resource shifts are caused by misaligned exchange rates, the collective efficiency of trading nations is suboptimal.

Pass-through Options

A trading firm can try to avoid short-term exchange rate volatility by abstaining from international activities, or it can try to hedge the uncertainty by employing appropriate financial instruments. For long-term misalignments, the firm needs a more comprehensive strategy. Among other things, this strategy entails determining the appropriate price response of tradeables to changes in the exchange rate.

One of the key roles of the exchange rate is to relate domestic and foreign prices. If the domestic price level rises, for example, the value of the domestic currency must fall in order to maintain the same relationship between domestic and foreign prices, when expressed in a common currency. Otherwise, domestic exports will be priced out of the foreign market and imports from the foreign country will displace domestically produced goods.

An issue that firms involved in international trade must deal with is what to do when the exchange rate moves unexpectedly. The relationship between domestic and foreign prices is altered. Firms must decide whether to change the prices of traded goods to offset the exchange rate effect. At stake is the profitability of trade.

The Federal Reserve Bank of New York has looked at the impact of an exchange rate appreciation on the profitability of U.S. manufacturers.[22] The study concluded that regardless of the ways in which exporters adjusted their pricing strategies, their profits declined. If the dollar appreciates and the firm raises the foreign currency price of its exports, passing the full effect on to consumers in the foreign market, the per-unit dollar profit stays the same, but total profits fall because the products are less competitive in the foreign market and sales decline. If the firm keeps the foreign price the same following the currency appreciation, passing none of the effect on to consumers in the foreign market, the dollar price of exports falls by the same amount the dollar has appreciated. In this case, the firm preserves market share, maintains export volumes and foreign currency profits, but the profit in dollars will be lower.

[22] See J. Hung, "Assessing the Exchange Rate's Impact on U.S. Manufacturing Profits." In *Quarterly Review*. New York: Federal Reserve Bank of New York, Winter 1992-93.