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Were bid–ask spreads in the FX market excessive during the Asian crisis?

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Abstract

Bid–ask spreads for Asian emerging market currencies increased sharply during the Asian crisis. The question is whether the spreads were excessive or in line with standard models of bid–ask spreads. Pre-crisis estimates of the models show that spreads during the crisis were in most cases tighter than predicted and there were only a few cases of excessive spreads. The result is largely explained by substantial increases in exchange rate volatility during the crisis and to some extent by depreciating exchange rates. The empirical models have greater explanatory power for emerging market than for mature market currencies.

JEL classification: F31; G14; G15
Keywords: Foreign exchange; Market microstructure; Bid–ask spreads; Asian crisis

1. Introduction

Bid–ask spreads in foreign exchange markets are important since they determine transaction and hedging costs which in turn affect trade, the effectiveness of policy and ultimately carry significant real costs to the economy.[1] The study of bid–ask spreads and the microstructure of foreign exchange markets can also improve the analysis of short-run exchange rate behavior, which is an area where conventional macro-models have had limited success.[2] Market

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[1] The European Commission (1990) estimated that the elimination of spreads following the adoption of a single European currency would result in savings of 0.4% of Community GDP per annum. Furthermore, the estimated total transaction costs incurred by non-financial firms were on average 15% of their profits on turnover in other EC countries.

[2] See Flood and Taylor (1996).

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microstructure issues are particularly important in times of balance of payments crises when the adjustment process of the economy critically depends on exchange rate movements. Furthermore, if transaction costs increase significantly with a move from a relatively fixed exchange rate to a floating exchange rate, it takes longer before the added flexibility of the exchange rate has a positive effect on the real economy .

During the Asian crisis, bid–ask spreads on most Asian currencies skyrocketed to levels never seen before. Bid–ask spreads widened by factors of between 5 and 14 in dollar terms, drastically increasing transaction costs for converting emerging market currencies into dollars. Table 1 provides an overview of the costs associated with a US$10 million roundtrip transaction before and during the crisis period for the different Asian currencies that are analyzed in this paper. For example, for the Indonesian rupiah, the cost increased from a moderate US$8000 pre-crisis to a cross-section high of US$215,900 during the crisis whereas for the Hong Kong dollar (which remained under its currency board arrangement) the cost increased by only US $200. Such levels and changes in the cost of currency transactions can obviously have significant impacts on both micro- and macroeconomic variables.

Bid–ask spreads also affect the revenue of various institutions active in the foreign exchange market, including commercial banks where the abrupt rise in bid–ask spreads during the Asian crisis resulted in record trading profits. The Institute of International Finance (1999) remarked that "...a diversity of business lines enabled most banks to offset losses in Asia with record foreign exchange trading revenues. This enabled most financial firms to emerge from the East Asian market turmoil without experiencing debilitating losses." One justification for these record profits is that the gains represented compensation for the high levels of risk that foreign exchange market participants were exposed to during such turbulent times.

The purpose of this paper is to examine if bid–ask spreads on Asian currencies were excessive during the 1997 crisis. In answering this question, the paper first documents features of bid–ask spreads for Asian emerging market currencies and then estimates standard models of bid–ask spreads that have previously been used mainly for mature markets. The predicted spreads from the models are then compared to actual spreads to assess if spreads were excessive. The currencies studied are the Thai baht (THB), the Indonesian rupiah (IDR), the Korean won (KRW), the Malaysian ringgit (MYR), the Philippine peso (PHP), the Singapore dollar (SGD), the Hong Kong dollar (HKD), and as a mature market benchmark, the Japanese yen (JPY).

Table 1
The cost of a US$10 million round trip transaction (in US dollars)

Currency	1996–1997	Crisis
Thai baht	13,100	68,300
Indonesian rupiah	8800	215,900
Korean won	34,500	42,200
Malaysian ringgit	4000	28,300
Philippine peso	23,700	163,500
Singapore dollar	6900	14,000
Hong Kong dollar	1200	1400
Japanese yen	6000	5700

Source: Reuters and authors' calculations.