

ASYMMETRIC EXCHANGE RATE EXPOSURE

Examining the link between currency movements and stock market returns.



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The impact of exchange rate risk on firm value is complex: indeed, the ability to detect a significant relationship between exchange rate movements and stock prices has met with limited success. A recent study by Koutmos and Martin (2003) argues that exchange rate exposures may be asymmetric and that accounting for these asymmetries in the methodology may improve the detection of exposures. The typical assumption is that there is symmetric stock price sensitivity; for example, net exporters experience adverse stock price effects due to appreciations of the domestic currency and beneficial stock price effects due to depreciations of the domestic currency.

Asymmetric stock price sensitivity to exchange rate movements may result from asymmetric pricing-to-market behavior, hysteretic behavior, and asymmetric hedging. The following example shows how asymmetric pricing-to-market may occur: with an appreciation in the domestic currency, an exporter with a market share objective would not likely permit foreign currency prices to increase for fear that sales volume would drop. This pricing action results in reduced margins and is considered to be 'pricing-to-market'.

On the other hand, with a depreciation in the domestic currency, this exporter with a market share objective would likely lower their foreign currency prices to grow sales volume. This pricing action nearly always results in maintained margins. Hence, the asymmetric pricing-to-market behavior of an exporter with a market share objective results in asymmetric margin effects, and likely induces asymmetric stock price sensitivity.

Hysteretic behavior by exporters can also induce asymmetric stock price sensitivity. If the domestic currency weakens, new export competitors commonly enter the market, putting pressure on margins.

However, if exporters do not exit the market when the domestic currency strengthens (i.e., hysteresis occurs), pressure is again placed on margins. Thus, these asymmetric competitive effects may not allow cash flows to increase with domestic currency depreciations, yet cause cash flows to decrease with domestic currency appreciations.

Asymmetric hedging occurs when firms take one-sided hedges, such as with using currency options. Net exporters with foreign currency receivables (i.e., with net long foreign currency positions) would prefer to protect themselves against domestic currency apprecia-

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tions, yet remain unhedged and benefit from domestic currency depreciations. To the extent that the firm asymmetrically hedges, there should be asymmetric stock price sensitivity.

Financial market participants can benefit from the results of the study by Koutmos and Martin (2003), which shows returns on nine sector indexes across four countries are frequently asymmetrically affected by exchange rate movements, especially in the financial and non-cyclical sectors. This study is directly relevant for money managers with a sector-level focus to improve their understanding of sector exposure to exchange rate risk.

Research analysts at major investment banks should scrutinize the firm-level sensitivity of not only stock returns but cash flows to exchange rate risk. A recent study by Martin and Mauer (2003) describe cash flow-based methodology to evaluate firm-level exchange rate exposure. ■