exchange rates as well as the channels through which exogenous shocks influence these markets. We use monthly data for the period January 1980 to February 2009 for four Latin America, namely, Argentina, Brazil, Chile and Mexico. We conduct our analysis by means of cointegration analysis and multivariate Granger causality tests. The main finding of our analysis suggests that stock and foreign exchange markets in these economies are positively related and that the U.S. stock market acts as a channel for these links. Moreover, it is shown that these links are independent of foreign exchange restrictions. Finally, stability tests proposed by Hansen and Johansen (1993) are applied and it is shown that the dimension of the cointegration space is sample independent while the estimated coefficients exhibit instability in recursive estimations. Instability in these long-run relationships is evident during the Mexican currency crisis of 1994–1995, the Asian crisis of 1997 and the 2007–2009 credit and financial crisis.


*JEL classification:* F21; F31; F36

*Keywords:* Latin America stock markets; Foreign exchange market; Capital market integration; Financial crises

☆ An earlier version of this paper was presented at seminars at Athens University of Economics and Business and the University of Crete. The first author acknowledges financial support from PENED 2003 under research grant 03ED46 by the General Secretariat for Research and Technology of the Ministry of Development. We would like to thank without implicating Dimitris Georgoutsos, George Karathanasis, George Kouretas and Leonidas Zarangas for many helpful comments and discussions. We thank Manolis Syllignakis for superb research assistance. We also thank four anonymous referees for valuable comments that improved the manuscript substantially. The usual caveat applies.
* Corresponding author. Tel.: +30 2108203279.
*E-mail address:* pfd@aueb.gr (P.F. Diamandis).

0161-8938/$ – see front matter 
doi:10.1016/j.jpolmod.2010.11.004

## 1. Introduction

During the last fifteen years we have witnessed a substantial development in the structure of both mature and emerging financial markets. The emerging markets have been in the center of interest of private and institutional investors as well as portfolio managers. More specifically this growing interest has come from the recognition of the important positive link between the process of financial liberalization in which these economies have undergone and economic development. The flow of portfolio investments to emerging financial has increased from a mere \$6.2 billion in 1987 to \$37.2 billion in 1992 to a total of \$211.6 for the period 2000–2006 (Bank of International Settlements, 2008). The flow of these funds has been mainly directed to bonds, certificates of deposit and commercial papers although during the recent period there is a major shift towards investing on stocks.

The four largest economies of Latin America namely, Argentina, Brazil, Chile and Mexico, have been over this period main recipients of capital flows directed to portfolio investments especially since the late 1980s and early 1990s when their economies became much more open. This trend was further magnified by the capital liberalization and privatization process that was initiated in the early 1990s and it was not interrupted even during the 1994–1995 currency crisis of Mexico although it was put under doubt during the 1997–1998 Asian and Russian financial crisis. The economic growth of the Latin America region as a result of the openness and financial liberalization became obvious by the fact that several Latin American countries exhibit substantial increase in their exports growth (Bekaert & Harvey, 2000; Bekaert, Harvey, & Lumsdaine, 2006; Grilli, 2005; Salvatore, 2001). Another consequence of the openness of these economies during this period was the efforts to implement a framework for economic and monetary integration initially between Argentina and Brazil and later with the creation of the Mercosur between Argentina, Brazil, Paraguay and Uruguay. However, this integration process has remained incomplete mainly due to the currency devaluation, sovereign debt default and a freeze on bank accounts that Argentina faced in the late 1990s after a 10 year period of devaluation. This process was further delayed during the Brazilian currency and the subsequent devaluation. These exchange rate movements had also substantial negative impact on the respective stock markets (Allegret & Sand-Zantman, 2009; Alvarez-Plata & Schrooten, 2004; Camarero, Flores, & Tamarit, 2006).

The upward trend of capital flows to the emerging markets of Latin America and in the rest of the world was interrupted as a result of the of the credit and financial crisis that began in September 2007 in the U.S. with the collapse of the subprime mortgage market. Since the summer of 2008 the spread of the credit and financial crisis from the U.S. to Latin America and the rest of the world caused significant negative effects on the stock markets and the economies of these Latin American countries (LACs). More specifically, the 2007–2009 financial crisis which reached its peak in October 2008 led the over borrowed hedge funds, private equity and other institutional investors to withdraw from the emerging markets of Argentina, Brazil, Chile and Mexico among others. This liquidation of financial assets included heavy sales of stock, bonds as well as currencies in an attempt to reduce the enormous realized losses that investors had already suffered. This dramatic capital outflow from these LACs increased the risk of a significant currency devaluation which could led in turn to enormous corporate losses and even bankruptcy reducing the value of stocks traded in the respective markets and accrued to investors major capital losses. Furthermore, the flight to quality by foreign investors had also led to a significant deterioration of the balance of payments of the LACs. The economic and monetary integration of Southern Latin America has suffered another setback during the current crisis as well.