

FOREIGN RISK AND ITS

RELEVANT TO ACCA QUALIFICATION PAPER F9

Increasingly, many businesses have dealings in foreign currencies and, unless exchange rates are fixed with respect to one another, this introduces risk. There are three types of currency risk as detailed below.

Economic risk. The source of economic risk is the change in the competitive strength of imports and exports. For example, if a company is exporting (let's say from the UK to a eurozone country) and the euro weakens from say €/ \pounds 1.1 to €/ \pounds 1.3 (getting more euros per pound sterling implies that the euro is less valuable, so weaker) any exports from the UK will be more expensive when priced in euros. So goods where the UK price is \pounds 100 will cost €130 instead of €110, making those goods less competitive in the European market.

Similarly, goods imported from Europe will be cheaper in sterling than they had been, so those goods will have become more competitive in the UK market. Note that a company can, therefore, experience economic risk even if it has no overt dealings with overseas countries. If competing imports could become cheaper you are suffering risk arising from currency rate movements.

Doing something to mitigate economic risk can be difficult – especially for small companies with limited international dealings. In general, the following approaches might provide some help:

- Try to export or import from more than one currency zone and hope that the zones don't all move together, or if they do, at least to the same extent. For example, over the six months 14 January 2010 to 14 June 2010 the €/US\$ exchange rate moved from about €/US\$0.6867 to €/US\$ 0.8164. This meant that the € had weakened relative to the US\$ (or the US\$ strengthened relative to the €) by 19%. This made it less competitive for US manufacturers to export to a eurozone country. If, in the same period, the £/US\$ exchange rate moved from £/US\$0.6263 to £/US\$0.6783, a strengthening of the US\$ relative to £ of only about 8%. Trade from the US to the UK would not have been so badly affected.

- Make your goods in the country you sell them. Although raw materials might still be imported and affected by exchange rates, other expenses (such as wages) are in the local currency and not subject to exchange rate movements.

Translation risk. This affects companies with foreign subsidiaries. If the subsidiary is in a country whose currency weakens, the subsidiary's assets will be less valuable in the consolidated accounts. Usually, this effect is of little real importance to the holding company because it does not affect its day-to-day cash flows. However, it would be important if the holding company wanted to sell the subsidiary and remit the proceeds. It also becomes important if the subsidiary pays dividends. However, the term 'translation risk' is usually reserved for consolidation effects.

It can be partially overcome by funding the foreign subsidiary using a foreign loan. For example, take a US subsidiary that has been set up by its holding company providing equity finance. Its statement of financial position would look something like this:

	US\$m
Non-current assets	1.5
Current assets	0.5
	<u>2.0</u>
Equity	<u>2.0</u>

If the US\$ weakens then all the US\$2m total assets become less valuable.

CURRENCY MANAGEMENT

TRANSLATION RISK AFFECTS COMPANIES WITH FOREIGN SUBSIDIARIES. IF THE SUBSIDIARY IS IN A COUNTRY WHOSE CURRENCY WEAKENS, THE SUBSIDIARY'S ASSETS WILL BE LESS VALUABLE IN THE CONSOLIDATED ACCOUNTS.

However, if the subsidiary were set up using 50% equity and 50% US\$ borrowings, its statement of financial position would look like this:

	US\$m
Non-current assets	1.5
Current assets	0.5
	<u>2.0</u>
\$ Loan	1.0
Equity	<u>1.0</u>
	<u>2.0</u>

The holding company's investment is only US\$1m and the company's net assets in US\$ are only US\$1m. If the US\$ weakens, only the net US\$1m becomes less valuable.

Transaction risk. This arises when a company is importing or exporting. If the exchange rate moves between agreeing the contract in a foreign currency and paying or receiving the cash, the amount of home currency paid or received will alter, making those future cash flows uncertain. For example, in June a UK company agrees to sell an export to Australia for 100,000 Australian \$ (A\$), payable in three months. The exchange rate at the date of the contract is A\$/£1.80 so the company is expecting to receive $100,000/1.8 = £55,556$. If, however, the A\$ weakened over the three months to become worth only A\$/£2.00, then the amount received would be worth only £50,000.

Of course, if the A\$ strengthened over the three months, more than £55,556 would be received.

It is important to note that transaction risk management is not mainly concerned with achieving the most favourable cash flow: it is mainly aimed at achieving a definite cash flow. Only then can proper planning be undertaken.

DEALING WITH TRANSACTION RISKS

Assuming that the business does not want to tolerate exchange rate risks (and that could be a reasonable choice for small transactions), transaction risk can be treated in the following ways:

- 1 Invoice.** Arrange for the contract and the invoice to be in your own currency. This will shift all exchange risk from you onto the other party. Of course, who bears the risk will be a matter of negotiation, along with price and other payment terms. If you are very keen to get a sale to a foreign customer you might have to invoice in their currency.
- 2 Netting.** If you owe your Japanese supplier ¥1m, and another Japanese company owes your Japanese subsidiary ¥1.1m, then by netting off group currency flows your net exposure is only for ¥0.1m. This will really only work effectively when there are many sales and purchases in the foreign currency. It would not be feasible if the transactions were separated by many months. Bilateral netting is where two companies in the same group cooperate as explained above; multilateral netting is where many companies in the group liaise with the group's treasury department to achieve netting where possible.
- 3 Matching.** If you have a sales transaction with one foreign customer, and then a purchase transaction with another (but both parties operate with the same foreign currency) then this can be efficiently dealt with by opening a foreign currency bank account. For example:

11 November: should receive US\$2m from US customer
15 November: must pay US\$1.9m to US supplier.

Deposit the US\$2m in a US\$ bank account and simply pay the supplier from that. That leaves only US\$0.1m of exposure to currency fluctuations.

Usually, for matching to work well, either specific matches are spotted (as above) or there have to be many import and export transactions to give opportunities for matching. Matching would not be feasible if you received US\$2m in November, but didn't have to pay US\$1.9m until the following May. There aren't many businesses that can simply keep money in a foreign currency bank account for months on end.

4 Leading and lagging. Let's imagine you are planning to go to Spain and you believe that the euro will strengthen against your own currency. It might be wise for you to change your spending money into euros now. That would be 'leading' because you are changing your money in advance of when you really need to. Of course, the euro might weaken and then you'll want to kick yourself, but remember: managing transaction risk is not about maximising your income or minimising your expenditure, it is about knowing for certain what the transaction will cost in your own currency.

Let's say, however, that you believe that the euro is going to weaken. Then you would not change your money until the last possible moment. That would be 'lagging', delaying the transaction. Note, however, that this does *not* reduce your risk. The euro could suddenly strengthen and your holiday would turn out to be unexpectedly expensive. Lagging does not reduce risk because you still do not know your costs. Lagging is simply taking a gamble that your hunch about the weakening euro is correct.

5 Forward exchange contracts. A forward exchange contract is a binding agreement to sell (deliver) or buy an agreed amount of currency at a specified time in the future at an agreed exchange rate (the forward rate).

In practice there are various ways in which the relationship between a current exchange rate (spot rate) and the forward rate can be described. Sometimes it is given as an adjustment to be made to the spot rate; in the Paper F9 exam, for example, the forward rates are quoted directly.

However, for each spot and forward there is always a pair of rates given. For example:

Spot	€/£	1.2025 ± 0.03 ie 1.2028 and 1.2022
Three-month forward rate	€/£	1.2020 ± 0.06 ie 1.2026 and 1.2014

One of each pair is used if you are going to change sterling to euros. So £100 would be changed now for either €120.28 or €120.22. Guess which rate the bank will give you! You will always be given the exchange rate which leaves you less well off, so here you will be given a rate of 1.2022, if changing £ to euros now, or 1.2014 if using a forward contract. Once you have decided which direction one rate is for, the other rate is used when converting the other way. So:

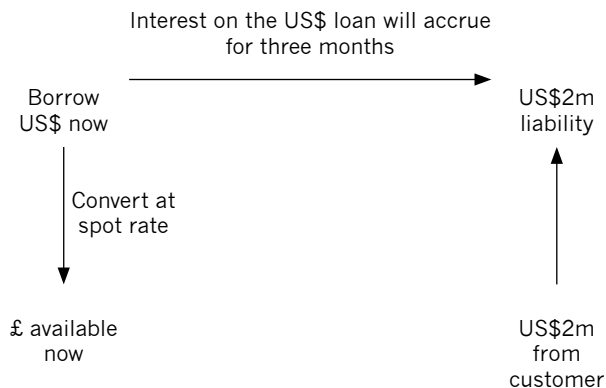
	€/£	<u>€ to £</u>	<u>£ to €</u>
Spot	€/£	1.2028	- 1.2022
Three month forward rate	€/£	1.2026	- 1.2014

So, let's assume you are a manufacturer in Italy, exporting to the UK. You have agreed that the sale is worth £500,000, to be received in three months, and wish to hedge (reduce your risk) against currency movements.

In three months you will want to change £ to € and you can enter a binding agreement with a bank that in three months you will deliver £500,000 and that the bank will give you £500,000 x 1.2014 = €600,700 in return. That rate, and the number of euros you will receive, is now guaranteed irrespective of what the spot rate is at the time. Of course if the £ had strengthened against the € (say to €/£ = 1.5) you might feel aggrieved as you could have then received €750,000, but income maximisation is not the point of hedging: its point is to provide certainty and you can now put €600,700 into your cash flow forecast with confidence.

However, there remains here one lingering risk: what happens if the sale falls through after arranging the forward contract? We are not necessarily talking about a bad debt here as you might not have sent the goods, but you have still entered into a binding contract to deliver £500,000 to your bank in three months' time. The bank will expect you to fulfil that commitment, and so what you might have to do is get enough € to buy £500,000 using the spot rate, use this to meet your forward contract, receiving €600,700 back. This process is known as 'closing out', and you could win or lose on it depending on the spot rate at the time.

6 Money market hedging. Let's say that you were a UK manufacturer exporting to the US and in three months you are due to receive US\$2m. You would suffer no currency risk if that US\$2m could be used then to settle a US\$2m liability; that would be matching the currency inflow and outflow. However, you don't have a US\$2m liability to settle then – so create one that can soak up the US\$. You can create a US\$ liability by borrowing US\$ now and then repaying that in three months with the US\$ receipt. So the plan is:



To work out how many US\$ need to be borrowed now, you need to know US\$ interest rates. For example, the US\$ three month interest rate might be quoted as: 0.54% – 0.66%

It is important to understand that, although this might be described as a 'three month rate' it is always quoted as an annualised rate. One rate is what you would earn in interest if the money was on deposit, and the other is the rate you would pay on a loan. Again, no prizes for guessing which is which: you will always be charged more than you earn. On the US\$ loan we will be charged 0.66% pa for three months and the loan has to grow to become US\$2m in that time. So, if X is borrowed now and three months' interest is added:

$$X(1 + 0.66\%/4) = 2,000,000$$

$$X = \$1,996,705$$

This can be changed now from US\$ to £ at the current spot rate, say US\$/£ 1.4701, to give £1,358,210.

This amount of sterling is certain: we have it now and it does not matter what happens to the exchange rate in the future. Ticking away in the background is the US\$ loan which will amount to US\$2m in three months and which can then be repaid by the US\$2m we hope to receive from our customer. That is the hedging process finished because exchange rate risk has been eliminated.

Why might this somewhat complicated process be used instead of a simple forward contract? Well, one advantage is that we have our money *now* rather than having to wait three months for it. If we have the money now we can use it now – or at least place it in a sterling deposit account for three months. This raises an important issue when we come to compare amounts received under forward contracts and money market hedges. If these amounts are received at different times they cannot be directly compared, because receiving money earlier is better than receiving it later. To compare amounts under both methods we should see what the amount received now would become if deposited for three months. So, if the sterling three month deposit rate were 1.2%, then placing £1,358,210 on deposit for three months would result in:

$$£1,358,210 (1 + 1.2\%/4) = £1,362,285$$

It is this amount that should be compared to any proceeds under a forward contract.

The example above dealt with hedging the receipt of an amount of foreign currency in the future. If foreign currency has to be paid in the future, then what the company can do is change money into sufficient foreign currency now and place it on deposit so that it will grow to become the required amount by the right time. Because the money is changed now at the spot rate, the transaction is immune from future changes in the exchange rate.

FURTHER METHODS OF EXCHANGE RISK HEDGING

There are two other methods of exchange risk hedging which you are required to know about, but you will not be required solve numerical questions relating to these methods. They involve the use of derivatives: financial instruments whose value derives from the value of something else – like an exchange rate.

1 **Currency futures.** Simply think of these as items you can buy and sell on the futures market and whose price will closely follow the exchange rate. Let's say that a US exporter is expecting to receive €5m in three months' time and that the current exchange rate is US\$/€1.24. Assume that this rate is also the price of US\$/€ futures. The US exporter will fear that the exchange rate will weaken over the three months, say to US\$/€1.10 (that is fewer dollars for a euro). If that happened, then the market price of the future would decline too, to around 1.1. The exporter could arrange to make a compensating profit on buying and selling futures: sell now at 1.24 and buy later at 1.10. Therefore, any loss made on the main the currency transaction is offset by the profit made on the futures contract.

This approach allows hedging to be carried out using a market mechanism rather than entering into the individually tailored contracts that the forward contracts and money market hedges require. However, this mechanism does not offer anything fundamentally new.

2 **Options.** Options are radically different. They give the holder the right, but not the obligation, to buy or sell a given amount of currency at a fixed exchange rate (the exercise price) in the future (if you remember, forward contracts were binding). The right to sell a currency at a set rate is a put option (think: you 'put' something up for sale); the right to buy the currency at a set rate is a call option.

Suppose a UK exporter is expecting to be paid US\$1m for a piece of machinery to be delivered in 90 days. If the £ strengthens against the US\$ the UK firm will lose money, as it will receive fewer £ for the US\$1m. However, if the £ weakens against the US\$, then the UK company will gain additional money. Say that the current rate is US\$/£1.40 and that the exporter will get particularly concerned if the rate moved beyond US\$/£1.50. The company can buy £ call options at an exercise price of US\$/£ = 1.50, giving it the right to buy £ at US\$1.50/£. If the dollar weakens beyond US\$/£1.50, the company can exercise the option thereby guaranteeing at least £666,667. If the US\$ stays stronger – or even strengthens to, say, US\$/£1.20, the company can let the option lapse (ignore it) and convert at 1.20, to give £833,333.

This seems too good to be true as the exporter is insulated from large losses but can still make gains. But there's nothing for nothing in the world of finance and to buy the options the exporter has to pay an up-front, non-returnable premium. Options can be regarded just like an insurance policy on your house. If your house doesn't burn down you don't call on the insurance, but neither do you get the premium back. If there is a disaster the insurance should prevent massive losses.

Options are also useful if you are not sure about a cash flow. For example, say you are bidding for a contract with a foreign customer. You don't know if you will win or not, so don't know if you will have foreign earnings, but want to make sure that your bid price will not be eroded by currency movements. In those circumstances, an option can be taken out and used if necessary or ignored if you do not win the contract or currency movements are favourable.

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OPTIONS GIVE THE HOLDER THE RIGHT, BUT NOT THE OBLIGATION, TO BUY OR SELL A GIVEN AMOUNT OF CURRENCY AT A FIXED EXCHANGE RATE (THE EXERCISE PRICE) IN THE FUTURE.