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ABSTRACT:
THE EFFICIENCY OF THE MARKET FOR FOREIGN EXCHANGE UNDER FLOATING EXCHANGE RATES

*W. Bradford Cornell and J. Kimball Dietrich**

Our paper reports on tests of the weak form of the efficient markets hypothesis applied to spot foreign exchange contracts for the Canadian dollar, Swiss franc, Dutch guilder, German mark, British pound, and Japanese yen, during the period March, 1973, to August, 1973. We conclude that the evidence favors the efficient market hypotheses, and find that the behavior of one-day rates of return on spot contracts resembles the behavior noted for other speculative prices.

Two types of tests of market efficiency are performed. First, the autocorrelations of one-day rates of return for one to eight trading-day lags are computed. We calculate simple autocorrelations and use forward rates to estimate changes in expectations of currency appreciation in order to account for the fact (noted by Fama) that an efficient market does not imply a random walk. All of the estimated autocorrelation coefficients are small and only four out of a possible forty-eight are significant. We conclude that these tests favor the efficient market hypothesis.

A second set of tests applies Alexander filter rules and moving-average trading rules to daily returns to find evidence of time dependencies not related to calendar time. For the mark, guilder and franc, we find the maximum-profit trading rules produce profits of the order of ten to sixteen percent per year (the others are all less than three percent). This return, furthermore, cannot be interpreted as a risk premium because none of the currencies had Betas significantly different from zero. However, two of these currencies were tied in a joint float, and given the high money market rates of return in the period and exchange risk, we argue that these returns cannot be considered as excessive.

The distribution of daily rates of return has fat tails relative to the normal. Further, large price changes tend to follow large changes, as Fama found for common stock. We conclude that spot exchange prices behave similarly to stock and commodity prices, despite the differences in the institutional structure of that market.

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* *University of Arizona.*