

risk management FOREIGN EXCHANGE HEDGING

Long-term, adverse currency trends can seriously hit your company's earnings and its bottom line. With traditional hedging strategies no longer up to the job, treasurers must look towards more advanced averaging methodologies. PPP-based currency models can also add sophistication, says Didier Hirigoyen.

WEIGHING UP FX HEDGING



When it comes to currency risk management, most companies aim to limit the impact of exchange rate fluctuations on their bottom line, and more specifically, limit foreign exchange (FX)-induced volatility. Unfortunately, the means often used to achieve this goal – essentially one-year rolling forward exchange contracts – are usually completely inadequate if an adverse currency trend lasts for a number of years. Using a one-year rolling forwards strategy will only postpone the FX impact on earnings by the length of the hedge.

One way in which the impact of adverse FX fluctuations can be smoothed out is to use an averaging methodology. This approach involves layering hedges over time – entering different contracts for different sums over different lengths of time. It has two fundamental advantages:

- It allows you to factor in uncertainties regarding cashflows or earning forecasts by reducing the amount hedged as the length of the hedge increases.
- The overall exchange rate is smoother (see *Figure 1*), as it is an average of exchange rates experienced over several years. Consequently, your company's results will not be affected by the most extreme currency moves. This approach provides a substantial improvement over more traditional hedging programs. For example, a four-year layered approach could reduce the impact of euro:dollar volatility by more than 60% in comparison to hedging using one-year rolling forwards or not hedging at all.

Executive summary

- Companies want to reduce the effects that adverse currency trends have on their bottom lines and limit FX-induced volatility.
- One-year rolling exchange contracts are inadequate if adverse trends continue for years and to combat this, companies must re-evaluate their hedging strategies.
- Using advanced averaging methodologies and layering hedges over a period of years allow companies to factor in cashflow and earning forecast uncertainties.
- Corporate management can take control of a hedging programme by establishing criteria, which when triggered, execute a specific hedging strategy.
- A Purchasing Power Parity (PPP)-based hedging program, can also improve performance. PPP can also determine the best hedging instruments that are required at a certain point in time.
- It is the turn for European corporates to deal with the effects of a strong performance of the euro on foreign subsidiaries, particularly those generating revenue in US dollars.

Table 1. Appropriate hedging mixes for an over/undervalued euro

20% undervalued – 100% forward
 20-10% undervalued – 25% AMTF Opt + 75% forward
 10% undervalued – 10% overvalued – 50% AMTF Opt + 50% forward
 10% overvalued – 20% overvalued – 75% AMTF Opt +25% forward
 20% overvalued – 100% ATMF Opt

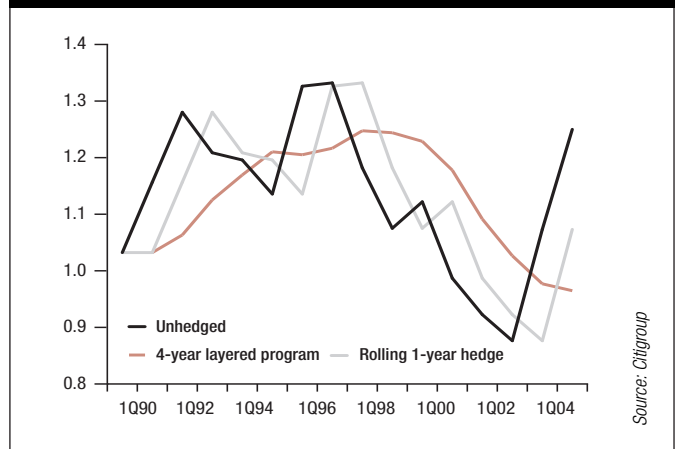
Table 2. Results of a euro:dollar hedging strategy

	1 year forward	PPP Mix strategy	ATMF options
Average Eff. rate	1.227	1.1112	1.0991
STDV of YoY charges in Eff. rates	10.9%	9.2%	9.4%
Average hedge cashflow at maturity (in % euro)	-0.3%	0.3%	1.0%

MANAGEMENT-DIRECTED STRATEGIES. However, when stating that their risk management programs aim to reduce FX volatility, companies sometimes fail to formulate their actual goals. Competitive pressures or cash considerations should tempt them to reduce 'negative volatility', but while this is an objective that business units often have at heart, corporate management often tends to ignore it. This decision, however, is at the core of any hedging program, as everything else depends on it.

There are many ways in which corporate management can actively run a hedging program without giving treasury personnel full responsibility for deciding when or how to execute hedges.

Figure 1. Results of different euro:dollar hedging strategies



One approach is to implement a systematic program where all parameters are decided once and for all by the appropriate decision makers within the company. In essence, it involves agreeing on the establishment of fixed criteria that, when met, trigger the execution of a specific hedging strategy.

The details of the methodology applied can vary from implementing straightforward hedges to following more complex hedging models. It all depends on how important currencies are for the underlying business. BMW, for example, uses an advanced methodology which involves using a currency valuation model to adjust the structure of its currency hedges.

Hedging the euro's strength

Just two years ago, US companies were struggling to remove the impact of the dollar's strength on their foreign currency denominated earnings. Today, it is the turn of European corporations to deal with the implications of a strong euro on the performance of their foreign subsidiaries – particularly those generating revenues in US dollars. After years of accounting-driven hedging, major multi-national corporations must start to show increased interest in more active currency management.

Figure 2. Euro under/over valuation vs US dollar



How long the dollar's weakness is going to last is everybody's guess. The strong ties between euro:dollar fluctuations and the expected behaviour of interest rates may advocate for a dollar rebound. However, recent soft US economic results have dampened the market's hopes for a sharp upturn. In this environment, what can European companies do to mitigate these adverse currency effects and, more importantly, what changes should they consider making to limit their exposure to adverse foreign exchange (FX) fluctuations in the future?

The euro's appreciation has negatively impacted the year-on-year translation of US quarterly earnings into euros by, on average, more than 14% since 2002. Consequently, companies must look ahead and think of future possible outcomes. Certainly, the first step is to abandon the idea that the euro is now too high to do anything. Although various currency models such as Purchasing Power Parity (PPP) point to a slightly overvalued euro (roughly 3% using relative PPP methodology), many cases of over-valuation have been seen in the currency market in the past. The euro has been overvalued by 10-20% versus the dollar for almost one quarter of the time since 1990 and more than 20% for 7% of the time (see Figure 2). Reversions to the PPP equilibrium tend to occur over fairly long periods – two-to-three years in general. This emphasises the need to deal with the possibility of continued euro strength, regardless of whether it looks overvalued or not.

To overcome such challenges, companies cannot just take temporary and circumstantial resolutions. It is best to review exactly what your company's hedging objectives are and what is going wrong with its existing hedging program.

PPP-BASED CURRENCY VALUATION MODELS. Implementing a Purchasing Power Parity (PPP)-based, long-term hedging program can also improve performance. Basically, the valuation of a currency at a certain point in time, using PPP, can determine which hedging instruments should be used and their mix. *Table 1* illustrates that if the euro is undervalued by more than 20%, the hedge should be exclusively composed of forward contracts. Meanwhile, if it is overvalued by more than 20%, only At-The-Money Forward (ATMF) options are utilised.

Table 2 shows the improvements that PPP-based methodology can achieve over a one-year rolling forwards strategy, in terms of the extent of year-on-year deviation in exchange rates and achieving a more positive cashflow when the hedge is rolled over. Such information is especially useful for companies hedging foreign earnings that are not immediately repatriated but retained at the subsidiary level, possibly for future local investment purposes. *Table 2* also shows the results achieved when using a simple program of ATMF options. Interestingly, this method has performed significantly better than the other two over the past 14 years. The price for such performance is, of course, the necessity to pay a premium upfront – something which numerous companies are reluctant to do. However, there is obviously something to be said about the trade off between immediate cash and future returns.

At the end of the day there are several other ways of using a currency valuation model to define the amount and length of hedges. The structure of the program highlighted here can be improved, but it still offers an interesting insight on how active currency management can help reduce the impact of long-term adverse currency trends on a company's bottom line.

Purchasing Power Parity

Exchange rates can be a poor indicator of the purchasing power of a currency at home. For example, £1 sterling may be the equivalent of 200 Japanese yen in foreign exchange (FX) rate terms, but will £1 in the UK purchase the same amount of goods as ¥200? The answer is almost certainly “no”.

To establish a better idea of a currency's purchasing power, Purchasing Power Parity (PPP) rates are used. This is the rate at which the amount of money used to buy a set basket of goods in one country must be exchanged to buy exactly the same basket of goods in another country.

The European Commission publishes PPP rates for all European Union (EU) currencies against the euro, as well as the US dollar and Japanese yen, thereby providing information on the rate at which that currency must be exchanged in order to purchase the same basket of goods in euro zone countries, the US and Japan respectively. The Organisation for Economic and Co-operative Development (OECD) also publishes PPP rates against the dollar for all 30 OECD countries.

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