Crossing the lines: The conditional relation between exchange rate exposure and stock returns in emerging and developed markets

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A B S T R A C T

This paper examines the importance of exchange rate exposure in the return generating process for a large sample of non-financial firms from 37 countries. We argue that the effect of exchange rate exposure on stock returns is conditional and show evidence of a significant return impact to firm-level currency exposures when conditioning on the exchange rate change. We further show that the realized return to exposure is directly related to the size and sign of the exchange rate change, suggesting fluctuations in exchange rates as a source of time-variation in currency return premia. For the entire sample the return impact ranges from 1.2 to 3.3% per unit of currency exposure, and it is larger for firms in

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emerging markets compared to developed markets. Overall, the results indicate that foreign exchange rate exposure estimates are economically meaningful, despite the fact that individual time-series results are noisy and many exposures are not statistically significant, and that exchange rate exposure plays an important role in generating cross-sectional return variation. Moreover, we show that the relation between exchange rate exposure and stock returns is more consistent with a cash flow effect than a discount rate effect.

“The key but far from straightforward question is of course “how much” exchange rate movements matter.” Exchange rate moves in a global economy: a central banking perspective, Speech by Gertrude Tumpel-Gugerell, Member of the Executive Board of the ECB, at the Federal Reserve Bank of Philadelphia, Philadelphia, 3 December 2004

1. Introduction

Even though financial theory predicts sizable foreign exchange rate exposures for many firms, a large literature has documented that empirically the impact of exchange rate risk on stock returns is economically and statistically small in almost any sample. While it might be possible to reconcile the empirical evidence with predictions from theory by considering various forms of corporate hedging that reduce large gross exposures of firms to levels that are small on an after-hedging basis, the question remains whether empirical estimates of exchange rate exposures are, despite being small, still economically meaningful and useful for investors in financial markets. In this paper we address this issue. To this end, we argue and show that tests of the relation between stock returns and exchange rate exposure are fraught with similar problems revealed by Pettengill et al. (1995) and Lakonishok and Shapiro (1984) with regards to the conditional relation between stock returns and market betas. Tests of the relation between market betas and future returns postulate ex ante a positive, unconditional relation between expected returns and market betas. However, these papers propose that the relation between realized returns and market betas is segmented, i.e. positive in periods of positive market excess returns and negative in periods of negative market excess returns. This conditional relation entails that market betas may not show a significant relation with returns in standard Fama and MacBeth (1973) regressions since the existence of a large number of periods with negative market excess returns biases test of a positive unconditional relation between market betas and returns against finding a systematic relationship.

Since positive and negative exchange rate change occur with roughly the same frequency and since the average currency premium is close to zero, empirical tests are even more biased against finding a positive unconditional relation than for market betas. Consequently, we argue that the relation between stock returns and exchange rate exposure should be examined conditional on the realization of the exchange rate change, i.e. positive for local currency depreciations and negative for local currency appreciations, while the unconditional relation is likely insignificant on average, just as for market betas. We test these predictions of the relation between exchange rate exposure and stock

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2 Much of the previous work in this area examines exchange rate exposures from regressions of exchange rates (and control variables) on stock returns (e.g., Dominguez and Tesar, 2006, 2001a,b; Allayannis and Ihrig, 2001; Williamson, 2001; He and Ng, 1998; Bartov and Bodnar, 1994; Bodnar and Gentry, 1993; Jorion, 1990). These studies demonstrate only a weak impact of exchange rate changes on the past distribution of firm returns and tend to focus on identifying corporate variables that explain the cross-sectional variation in exposures. See Bartram et al. 2005, with regards to predictions from financial theory.
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