INTERNATIONAL FINANCE

A PRACTICAL PERSPECTIVE

Adrian Buckley

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The currency overdraft is a particularly useful and economical technique of exposure management where a company carries a large number of small items denominated in foreign currency, all with uncertain payment dates.

In some countries, use of the currency overdraft exposure management technique may be limited by exchange controls which prevent residents from using foreign-currency-denominated bank accounts.

Another similar technique is the currency bank account. This is particularly useful where a company engaged in international trade has receivables in excess of payables in the same currency. The company opens a foreign-currency-denominated deposit account into which receivables in a particular currency are paid and out of which foreign-denominated payments in that currency are made. For example, should a UK company have a US dollar receivable of $2m due on 31 October and should it also have a payment to be made on 30 November of $1.5m, the company might open a dollar-denominated deposit account into which it pays the $2m. Of this, $\$^1/_2$m would be remitted via a previously arranged forward deal for delivery on 31 October and $\$1^1/_2$m would remain in the account to meet the payment due on 30 November. In addition, at the end of November some interest would have accrued on the US dollar bank account.

This kind of exercise is designed to save making a large number of forward deals which are priced to the bank's customer on the basis of the worst rate during a future period. In the above example, the trader received US dollar interest on the deposit left in the currency account. Had he or she remitted all proceeds from the initial receivable to the UK, he or she could have obtained a UK interest rate on the proceeds. It can be seen that the essential net saving for the company arises from eliminating the bid/offer spread on amounts left in the currency account to meet future payables. However, a careful comparison should be made of the expected proceeds from the currency account technique with both the outturns from doing a large number of forward deals and the payoff from a forward option since the currency account may not always be the best choice. Remember that the pricing of forward deals is based on interbank Eurocurrency interest differentials, and using markets based on these differentials may give a superior result to the reliance on bank deposit accounts.

11.7 Exchange risk guarantees

As part of a series of encouragements to exporters, government agencies in many countries offer their businesses insurance against export credit risks and certain export financing schemes. Many of these agencies offer exchange risk insurance to their exporters as well as the usual export credit guarantees. The exporter pays a small premium and in return the government agency absorbs exchange risk, thereby taking profits and absorbing losses.

The precise details vary from one export finance agency to another and the exact offerings should be checked with various local exchange risk guarantee organisations in the appropriate country concerned, for example Eximbank in the United States, ECGD in Britain and so on. Nowadays, most countries have export credit and other similar government agencies offering to absorb foreign exchange exposure risk on export and import transactions in return for a fee.

11.8 Counterparty risk

In providing forward cover for customers, banks take on risk. And just as they do for loans, they evaluate this risk and set credit limits. In this section we consider how a bank might go about this process of risk evaluation. The risk that the bank runs arises from two areas; the risk on unmatured forward contracts and settlement risk. We consider the risk on unmatured contracts first.

When a bank contracts a forward foreign exchange deal with its customer, it will wish at the same time to enter into an opposite transaction so that the net effect is for the bank to have a square position or balanced book.

If the bank's customer should go bankrupt prior to the maturity of the contract, then the bank knows that it will not receive the funds from the customer to satisfy the matching deal done in the market. The bank will enter the market again to buy in the necessary funds to meet the deal at current exchange rates. This will probably be at a different rate from that at which the original deal was done. This difference will cause the bank to incur either a loss or perhaps a profit resulting from the financial failure of its customer.

Because of this, banks set limits on the extent of the risk they are prepared to run on each customer on their books. This credit assessment is done in the normal manner by reference to the company's balance sheet and other indicators of financial health. Setting a limit for foreign exchange deals is exactly similar to setting a limit for the amount and period of an unsecured loan. But it is less easy to establish the extent of the risk represented by an unmatured forward contract. One might set a limit on the total deals outstanding to each counterparty as a gross total. But clearly this implies that all unmatured deals carry an equal degree of risk. An improvement would be an acceptance that deals with a short maturity involve less risk than longer ones and to allow for that in calculating exposure. In fact, banks have computer programs designed to estimate their exposure to each customer allowing for such factors as past exchange rate volatility as between currencies, period to run to maturity and whether the existing contracts would show a profit or a loss if the customer failed and it became necessary to replace them at ruling market rates.

We now turn to settlement risk. This may arise should the customer fail to deliver the currency concerned to the bank on settlement day and then go bankrupt. The bank's problem is that settlement of a foreign exchange contract is simultaneous – the bank pays away the currency due to the customer or its supplier in expectation of simultaneous receipt from the customer of countervalue. Banks are not usually in a position to ensure that countervalue has been received prior to paying away the currency amount. So if the customer fails just after the bank has paid away currency without receipt of countervalue from the customer, the bank has lost this amount. This kind of risk is only present on and immediately after settlement day up to when settlement is made. Most banks operate a system of settlement limits fixing a maximum amount for the settlement to be made on one date for each customer prior to receipt of countervalue.

Having calculated a limit for a customer, the essence of what banks do in terms of estimating whether a limit is breached is to weight contracts that are near to maturity by a small amount and those far from maturity by a larger figure. Thus a bank might adopt a policy of weighting contracts with one month or less to run to maturity by 0.10, contracts with up to three months to run by 0.15, contracts with up to six months to run by 0.20 and contracts with over six months to run by 0.25.

Summary

- External techniques of exposure management resort to contractual relationships outside a group of companies to reduce the risk of foreign exchange losses.
- External techniques include forward exchange contracts, short-term borrowing and depositing, financial futures contracts, currency options, discounting bills receivable, factoring receivables, currency overdrafts and currency hold accounts, currency swaps and government exchange risk guarantees. Most of these are considered in this chapter, but swaps, financial futures and currency options are considered in Chapters 12, 13, 14 and 15.
- The most well-known external method of exposure management involves the forward contract. This may be used to cover receivables and payables, but it also enables a company or high-net-worth individual to speculate on foreign currency movements.
- Forward markets are available in most major currencies of the world – but by no means all.
- Forward markets are available for periods beyond five years for such currencies as US dollars, sterling, euros, Swiss francs, yen, Canadian dollars, Danish kroner, Swedish kronor and so on. Ten-year forwards are quoted by some banks for many of the above. The forward market may be used to cover a receipt or payment denominated in a foreign currency when the date of receipt for payment is known. But it can be readily adapted to allow for situations when the exact payment date is not known.
- Techniques available to deal with imprecise payments dates include the forward option, the forward/forward swap and the spot/forward swap.
- Note how these three techniques work; a fair amount of space is devoted to them in the main text.
- Note that it is always cheaper to extend the maturity of a forward contract with a forward/forward swap or a spot/forward swap rather than undertaking a forward option in the first place.
- Note that a forward option, or option forward, or option dated forward contract, as it is sometimes called, is not a currency option. A forward option involves a right and an obligation to deal in foreign currency – the option is merely as to timing. In the case of a currency option, the holder has a right but not an obligation to deal at a particular price.
- Short-term, fixed rate borrowing or depositing is another technique for covering foreign-currency-denominated receivables and payables respectively.
- Currency overdrafts and currency hold accounts simply use floating rate borrowing and depositing, respectively, to achieve the same ends as under short-term borrowing or depositing with a fixed rate. The difference is clearly one of interest rate exposure. Floating rate borrowing or depositing clearly gives rise to an interest rate exposure; fixed rate finance does not.
- Note that when a forward contract is extended by a forward/forward swap or a spot/forward swap, the overall effect is to lock in the original forward rate plus or minus the effect of interest rate differences for the period by which the original maturity of the forward contract was extended. If this is not clear, check it out with the numerical example in the main text.

End of chapter questions

11.1 Assume that US Co Inc has net receivables of CHF100,000 in 90 days. The spot rate of the franc is $.50, and the Swiss interest rate is 2 per cent over 90 days (not 2 per cent per annum). Suggest how US Co Inc could implement a money market hedge.

11.2 Assume that US Co Inc has net payables of 200,000 Ballarian watsits (BLW) in 180 days. The BLW interest rate on deposits is 7 per cent over 180 days (not a per annum rate) and the spot rate of the BLW is $.10. Suggest how US Co Inc could implement a money market hedge.

11.3 If interest rate parity were to prevail, would a forward hedge be more favourable, equally favourable, or less favourable than a money market hedge on BLW payables in the last question?

Test bank 2

Exercises

1 Manana SA is the Coluvian subsidiary of a US manufacturer. Its local currency balance sheet is shown below. The current exchange rate is 20 pesos to the US dollar.

Figures in million pesos

Shareholders' funds	42	Fixed assets	36
Long-term debt	9	Debtors	12
Current liabilities	3	Cash	6
	54		54

(a) Translate the peso balance sheet of Manana SA into dollars at the existing exchange rate of 20 pesos to the dollar. All monetary items in Manana's balance sheet are denominated in pesos.

(b) If Manana's balance sheet remained as above but the peso moved to 25 pesos per dollar, what would be the translation gain or loss if translated by the monetary/non-monetary method? By the current/non-current method? By the all-current rate method?

(c) If the peso moved to $0.06, what would be the translation gain or loss according to the three accounting translation methods referred to under (b)?

(d) What is Manana's translation exposure under the three accounting methods?

2 Imagine that you have just been appointed treasurer of a consumer goods company. It manufactures only in the United Kingdom, but exports over 50 per cent of its sales. As the market is an international one, you face the same competitors in each national market, including your domestic market. Your major competitors are Japanese and German.

(a) How does your foreign exchange exposure arise?

(b) How would you measure it?

(c) Could your exposure be reduced by investing in manufacturing facilities abroad?

3 Imagine that you work for a company wishing to deal in the foreign exchange markets in Norwegian kroner and US dollars against the pound. The *Financial Times* gives the following quotation $ and NKr against the £:

	US$	**NKr**
Spot	1.2775–1.2785	11.25–11.26
Forward		
1 month	0.56–0.53 cent pm	1/4 ore pm–3/8 dis
2 months	1.03–0.99 pm	1/2–1 1/4 dis
3 months	1.50–1.45 pm	7/8–1 3/4 dis

You notice that Eurocurrency interest rates are as following according to the *FT*:

	Sterling	US$
Short-term	$12^{7}/_{8}$–$12^{5}/_{8}$	$7^{7}/_{8}$–$7^{1}/_{4}$
1 month	$12^{3}/_{4}$–$12^{5}/_{8}$	$7^{7}/_{16}$–$7^{5}/_{16}$
3 months	$12^{1}/_{2}$–$12^{3}/_{8}$	$7^{9}/_{16}$–$7^{7}/_{16}$

Assuming that your company's bank gives the same quotation as all of those tabulated above, answer the following:

(a) At what rate would your company sell NKr for sterling three months forward, option over the second and third months?
(b) At what rate would the bank sell NKr for sterling three months forward, option running from day 30 to day 90?
(c) At what rate would the bank sell $ for sterling three months forward, option over the third month?
(d) At what rate would your company sell $ for sterling three months forward, option over the third month?
(e) At what rate would the bank buy NKr one month forward?
(f) At what rate would the bank sell NKr one month forward?

Note: There are 100 ore in 1 krone.

4 Imagine that you work for a company wishing to deal in the foreign exchange markets in Danish krone and US dollars against the pound. The *Financial Times* gives the following quotations $ and DKr against the £:

	US$	DKr
Spot	1.3820–1.2830	$13.85^{3}/_{4}$–$13.86^{3}/_{4}$
Forward		
1 month	0.26–0.29 dis	0.40 ore pm–0.40 ore dis
2 months	0.50–0.54 dis	0.45 ore pm–0.60 ore dis
3 months	0.80–0.85 dis	0.55 ore pm–0.55 ore dis

You notice that Eurocurrency interest rates are as follows according to the *FT*:

	Sterling	US$
Short-term	9–$8^{3}/_{4}$	$10^{7}/_{8}$–$10^{3}/_{4}$
1 month	$9^{1}/_{4}$–$9^{1}/_{8}$	$11^{1}/_{4}$–$11^{1}/_{8}$
3 months	$9^{1}/_{2}$–$9^{3}/_{8}$	$11^{11}/_{16}$–$11^{9}/_{16}$

Assuming that your company's bank gives the same quotations as all of those tabulated above, answer the following:

(a) At what rate would your company sell DKr three months forward, option over the second and third months?
(b) At what rate would the bank sell $ three months forward?
(c) At what rate would the bank sell $ three months forward, option over the third month?
(d) At what rate would your company sell $ three months forward, option over the third month?
(e) At what rate would the bank buy DKr two months forward?
(f) At what rate would the bank sell DKr spot?

Note: There are 100 ore in 1 krone.

5 A service company with 100 per cent owned subsidiaries in four countries experiences major cash flows between these subsidiaries. The subsidiaries are in Alphaland, Betaland, Gammaland and Deltaland. The respective countries currencies are the ax, the bon, the cop and the drac. The monthly cash flows are as follows: