Currency risk on risky assets: which strategy to adopt?

While the exchange rate hedging of trade flows is standardized and very well controlled, the hedging of net assets in foreign currencies is a more complex subject where situations are much more varied and practices much more diversified, especially when the future value of these assets is uncertain.

It is commonly accepted that debt should, as much as possible, be raised in the currency of the asset to generate natural hedging by reducing currency exposure. But investment funds, companies, or project finance sponsors are often faced with measuring and managing currency risk on their equity investment in a foreign currency.

Interest for foreign exchange hedging of equity holdings has risen recently with uncertainty about the evolution of the GBP in the context of the Brexit, or with the uncertain impact of US fiscal and budgetary policy on the dollar in the context of an exit from the QE and increasing short-term interest rates. Especially as the exposure of European investors to projects in foreign currencies is increasing.

Hedging means reducing uncertainty

To an investor based in euros, there may be a significant discrepancy between yields in foreign currency and yields once converted into euros.

The difference is deterministic if the expected return on the asset is hedged in foreign exchange: the yield on the asset converted into euros takes into account the cost (or more rarely the benefit) of the hedge.

The discrepancy is random and unpredictable when the return on the asset is not hedged against foreign exchange.

Hedging means reducing uncertainty. On the opposite, not hedging exposes the investor to a yield very dependent on the evolution of the exchange rate.

The cost of currency hedging is primarily a question of interest rates.

The cost of foreign exchange hedging is first determined by the interest rate differential between the two currencies. Forwards will indicate that the currency with the higher interest rates depreciates through time. When the interest rate differential between the euro and the investment currency is high, hedging is expensive, which reflects the higher cost of funding in local currency. To an investor whose reference currency is the euro, when an investment is not hedged against foreign exchange, the investment is funded in euro at the euro interest rate. When the investment is hedged against foreign currency, the investment is implicitly funded in the foreign currency at the interest rate of the foreign currency.

Therefore, to an investor based in euros, the cost of hedging is negative (it is a hedging benefit) if the investment currency is for instance, the Swiss franc, where interest rates are lower than in euros.

On the opposite, currency hedging for an investment in Mexican pesos (MXN) or Indian rupees (INR) implies a high cost because of high interest rates in these currencies, much higher than in euros.

It is also understood that an investor whose reference currency is the US dollar will have a lower hedging cost than an investor based in euro because the market rates in USD are higher than the market rates in euro. To this investor in USD, to hedge an investment made in euros will even make it possible to fix a more favourable forward exchange rate than the spot exchange rate, which will obviously ease the hedging decision.

It may explain why large US funds hedge their currency exposures more systematically than large European funds.

If the yield of a local currency investment is not sufficient to absorb the cost of the hedge, this investment will be less attractive than investments in euros. An investment in an exotic currency with higher interest rates and higher hedging costs will thus be expected to have a higher return in local currency than investments in euros.

In order to compare the profitability of investments in different currencies it is essential to take into account the cost of any currency hedging, whether or not such hedging is implemented.

When the project is not hedged, stress tests on the impact of possible exchange rate fluctuations will have to be carried out to check the project's sustainability in the event of an adverse shock on the rate of exchange.

Likewise, partial hedging strategies such as rolling short-term hedges, often used to limit the cost of hedging, will have to be tested both on short-term interest rate spread scenarios and on their liquidity impact if it is not certain that the exchange rate hedge will always be extended at historical rates[1].

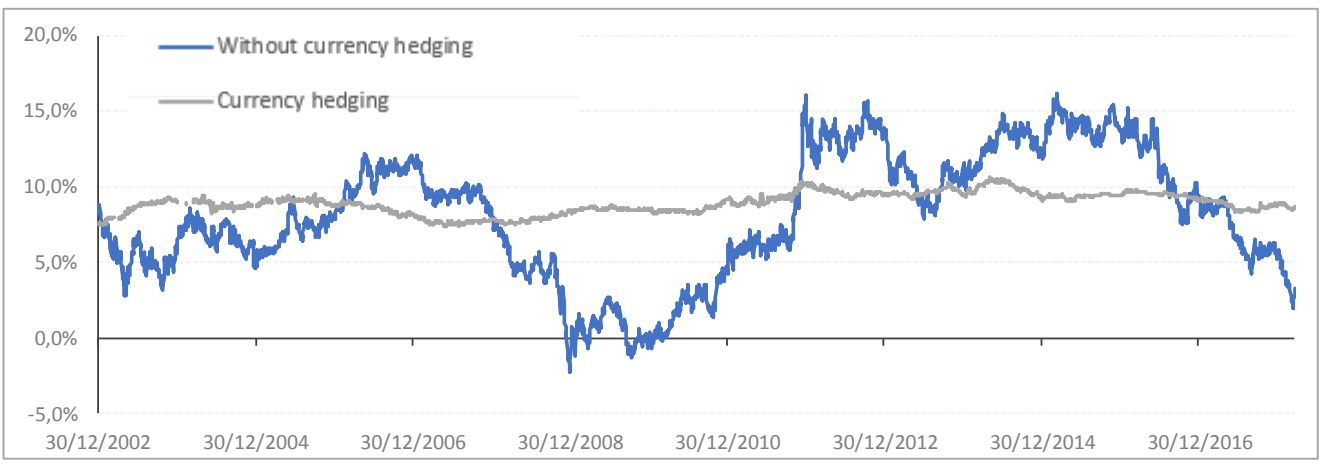
Backtesting of Foreign Exchange hedging through the purchase of Forward contracts

We backtested a strategy of Foreign Exchange hedging through the purchase of Forward contracts throughout the duration of an equity investment in a foreign currency.

The graph below compares, for an investor based in euro, the profitability of an investment in GBP over 3 years depending on whether it is hedged against foreign exchange or not. The expected return on the asset held in local currency is assumed to be 10% per annum.

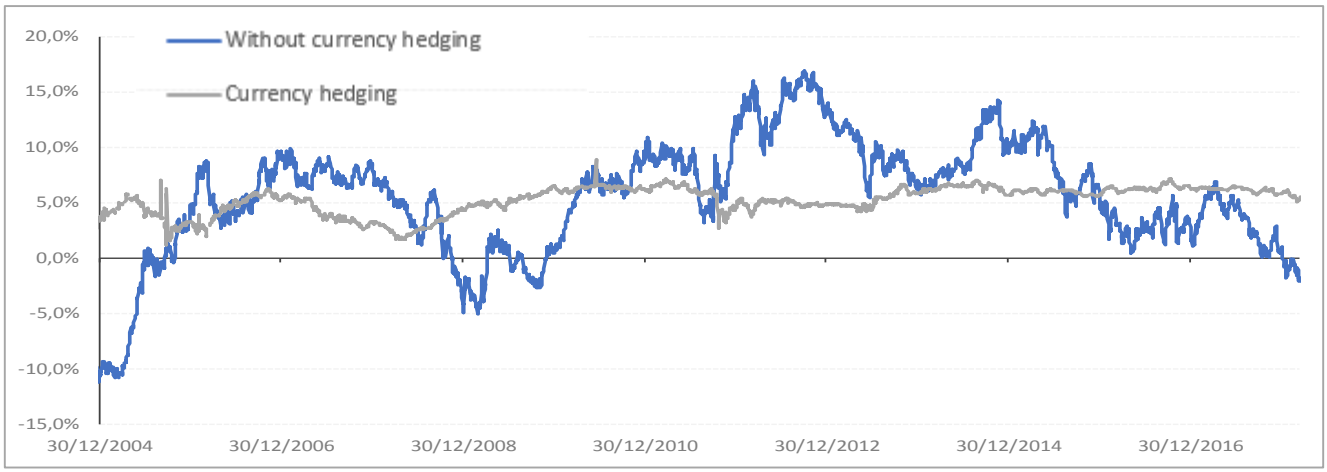
The grey curve shows the profitability of the investment after currency hedging, this curve is relatively stable over time and oscillates between 7% and 10%: currency hedging reduces the risk.

The blue curve shows the return on the investment without currency hedging. This curve is much more volatile and profitability is a direct function of the timing of investment and divestment : it is a gamble on the pound which can generate a return on investment that ranges from -2% to 15%.



[1] The Risk Committee of banks must generally approve any deferral of a historical currency hedge. Authorization may be declined.

As shown by the simulation below, the situation is similar for an investment in an exotic currency, such as the Mexican Peso. The only difference is the higher hedging cost.



As a conclusion, the unhedged strategy can generate a much higher or a much lower return than the hedged strategy. It is impossible to predict which will be the case in the future. What is certain is that currency volatility is always potentially much greater than the cost of currency hedging. Only hedging can stabilize the yields and achieve the expected return on investment without being polluted by currency risk.

Hedging strategy for less liquid currencies

While currencies of the main developed countries allow hedging both via forward instruments (forward exchange contracts) and options, and over relatively long-term horizons (over 10 years), this is not the case for all currencies.

When the currency is not convertible[2], hedging must be done through Non Deliverable Forwards. In these, the foreign currency is not physically delivered. It is a payment in the convertible currency that compensates both parties against the change in the exchange rate through the duration of the contract. Liquidity is generally lower than for convertible currencies but hedging through NDF works well.

However, some currencies such as many African currencies (e.g. metical, the Mozambican currency), or some Latin American currencies, are very illiquid. In these currencies, hedging instruments can only be liquid to short-term horizons.

Any investment in these currencies must, in the absence of hedging, be subjected to stress tests, for example by extrapolating a long history of exchange rates (at least 15 years) and by stress testing this history to appraise the impact of unfavorable scenarios. Short-term hedging, even if expensive, will greatly reduce uncertainty when the currency is highly volatile.

In these exotic currencies, it is particularly valuable to know the market specificities, to know which market participants are capable of providing a hedge.

Hedging uncertain exposure is more difficult

When currency exposure is uncertain, it is more complex to define the appropriate hedging strategy.

[2] For example in Brazil, India, China

The uncertainty can stem from the amount of the exposure (dividends or resale price of an asset), the timing of the exposure, or even the existence of the exposure, for example when the acquisition is not certain yet.

Uncertainty about the timing can be managed through an early unwinding of the hedge or its extension beyond the initial term. However, in the latter case, the extension of hedging may result in undesirable intermediate cash calls[3].

Uncertainty about the amount of the exposure, or even the existence of that exposure, is more complex to handle because the hedging method most suited to certain flows is not identical to that of uncertain flows.

Indeed, though it is possible to use both forwards and optional instruments to manage exposures that are certain, it is generally considered that forward instruments are less suitable to manage uncertain exposures. Indeed, in the event that the exposure deviates from the expected amount, forward contracts create, for the equity holder, an unlimited risk : the hedge itself becomes the source of the currency exposure.

On the opposite, optional instruments are more often used to cover uncertain exposures. Among these, we find:

- Currency options. But they are not liquid in all currencies and they can be costly.
- Contingent hedges. It is a hedge that disappears without charges if the acquisition, or investment, does not occur[4].

To avoid paying the premium for optional instruments, some investors prefer to apply a dynamic hedging strategy consisting in adjusting the amount of the forward contracts they buy as uncertainty fades away. This strategy can result in significant readjustment costs, as well as significant cash inflows or outflows.

It is therefore important, when implementing this type of strategy, to test it throughout.

Finally, whether one chooses to use only forward instruments, or a combination of forward instruments and optional instruments, it is nevertheless appropriate, at regular intervals, to reassess the central scenario to establish how much of the currency exposure is certain (or highly likely) and what is the magnitude of uncertainty around this central scenario.

The ability to trade depends on credit quality and guarantee mechanisms

As with any hedging solution using forward financial instruments, the ability to trade will depend on the credit quality of the entity carrying out the hedge. Indeed, a forward contract exposes each party to the potential default of the other party.

When the credit quality of the entity is not considered sufficient by the hedge counterparty[5], she will require the implementation of guarantee mechanisms.

The first possible mechanism is the granting of a corporate guarantee by the project sponsors or their shareholders.

The second possible mechanism relies on the constitution of a collateral, i.e. an amount of cash deposited in the company to secure potential exposure. Certain techniques make it possible to avoid frequent readjustments of the collateral.

[3] When the extension at historical exchange rates is not possible, the result of the hedge has an immediate impact on cash that must be absorbed.
[4] A bank will only agree to process a contingent hedge if the probability of realization of the exposure is high. Once the transaction is completed, the hedge has a higher cost, to compensate the bank for the contingency.
[5] For example in the case of a SPV in creation which wishes to be able to hedge a future exposure before being sufficiently endowed in terms of assets which could be used as guarantee for the transaction.

It should be noted that certain entities wishing to set up a hedge are legally obliged, due to EMIR regulation, to constitute a collateral with daily adjustment to trade a forward financial instrument. The question of which entity should set up the hedge or which instrument is better suited must then be carefully addressed.

Ultimately, when the company does not want to establish a collateral or any kind of guarantee, and when it does not have sufficient equity capital to be able to contract a swap or forward exchange contract, options with a single premium paid in advance or contingent transactions without premiums to be paid in advance can sometimes provide a satisfactory response.

Each of these solutions has its pros and cons, risks and costs, and none should be rejected a priori. Only an ad-hoc analysis of the full situation will make it possible to choose the best possible solution to overcome the lack of sufficient bank lines.

ESTER is at your side to analyse each situation and identify in each case, the most suitable strategy to adopt.

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