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Valuation impact of currency crises: Evidence from the ADR market

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Abstract

This study analyzes American depository receipts (ADR) performance surrounding the outbreak of major currency crises during the past decade. By employing event–study methodologies and multi-factor pricing models, we find that the outbreak of a currency crisis is accompanied by a negatively significant abnormal return for the corresponding ADRs, even after controlling for variations in exchange rates. We also find significant upward shifts in the exchange rate exposure of ADRs when the home currency is switched from a "pegging" to a "floating" exchange rate regime. In addition, ADR-originating firms with larger sizes, greater proportions of U.S. market activities, and greater market liquidity have relatively less negative abnormal returns (ARs) and less significant upward shifts in currency exposure, implying that such firms are relatively better hedged against currency crises.

Keywords: ADR; Currency crisis; International portfolio diversification; Exchange rate exposures

1. Introduction

American depository receipts (ADRs) are U.S. dollar-denominated negotiable receipts for non-U.S. shares, thus allowing foreign companies to be listed and traded in U.S. equity markets. The Bank of New York estimates that over the past decade, the compound annual growth rate for ADR trading volume reached 22%. During 2000, the trading of ADRs in NYSE, AMEX, and NASDAQ reached a record high of 30 billion shares valued at US$1.185 trillion.[1]

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[1] See http://www.adrbny.com for annual reviews of the ADR market.

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The study of the ADR market has increasingly drawn the attention of investors and academicians, as a result of the increasing globalization of today's capital markets, intensifying the privatization of enterprises around the world, and of the U.S. investors' growing need for international portfolio diversification. One of the extensively investigated topics regarding ADR investments is their currency risk, that is, the sensitivity of ADR values to foreign exchange rate fluctuations.

Currency exposure can emanate from translation, transactions, and economic sources. Theoretically, the unexpected changes in currency rates are supposed to affect a firm's translated share price, its operating cash flows, and/or its cost of capital, therefore causing a valuation impact on the firm's equity returns. However, firms can minimize their foreign exchange exposure by operational hedges (i.e., shifting operations abroad to match foreign currency revenue with foreign currency cost streams) and/or by financial hedges (i.e., trading currency derivatives to offset adverse impact of exchange rate fluctuations and matching funding sources with revenue streams).

Empirically, existing evidence concerning the significance of currency exposure to a firm's value is mixed. Although the majority of stock markets worldwide are found to be exchange rate sensitive, U.S. firms have consistently been found to have weak foreign exchange exposure. ADRs, on the other hand, are neither purely foreign nor purely American, as they are commonly cross listed, traded, and even raise capital both on the U.S. stock markets and in their own home countries. Should their exchange rate exposure, then, more resemble that of U.S. stocks or that of foreign equities? How much should U.S. investors in ADRs be concerned about the exchange rate pricing factor? We hence investigate how effectively U.S. investors in ADRs are shielded from currency risk, particularly in the case of a collapse in the foreign currency. If ADR-originating foreign firms have effectively hedged their asset values from fluctuations in exchange rates, U.S. investors are protected. Otherwise, U.S. ADR investors would have to hedge the currency exposure largely on their own.

The currency exposure of ADRs hence remains a topic of significant interest to both foreign firms and U.S. investors, in the light of historical and potential currency turmoil around the world, particularly in emerging markets. Yet, so far, except for Bailey, Chan, and Chung (2000) and Huang and Stoll (2001), there are few published studies that investigate the valuation impact of currency crises on the ADR market.

This study examines the price performance of ADRs when a currency crisis breaks out in the ADR-originating country/region. We utilize the event–study paradigm to investigate the ADR market reaction to the occurrence of major currency devaluation events during the 1990s. Specifically, we analyze the U.K. pound sterling withdrawal from the European Exchange Rate Mechanism (ERM) in September 1992, the Mexican peso crisis starting in December 1994, the Asian financial flu starting in July 1997, the Russian ruble devaluation starting in August 1998, and the Brazilian real devaluation starting in January 1999.

We observe that (1) the event date of a currency crisis was consistently accompanied by a negatively significant abnormal return for ADRs originating in the crisis zone; (2) following a currency crash, there was a significant upward shift in the sensitivity of ADR returns to exchange rate movements, especially when a country is forced to switch its currency from a "pegging" to a "floating" exchange rate regime; and (3) on average,