Exchange rates are risky business

Dr. Alpa Dhanani of the Cardiff Business School takes an academic look at fluctuating exchange rates and their implications for businesses.

International business opportunities are inherently more risky than those closer to home. In going global, firms all too often encounter new types of risk, and so incur costs that they would ordinarily avoid in a domestic setting. These costs might include insurance premiums to protect property from nationalisation or costs for physical security measures; but the most common risk that firms face in the international marketplace is dealing in different currencies. Exchange rate risk arising from fluctuations in currency rates can cause extensive volatility in profitability, or even large losses in otherwise profitable operations.

The leading question here is "should companies seek to manage the effects of currency movements on financial performance?" This article addresses this issue. It explains that while the theoretical principles underpinning movements in exchange rates suggest that risk management is at best an irrelevant exercise, corporate reality is different. Capital market imperfections such as taxation and costs of financial distress make a strong case for the management of exchange rate risk.

The theory

In a perfect world, movements in exchange rates occur only so as to attain equilibrium positions between the interest rates and inflation rates of different economies in the market place (*Figure 1*). Disequilibrium positions create profitable opportunities for arbitrageurs, exploitation of which results in movements in exchange rates. This ensures that the tendency in the foreign exchange markets is towards equilibrium.

In essence then, movements in exchange rates do not materialise to create risk for companies, rather they occur only to neutralise the effects of movements in inflation and interest rates on corporate performance. The increase in costs for an exporter as a result of a high level of inflation in the local market, for example, would be compensated for by a corresponding increase in the sales revenues, because the exporter's currency would devalue to maintain the equilibrium position in the macroeconomic environment. This is known as purchasing power parity (PPP).

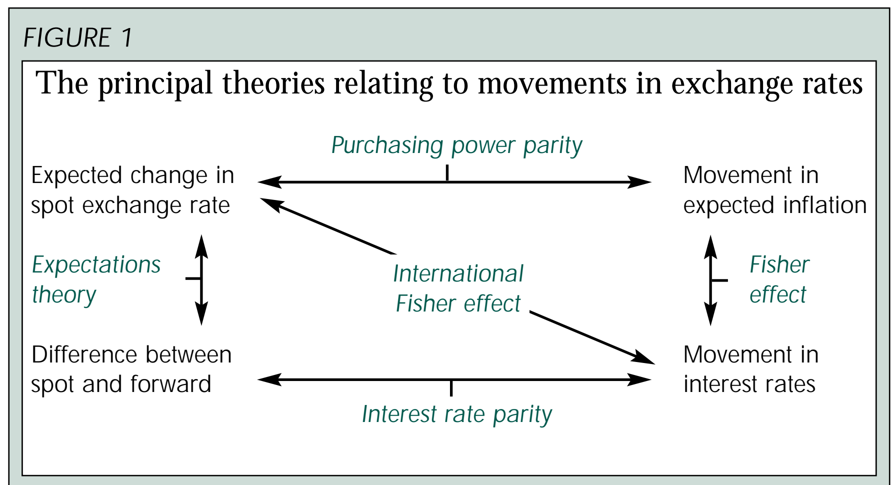


FIGURE 1
The principal theories relating to movements in exchange rates

Similarly, the rewards for borrowing in a country with low interest rates would be offset exactly by the disadvantage accrued, as a result of the revaluation of this country's currency – a theory known as the international Fisher effect, or IFE. As quoted in a common currency, the relatively low interest repayments in the foreign country and high interest payments elsewhere would amount to the same situation.

In a perfect market place there is also a relationship between forward exchange rates and future spot exchange rates (expectations theory). In this instance forward rates predict the future spot rates accurately over time. Hedging currency risk with forward contracts is of little worth, since the forward rate will, on average, equate the future spot rate. In fact, in light of the higher bid/ask spread on forward transactions as compared to spot transactions, avoiding cover is likely to be more profitable.

Overall, assuming perfect market conditions, exchange risk management is at best an irrelevant exercise since there is no real exchange rate risk and, at worst, a resource and time consuming exercise.

From theory to practice

In practice, the theories about movements in exchange rates fail to hold in at least the short to medium-term periods. If the PPP were to hold, for example, real exchange rates between two countries, exchange rates adjusted for differential inflation levels should remain constant. As can be seen in *Figure 2*, however, this was not the case; over the 1990–1998 period the real exchange rate between sterling and US dollar exhibited some variance. Moreover, reviewing the current situation in the UK, interest rates are higher here than in Europe, yet sterling is stronger than the euro. This situation does not conform to the predictions of the IFE.

Following on from this, exchange rate risk is an inherent feature of

multinational activity since the movements in exchange rates do not necessarily occur to neutralise the effects of movements in national interest and inflation rates on corporate performance. Management of this risk may therefore add to the market value of a firm since it seeks to:

- reduce the adverse effects of movements in exchange rates on financial performance (or increase the positive effects, if they so materialise); and/or
- reduce the potential variance in the cash flows and profit levels. The benefits of each of these strategies are detailed below.

Risk management: a value generator?

Tax evasion. The tax schedule in the UK is convex. In other words, the average rate of tax payable increases as the level of pre-tax profits increases (*Figure 3*). As a result, if the pre-tax profits of a company are volatile over time due to movements in exchange rates, it will pay a higher level of tax than if it had a more stable income with risk management strategies in place.

Financial distress. Failure to manage exchange rate risk may result in significant losses for multinational companies, particularly when movements in exchange rates are large. During the 1990s, for example, Toyota, the Japanese car manufacturer, explained that the continually strengthening Yen was eating away rapidly into the profitability of the firm. The implications of such losses are many and varied for the different stakeholders of a firm.

The company is likely to be scrutinised very closely by lending institutions and is vulnerable to hostile take-overs. Performance related pay and perhaps even jobs for management and employees will be at stake; dividends and capital gains for shareholders will wane. The future prospects of the firm may also weaken as a result, if customers and suppliers become hesitant to engage in business with the firm concerned.

Investment decisions. The key to making good long-term investment decisions is to generate a sufficient and stable income internally to fund these investments. Alternatively, firms can use this income as a security to raise funds externally, cheaply and easily. The management of exchange rate risk is a valuable exercise in this instance since it would serve to smooth out the revenue and cost streams. If profit levels are unstable, companies risk being unable to raise the capital to invest in profitable projects, which is in turn likely to threaten their competitive positions in the market place.

Inefficient market behaviour. Translation risk, one of the forms of exchange rate risk, is a feature of accounting conventions, and appears as a translation gain or loss in the financial statements of parent companies. This risk does not have any cash flow implications and as a result the general consensus amongst academics is that firms should refrain from managing it. However, if investors exhibit inefficient market behaviour, then they will respond to the gains and losses in annual accounts, which will in turn affect the share prices and market value of a firm. Consequently, companies may benefit from managing translation risk.

FIGURE 2

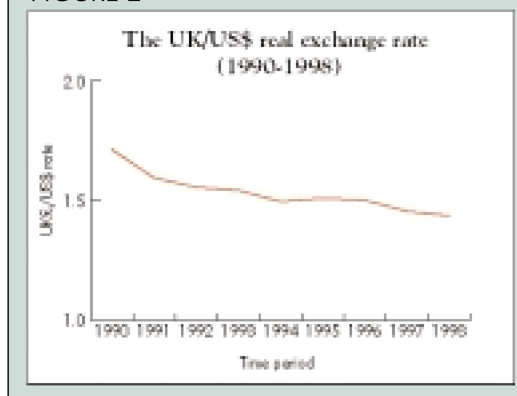
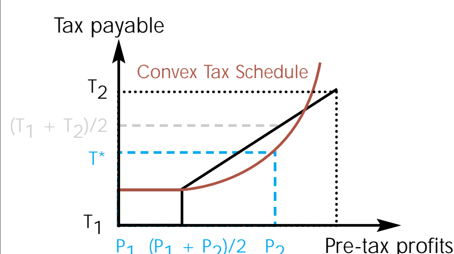


FIGURE 3

The benefits of risk management re: taxation



Assume that an UK MNC refrains from hedging; its pre-tax profit levels in years 1 and 2 are P_1 and P_2 respectively. The average tax paid by the company per annum will be $(T_1+T_2)/2$.

Now assume that the company hedges its foreign currency risk, and stabilises its earnings for each year to $(P_1 + P_2)/2$. The average tax paid per annum, T* is less than that paid if the company had not hedged $[(T_1 + T_2)/2]$.

Agency costs. Performance evaluation systems in companies are often based on financial reports prepared for external audiences. To better their own performance, managers may, as a result, be prepared to manage exchange rate risk if it improves the presentation of balance sheets and income statements. This is likely to occur even if the exchange risk being managed has no cash flow implications.

Theory and reality

Overall, according to the economic theories, movements in exchange rates are not cause for concern for multinational companies since they occur only to neutralise the effects of interest rate and inflation rate movements on corporate performance. Fortunately, however, most corporate treasurers are not convinced by this argument. The academic theories fail to hold in practice, making exchange rate risk an inherent feature of multinational activity. Companies can benefit from managing this risk by reducing the variance of future cash flows and/or the adverse effects of currency movements on these cash flows.

Managers may also be tempted to manage translation exchange risk, a risk with no cash flow implications, for reasons of agency costs and performance evaluation systems. In such instances, it may be in corporate interests to re-evaluate the evaluation systems so as to avoid the management of this risk. ■

Dr. Alpa Dhanani is a lecturer in Accounting and Finance at Cardiff Business School and has research interests in several treasury issues including the management of financial risk and the formulation of dividend policy.