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What determines market development? Lessons from Latin American derivatives markets with an emphasis on Chile

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Abstract

There is considerable heterogeneity in the development of derivatives markets in different countries. The question is: why? This paper addresses this question in the context of major derivatives markets in Latin America. The largest derivatives exchanges in Latin America are located in Argentina, Brazil, and Mexico. In addition, over-the-counter (OTC) markets exist in Chile and Peru. Excluding Peru, Chile's derivatives market is to date the least developed. We show that this is due to regulatory constrains and illiquidity. Domestic transactions are OTC, and consist mostly of exchange rate forwards. Recent changes in the Central Bank of Chile's exchange rate policy have not had a considerable impact on the aggregate trading volume of forwards. However, amendments made to the Law of Capital Markets in 2001 bring the possibility of having a more developed derivatives market in the future.

JEL classification: G1

1. Introduction

Prior to the 1970s, currency and interest rates risk was not generally a concern around the world. It was not until the failure of Bretton Woods that the volatility of the US dollar against the Japanese yen rose dramatically. At the same time, the yields on US long-maturity bonds fluctuated considerably at the end of the 1970s and at the beginning of the 1980s. This highly volatile economic environment was sharpened by the 1973s oil cri-

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sis. These changes underlined the importance of corporate risk management, namely, the strategy of eliminating costly lower-tail outcomes that might cause financial distress or interfere with investment plans (Stulz, 1996).

Specifically, between the mid-1970s and the mid-1980s, the derivatives market flourished. Forwards, futures, and options, began to be actively traded on and outside exchanges in most industrialized countries, with the Black and Scholes (1973) option pricing formula providing an important impetus to the development of these markets. Nowadays, notional amounts—a measure of market size—involved in derivative contracts are sizeable. Information gathered by the Bank for International Settlements (BIS) shows that the notional amount of outstanding positions reached US$99.7 trillion outside exchanges (OTC markets), and US$19.5 trillion on exchanges at the end of June 2001.

Among OTC transactions, positions on interest rates contracts represented 76 percent of the notional amount outstanding, whereas those on foreign exchange and other contracts (equity, commodities, credit and other derivatives) amounted to 20.5 and 3.4 percent, respectively. Among exchange-traded derivatives, interest rate contracts also predominated, reaching 89.9 percent of the notional amount outstanding. Meanwhile, turnover—a measure of market activity—reached US$1342 billion in OTC markets and US$2209 billions on exchanges at the end of June 2001.

Despite this impressive growth in derivatives markets around the world, considerable heterogeneity exists in the degree of development across different countries. For example, in Latin America, derivatives markets in Chile lag far behind those in Brazil and Argentina. What accounts for these differences? The analytical pricing machinery provided by Black and Scholes op cit, as well as the voluminous literature on contingent claims that has developed since,[1] are available freely to all participants, so the answer probably lies in institutional and legal factors. Understanding these factors is important for the broader issue of the design and development of financial markets and institutions, i.e., financial system architecture.[2] The purpose of this paper is to address this question within the context of derivatives markets in Chile, Argentina, Brazil and Mexico. Comparing these Latin American markets provides interesting insights into the impact of institutional and regulatory factors on the development of financial markets.

In Latin America, the largest derivatives exchanges are located in Argentina (MATBA, ROFEX), Brazil (BM&F, BOVESPA), and Mexico (MexDer). In addition, OTC markets exist in Chile and Peru. On the Buenos Aires Futures Market (*Mercado a Termino de Buenos Aires*), MATBA, the largest market of derivatives in agricultural products in Latin America, futures and options on futures on wheat, soybean, sunflower seeds are traded. The Rosario Futures Markets (*Mercado a Termino de Rosario*), ROFEX, offers derivatives on agricultural products (futures and options on soybean, corn, wheat, among others), feeder cattle, and financial products, but it is much smaller in size than the MATBA. For instance, for 1993–2001 the volume in tons of agricultural contracts negotiated on ROFEX amounted to only 11.2 percent of that on the MATBA.

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[1] See Hull (2000).

[2] See Allen and Gale (1999) and Boot and Thakor (1997).