Corporate Finance

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EXCHANGE RATE RISK

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Exchange-rate risk

- The impact of exchange rate changes on businesses
- The foreign exchange markets
- Exchange rates in the financial press
- Spot and forward rates
- Types of foreign exchange rate risk

What a difference a few percentage point moves on the exchange rate make

- European exchange rate mechanism (ERM)
- ‘Black Wednesday’, a 19 per cent decline
- In the four years following ‘Black Wednesday’
- 1996 and 2001 the pound rose against most currencies
- British Steel (Corus) cut thousands of jobs
- James Dyson announced in 2000 that he was planning to build a factory in East Asia
- The euro shot up against the pound over the period 2002 to 2010
- Heineken exporting beer to USA
- Next and JJB importing goods
- Taylor Wimpey debt in dollars
- Branston Pickle

What a difference a few percentage point moves on the exchange rate make (continued)

What a difference a few percentage point moves on the exchange rate make

Until autumn 1992 sterling was a member of the European exchange rate mechanism (ERM), which meant the extent it could move in value vis-à-vis the other currencies in the ERM was severely limited. Then came 'Black Wednesday' when the pound fell out of the ERM, the government gave up the fight to retain the high level of sterling and the pound fell by around 20 per cent.

George Soros was one of the speculators who recognised economic gravity when he saw it, and bet the equivalent of $10bn against sterling by buying other currencies. After the fall the money held in other currencies could be converted back to make $1bn profit in just a few days. When sterling was highly valued against other currencies exporters found life very difficult because, to the foreign buyer, British goods appeared expensive – every unit of their currency bought few pounds.

However, in the four years following 'Black Wednesday' UK exporters had a terrific boost and helped pull the economy out of recession as overseas customers bought more goods. Other European companies, on the other hand, complained bitterly. The French government was prompted by its hard-pressed importers to ask for compensation from the European Commission for the 'competitive devaluations by their neighbours'.

What a difference a few percentage point moves on the exchange rate make (continued)

Then things turned around. Between 1996 and 2001 the pound rose against most currencies. Looked at from the German importers' viewpoint UK goods relative to domestic goods rose in price by something of the order of 30–40 per cent. UK firms lined up to speak of the enormous impact the high pound was having on profits. British Steel (Corus) cut thousands of jobs in response to sterling's rise and started losing money at an alarming rate. It also passed on the pain by telling 700 of its UK suppliers to cut prices.

James Dyson, the vacuum cleaner entrepreneur, announced that he was planning to build a factory in East Asia rather than Britain because of the strength of the pound. The Japanese car makers, Toyota, Honda and Nissan, which had established plants in Britain, complained bitterly about the high level of the pound. Their factories were set up to export cars. They were hurt by having to reduce prices and also by their commitment to buy 70 per cent of components from UK suppliers (continental European suppliers benefited from a 30–40 per cent price advantage because of the high pound).

What a difference a few percentage point moves on the exchange rate make (continued)

Then things turned around again. European companies had an increasingly hard time trying to export, particularly into the US and UK markets, because, between 2002 and 2010, the euro rose by around 50 per cent, making European goods 50 per cent more expensive in the eyes of US and UK consumers. Worse, US exporters could compete against their European rivals more effectively when selling to countries in Asia and elsewhere because of the rise in the euro. Heineken, exporting beer to the USA, to maintain profits *should* have raised its export prices by 50 per cent, but found competition meant it could only raise them 2–3 per cent per year. Operating profit from its US unit alone fell by an estimated two-thirds. Similar difficulties were experienced by a whole range of European exporters, from German car makers to French cheese makers.

Also complaining were the UK companies that buy goods and services and borrow money abroad, because their margins were being squeezed. Next and JJB Sports source most of their goods from overseas manufacturers; the low pound against the dollar as well as the euro meant that they had to pay more in pound terms for the same items. The housebuilder Taylor Wimpey suffered because most of their debt was in dollars, which now needed more pounds for each unit of dollar interest. Branston Pickle (Premier Foods) prices rose in part because the falling pound pushed up the cost of many of its (imported) raw materials.

The effects of exchange rate changes

EXCHANGE RATE RISK

The effects of exchange-rate changes

Shifts in ‘FOREX’ (FOReign EXchange, FX), can impact on various aspects of a firm’s activities:

- **Income to be received from abroad**

  For example, if a UK firm has exported goods to Canada on six months’ credit terms, payable in Canadian dollars (C$), it is uncertain as to the number of pounds it will actually receive because the dollar could move against the pound in the intervening period

The effects of exchange-rate changes (continued)

- **The amount actually paid for imports at some future date**
  - For example, a Japanese firm importing wood from the USA may have a liability to pay dollars a few months later
  - The quantity of yen (¥) it will have to use to exchange for the dollars at that point in the future is uncertain at the time the deal is struck
  - The price of UK clothing rose in 2010 partly as a result of the low sterling exchange rate vis-a-vis the US dollar – *see next slide*

The effects of exchange rate changes (continued)

Sterling's plunge adds to debt burden at Sage

By Lucy Killgren

Debt levels at Sage rose in the final three months of last year, the software group said, because of the pound's weakness.

Net debt, a substantial proportion of which is denominated in dollars and euros, rose from £541m in September to £649m by December 31, as a result of currency translation.

However, Sage said it was comfortable with the amount of debt, remained within its banking covenants and had committed financing facilities of £850m in place until 2011.

It said the weakness of sterling had also lifted profits in the three months to December 31 – the first quarter of its financial year.

FT *Financial Times*, 5 February 2009, p. 18.

The effects of exchange rate changes (continued)

- **The valuation of foreign assets and liabilities**
  - In today's globalised marketplace many firms own assets abroad and incur liabilities in foreign currencies
  - The value of these in home currency terms can change simply because of forex movements
  - For example, Sage's debt rose over £100m in a three-month period because of exchange rate changes

The effects of exchange rate changes (continued)

Material increase in clothes prices

By Andrea Felsted, Retail Correspondent

The cost of UK clothing is forecast to rise this year by the most in more than two decades.

British consumers have enjoyed a decade of deflation as value retailers, such as Primark, and the supermarkets have whittled away prices, while the emergence of China as a manufacturing base brought with it cheap clothing that has reshaped the high street. But this era is coming to an end, as the weakness of sterling makes garments purchased by retailers from suppliers in Asia, but paid for in dollars, more expensive.

Last year British retailers were able to offset higher costs from currency weakness by striking competitive deals with Chinese suppliers, keen to keep factories running amid a dearth of US orders. Lower commodity prices also fed through to better terms from suppliers.

But Chinese factories are now winning more orders, while the country's wage costs are rising as Chinese workers strive for better terms and conditions. Suppliers' leeway to offer cut-price deals has also been clipped by their own costs rising. Cotton has gained about 50 per cent in the past year, and is trading close to its highest level in 14 years.

FT *Financial Times*, 18 July 2010, p. 4.

The effects of exchange rate changes (continued)

- **The long-term viability of foreign operations**
  - The long-term future returns of subsidiaries located in some countries can be enhanced by a favourable forex change
  - On the other hand firms can be destroyed if they are operating in the wrong currency at the wrong time
- **The acceptability or otherwise, of an overseas investment project**

  When evaluating the value creating potential of major new investments a firm must be aware that the likely future currency changes can have a significant effect on estimated NPV

Volatility in foreign exchange

EXCHANGE RATE RISK

Volatility in foreign exchange

- Next slides show the extent to which forex rates can move even over a period as short as a few weeks – **5 or 10 per cent point shifts are fairly common**
- In the mid-1970s a regime of (generally) floating exchange rates replaced the fixed exchange rate system which had been in place since the 1940s
- Today most currencies fluctuate against each other, at least to some extent
- If a UK firm holds dollars or assets denominated in dollars and the value of the dollar rises against the pound a forex profit is made
- Conversely, should the pound rise relative to the dollar, a forex loss will be incurred

Volatility in foreign exchange (continued)

- **Potential gains or losses can be very large**
- Between November 2005 and November 2007 the dollar depreciated by 20 per cent against the pound so you could have made a large gain by exchanging dollars and then holding sterling even before the money was put to use, say, earning interest
- In other periods fluctuating forex rates may wipe out profits from a project, an export deal or a portfolio investment (for example, a pension fund buying foreign shares)

Exchange-rate movements, US$ to £, November 2001–November 2011 (weekly)

Exchange-rate movements, £ to euro, November 2001 to November 2011

Exchange-rate movements, US$ to euro, November 2001 to November 2011

Foreign exchange markets

EXCHANGE RATE RISK

The foreign exchange markets

- The function of the currency (forex) market is to facilitate the exchange of one currency into another
- In 1973 the equivalent of US$10bn was traded on average each day
- 1986 US$300bn, 1989 US$590bn, 1998 US$1,490bn
- In 2007 it was estimated at US$3,210bn, 2010 US$4,000bn
- London has 37 per cent share, followed by the USA (18 per cent)
- Total output of all the people in the UK in one day (GDP): amounts to around US$7bn
- In 2010 the euro entered on one side of 41 per cent of all foreign exchange transactions
- The dollar was on one side in 84 per cent of cases

Who is trading?

- *Exporters/importers*
- *Tourists or investors*
- *Fund managers (pensions, insurance companies, etc.)*
- *Governments (for example, to pay for activities abroad)*
- *Central banks (smoothing out fluctuations)*
- Speculators or arbitrageurs
- Banks
- Dealers trading and acting as market makers
- Brokers buying and selling on behalf of clients
- Roughly one half of deals are still made over the telephone and later confirmed in writing
- Electronic platforms

Who is trading? (continued)

- The first five groups account for only a small fraction of the transactions
- **The big players are the large commercial banks and speculators, such as hedge funds**
- In addition to dealing on behalf of customers, or acting as market makers, the banks carry out ‘proprietary’ transactions of their own in an attempt to make a profit by taking a position in the market – that is, speculating on future movements

Who is trading? (continued)

- Companies and individuals usually obtain their foreign currencies from the banks
- Foreign exchange interbank brokers often act as intermediaries between large buyers and sellers
- They allow banks to trade anonymously, thus avoiding having the price move simply because of the revelation of the name of a bank in a transaction
- Roughly one half of deals are still made over the telephone

Twenty-four hour trading

- **Dealing 24-hours**
  - Dealing takes place on a 24-hour basis, with trading concentration moving from one major financial centre to another
  - Most trading occurs when both the European and New York markets are open – this is when it is afternoon in Frankfurt, Zurich and London and morning on the east coast of the Americas
  - Later the bulk of the trade passes to San Francisco and Los Angeles, followed by Sydney, Tokyo, Hong Kong and Singapore
  - There are at least 40 other trading centres around the world in addition to these main ones

Twenty-four hour trading (continued)

- **Banks are in the process of concentrating their dealers in three or four regional hubs**
  - Most banks are in the process of concentrating their dealers in three or four regional hubs
  - These typically include London as well as New York and two sites in Asia, where Tokyo, Hong Kong and Singapore are keen to establish their dominance

Twenty-four hour trading (continued)

- **Herstatt risk**
  - The vast sums of money traded every working day across the world means that banks are exposed to the risk that they may irrevocably pay over currency to a counterparty before they receive another currency in return because settlement systems are operating in different time zones
  - **A bank could fail after receiving one leg of its foreign exchange trades but before paying the other leg**
  - This is called **Herstatt risk** after a German bank that failed in 1974 leaving the dollars that it owed on its foreign exchange deals unpaid
  - Its failure caused panic and gridlock in the forex market, which took weeks to unravel

Twenty-four hour trading (continued)

- **CLS Bank (Continuous Linked Settlement)**
  - Herstatt's failure caused panic and gridlock in the forex market, which took weeks to unravel
  - Following this disaster, the major banks formed a new means of settlement, **Continuous Linked Settlement**, which began operating in 2002
  - The new entity, the **CLS Bank**, allows both legs of the trade to be paid simultaneously, eliminating the risk that one bank might fail in midstream

Twenty-four hour trading (continued)

- **Orderly schedule**
  - Under CLS payments are made by banks to an **orderly schedule** in a five-hour slot the day after the deal
  - If a trade is not matched, it is returned to its originator, so there is no possibility of one party to the trade suffering loss due to the other party's failure to settle

Twenty-four hour trading (continued)

- **Net values of the trades are settled**
  - A second major advantage of this system is that the net values of the trades are settled rather than the gross amount of trades
  - So if a bank sold $1 billion, but also bought $900 million the settlement is for only $100 million

Foreign exchange rates

EXCHANGE RATE RISK

Exchange rates

- An exchange rate is the price of one currency expressed in terms of another **US$/£ : 1.57** or **US$1.57/£**
- Exchange rates are expressed in terms of the number of units of the first currency per single unit of the second currency
- Forex rates are normally given to five or six significant figures **US$1.5675/£**

US$1.5675/£ 'middle rate'

	bid rate ↓	*offer rate* ↓
US$/£	1.5673	1.5677

Exchange rate (continued)

- So if you wished to purchase US$1m the cost would be:

$$\frac{\$1,000,000}{1.5673} = £638,040$$

- If you wished to sell US$1m you would receive:

$$\frac{\$1,000,000}{1.5677} = £637,877$$

Exchange rate (continued)

- The foreign exchange dealers are transacting with numerous buyers and sellers every day and they make a profit on the difference between the bid price and offer price (the **bid/offer spread**)
- In the previous example if a dealer sold US$1m and bought US$1m with a bid/offer spread of 0.04 of a cent a profit of

  £638,040 – £637,877 = £163

  is made

Exchange rate (continued)

Answer the following questions on the basis that the euro/US$ exchange rate is 1.1168–1.1173, that is, €1.1168/US$ or €1.1173/US$ depending on whether you are buying or selling euros.

1 What is the cost of buying €200,000?
2 How much would it cost to purchase US$4m?
3 How many dollars would be received from selling €800,000?
4 How many euros would be received from selling US$240,000?

Answers

1 $\frac{200{,}000}{1.1168} = \text{US\$179,083}$

2 $4{,}000{,}000 \times 1.1173 = €4{,}469{,}200$

3 $\frac{800{,}000}{1.1173} = \text{US\$716,012}$

4 $240{,}000 \times 1.1168 = €268{,}032$

The spot and forward exchange markets

There are two main forex markets

- The '**spot**' market
  - In the spot market transactions take place which are to be settled quickly
  - Officially this is described as immediate delivery, but this usually takes place two business days after the deal is struck
- The '**forward**' market
  - In the forward market a deal is arranged to exchange currencies at some future date at a price agreed now
  - The periods of time are generally one, three or six months, but it is possible to arrange an exchange of currencies at a predetermined rate many years from now

The spot and forward exchange markets (continued)

- **Forward transactions represent about one-third to one-half of all forex deals**
- There are many currencies, for which forward quotes are difficult to obtain
- **Exotic currencies**
  - The so-called **exotic currencies** generally do not have forward rates quoted by dealers
  - These are currencies for which there is little trading demand to support international business, etc
- Spot markets exist for most of the world's currencies

Dec 7	Currency	DOLLAR Closing Mid	DOLLAR Day's Change	EURO Closing Mid	EURO Day's Change	POUND Closing Mid	POUND Day's Change
Argentina	(Peso)	4.2763	−0.0025	5.7261	0.0000	6.7028	0.0278
Australia	(A$)	0.9747	−0.0040	1.3052	−0.0046	1.5278	0.0009
Bahrain	(Dinar)	0.3770	–	0.5048	0.0003	0.5910	0.0028
Bolivia	(Boliviano)	6.9100	–	9.2529	0.0055	10.8311	0.0511
Brazil	(R$)	1.7942	−0.0008	2.4025	0.0003	2.8123	0.0119
Canada	(C$)	1.0116	−0.0017	1.3546	−0.0014	1.5857	0.0049
Chile	(Peso)	509.750	−2.7000	682.581	−3.2054	799.008	−0.4400
China	(Yuan)	6.3643	0.0001	8.5222	0.0053	9.9757	0.0472
Colombia	(Peso)	1933.77	−1.8850	2589.41	−0.9756	3031.08	11.3692
Costa Rica	(Colon)	507.045	1.4550	678.959	2.3528	794.769	6.0220
Czech Rep.	(Koruna)	18.9000	0.0358	25.3080	0.0630	29.6248	0.1957
Denmark	(DKr)	5.5527	−0.0026	7.4353	0.0009	8.7035	0.0369
Egypt	(Egypt £)	6.0090	0.0020	8.0464	0.0075	9.4188	0.0476
Hong Kong	(HK$)	7.7740	0.0005	10.4097	0.0069	12.1853	0.0584
Hungary	(Forint)	224.525	−0.3585	300.650	−0.3000	351.932	1.1023
India	(Rs)	51.7200	0.3075	69.2557	0.4529	81.0685	0.8624
Indonesia	(Rupiah)	9035.00	–	12098.3	7.2280	14161.9	66.8590
Iran	(Rial)	10882.5	−22.5000	14572.2	−21.4046	17057.8	45.4294
Israel	(Shk)	3.7450	−0.0065	5.0147	−0.0058	5.8701	0.0175
Japan	(Y)	77.7300	−0.0300	104.084	0.0220	121.838	0.5284
One Month		77.6601	0.0121	104.012	0.0067	121.696	0.0183
Three Month		77.5846	0.0255	103.949	0.0344	121.506	0.0372
One Year		77.0640	0.0660	103.375	0.0638	120.396	0.0989
Kenya	(Shilling)	89.6250	−0.0750	120.012	−0.0287	140.483	0.5462
Kuwait	(Dinar)	0.2770	–	0.3709	0.0002	0.4342	0.0021
Malaysia	(M$)	3.1245	−0.0115	4.1839	−0.0129	4.8975	0.0052
Mexico	(New Peso)	13.5181	0.0241	18.1014	0.0431	21.1890	0.1376
New Zealand	(NZ$)	1.2880	0.0034	1.7247	0.0055	2.0189	0.0148
Nigeria	(Naira)	161.700	0.1500	216.524	0.3301	253.457	1.4306
Norway	(NKr)	5.7575	−0.0155	7.7096	−0.0161	9.0246	0.0185
Pakistan	(Rupee)	89.3500	−0.1000	119.644	−0.0623	140.052	0.5052
Peru	(New Sol)	2.6960	−0.0010	3.6101	0.0008	4.2259	0.0184
Philippines	(Peso)	43.2750	−0.2000	57.9474	−0.2330	67.8314	0.0083

	Currency	DOLLAR Closing Mid	DOLLAR Day's Change	EURO Closing Mid	EURO Day's Change	POUND Closing Mid	POUND Day's Change
Poland	(Zloty)	3.3368	−0.0067	4.4681	−0.0064	5.2302	0.0141
Romania	(New Leu)	3.2447	−0.0089	4.3448	−0.0092	5.0859	0.0102
Russia	(Rouble)	31.2849	−0.0179	41.8920	0.0010	49.0376	0.2036
Saudi Araia	(SR)	3.7505	0.0000	5.0220	0.0030	5.8787	0.0279
Singapore	(S$)	1.2864	0.0033	1.7226	0.0055	2.0164	0.0147
South Africa	(R)	8.0458	−0.0169	10.7737	−0.0161	12.6114	0.0332
South Korea	(Won)	1126.10	−5.1000	1507.90	−5.9242	1765.11	0.3769
Sweden	(SKr)	6.7385	−0.0154	9.0232	−0.0153	10.5623	0.0258
Switzerland	(SFr)	0.9256	−0.0016	1.2393	−0.0014	1.4507	0.0043
Taiwan	(T$)	30.1545	−0.0625	40.3784	−0.0595	47.2657	0.1257
Thailand	(Bt)	30.7750	−0.0800	41.2093	−0.0824	48.2383	0.1030
Tunisia	(Dinar)	1.4712	0.0017	1.9700	0.0034	2.3061	0.0135
Turkey	(Lira)	1.8345	−0.0032	2.4565	−0.0029	2.8754	0.0085
UAE	(Dirham)	3.6731	0.0001	4.9185	0.0031	5.7574	0.0273
UK (638)*	(£)	1.5675	0.0074	0.8543	−0.0036	–	–
One Month		1.5670	–	0.8547	−0.0001	–	–
Three Month		1.5661	0.0000	0.8555	–	–	–
One year		1.5623	0.0000	0.8586	−0.0002	–	–
Ukraine	(Hrywnja)	8.0060	−0.0095	10.7205	−0.0063	12.5490	0.0444
Uruguay	(Peso)	19.7500	0.0500	26.4463	0.0827	30.9572	0.2242
USA	($)	–	–	1.3391	0.0008	1.5675	0.0074
One Month		–	–	1.3393	−0.0001	1.5670	–
Three Month		–	–	1.3398	–	1.5661	0.0000
One Year		–	–	1.3414	−0.0003	1.5623	0.0000
Venezuela (Bolivar Fuerte)		4.2947	–	5.7508	0.0034	6.7317	0.0318
Vietnam	(Dong)	21010.5	–	28134.1	16.8084	32932.9	155.478
Euro (0.7468)*	(Euro)	1.3391	0.0008	–	–	1.1706	0.0049
One Month		1.3393	−0.0001	–	–	1.1701	0.0001
Three Month		1.3398	–	–	–	1.1689	0.0000
One Year		1.3414	−0.0003	–	–	1.1647	0.0003
SDR	–	0.6427	−0.0005	0.8606	−0.0002	1.0074	0.0040

Rates are derived from WM/Reuters at 4pm (London time). *The closing mid-point rates for the Euro and £ against the $ are shown in brackets. The other figures in the dollar column of both the Euro and Sterling rows are in the reciprocal form in line with market convention. Currency redenominated by 1000. Some values are rounded by the F.T. The exchange rates printed in this table are also available on the internet at http://www.FT.com/marketsdata.

Euro Locking Rates: Austrian Schilling 13.7603, Belgium/Luxembourg Franc 40.3399, Cyprus 0.585274, Finnish Markka 5.94572, French Franc 6.55957, German Mark 1.95583, Greek Drachma 340.75, Irish Punt 0.787564, Italian Lira 1936.27, Malta 0.4293, Netherlands Guilder 2.20371, Portuguese Escudo 200.482, Slovenia Tolar 239.64, Spanish Peseta 166.386.

FT forex quotes

- The Financial Times reports the previous day's trading in the forex market
- The figures shown in the previous slide relate to dealing on 7 December 2011
- By the time a newspaper reader receives the information in this table the rates have changed as the 24-hour markets follow the sun around the world
- **However, FT.com and other websites provide much more up-to-the-minute and detailed information**
- The prices shown under the pound columns in the previous slide are the middle price of the foreign currency in terms of £1 in London the previous afternoon
- For instance, the mid-price of £1 for immediate delivery is 1.5278 Australian dollar

Covering in the forward market

EXCHANGE RATE RISK

Covering in the forward market

- On 7 December 2011 a UK exporter sells goods to a customer in France invoiced at €5,000,000
- Payment is due three months later
- Spot rate of exchange at € 1.1706/£ :

  5.000.000/1.1706 = £4,271,314

- If sterling strengthens against the Euro:

  5.000.000/1.4 = £3,571,429

- The loss due to currency movement is:

  £4,271,314 – £3,571,429 = £699,885

Covering in the forward market (continued)

- If sterling weakens to, say, €1.0/£ a currency gain is made :

  5.000.000/1 = £5,000,000

- The currency gain is:

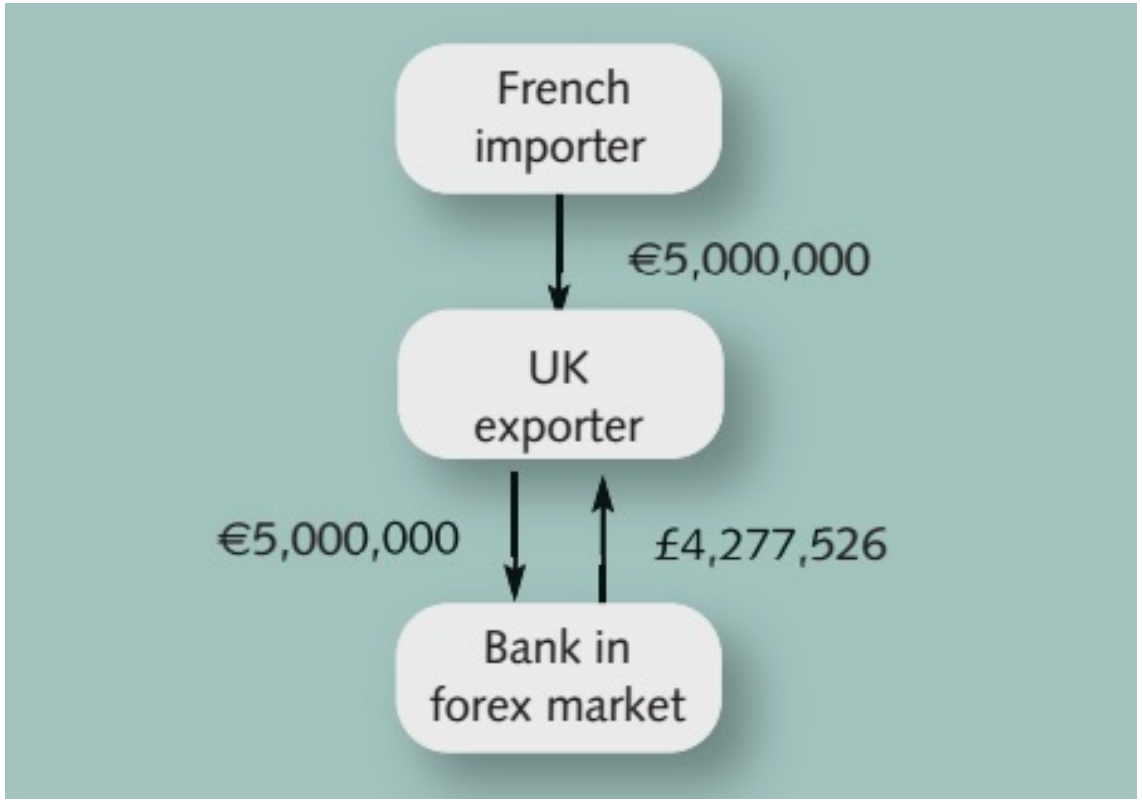
  £5,000,000 − £4,271,314 = £728,686

- **Cover in the forward market:**

  5,000,000/1.1689 = £4,277,526

- Rather than run the risk of a possible loss on the currency side of the deal the exporter may decide to cover in the forward market
- Under this arrangement the exporter promises to sell €5,000,000 against sterling in three months (the agreement is made on 7 December for delivery of currency in March)
- The forward rate available on 7 December is €1.1689/£
- This forward contract means that the exporter will receive £4,277,526 in March regardless of the way in which spot exchange rates move over the three months

Covering in the forward market (continued)



Covering in the forward market (continued)

- From the outset (in December) the exporter knew the amount to be received in March (assuming away counterparty risk)
- It might, with hindsight, have been better not to use the forward market but to exchange the euro in March at a spot rate of, say, €1/£
- **This would have resulted in a larger income for the firm**

Covering in the forward market (continued)

- But there was uncertainty about the spot rate in march when the export took place in December
- If the spot rate in march had turned out to be €1.4/£ the exporter would have made much less
- **Covering in the forward market is a form of insurance which leads to greater certainty – and certainty has a value**
- For many companies it is vital that they have this certainty about income and expenditure; they cannot afford to leave things and hope they will turn out satisfactorily

Types of foreign exchange risk

EXCHANGE RATE RISK

Types of foreign exchange risk

- Transaction risk
- Translation risk
- Economic risk

Types of foreign exchange risk – Transaction risk

- **Transaction risk**

  The risk that transactions already entered into, or for which the firm is likely to have a commitment in a foreign currency, will have a variable value in the home currency because of exchange-rate movements

  - **Imports or exports**

    A commitment in a foreign currency, will have a variable value in the home currency because of exchange-rate movements

  - **Invest abroad**

    Opening a new office or manufacturing plant: If the costs of construction are paid for over a period the firm may be exchanging the home currency for the foreign currency to make the payments. The amounts of the home currency required are uncertain if the exchange rate is subject to rate shifts. Also the cash inflows back to the parent are subject to exchange-rate risk

  - **Borrow in a foreign currency**

    When companies borrow in a foreign currency, committing themselves to regular interest and principal payments in that currency, they are exposed to forex risk

Types of foreign exchange risk – Translation risk

- **Translation risk**
  - Translation risk arises because financial data denominated in one currency are then expressed in terms of another currency
  - The financial statements of overseas business units are usually translated into the home currency in order that they might be consolidated with the group's financial statements - Income, expenses, assets and liabilities have to be re-expressed in terms of the home currency
  - It is translation and not the conversion of real money from one currency to another.
  - If exchange rates were stable, comparing subsidiary performance and asset position would be straightforward

Types of foreign exchange risk – Translation risk (continued)

- However, if exchange rates move significantly the results can be severely distorted
- GlaxoSmithKline, the UK-based pharmaceutical company found that even though overseas earnings rose in local currency terms, when the figures were translated into sterling a fall in profits was reported
- This was mainly because sterling rose against the dollar – *see next slide*

Types of foreign exchange risk – Translation risk (continued)

Exchange rate woes hit GSK

by Andrew Jack

The strengthening pound pegged back first-quarter earnings per share at GlaxoSmithKline, the UK-based pharmaceutical group to 27p – a modest 2 per cent. Pre-tax profit in cash terms fell 1 per cent to £2.1bn for the quarter.

At constant exchange rates, earnings per share rose 14 per cent and the company said its guidance for the year on the same terms remained unchanged at 8–10 per cent.

The weakening dollar reduced sales in cash terms to £5.6bn (£5.8bn), though adjusted pharmaceutical sales in the key US market rose 3 per cent to £2.4bn and 3 per cent to £4.8bn worldwide, in spite of challenges from generic drugs.

Jean-Pierre Garnier, chief executive, dismissed the short-term headline exchange rate effect, arguing that the market had seen through the figures to the underlying performance.

'There is nothing we can do about [the weakening dollar]. What comes up must come down,' he said. 'It's a hit like the weather: you have to live with it.'

FT *Financial Times*, 26 April 2007, p. 22.

Types of foreign exchange risk – Translation risk (continue)

There are two elements to **translation risk**:

1. **The balance sheet effect**
   - Assets and liabilities denominated in a foreign currency can fluctuate in value in home-currency terms with forex-market changes
   - If a UK company acquires A$1,000,000 of assets in Australia when the rate of exchange is A$2.2/£ this can go into the UK group's accounts at a value of £454,545
   - If, over the course of the next year, the Australian dollar falls against sterling to A$2.7/£, when the consolidated accounts are drawn up and the asset is translated at the current exchange rate at the end of the year it is valued at only £370,370 (1,000,000/2.7), a 'loss' of £84,175
   - And yet the asset has not changed in value in A$ terms one jot - **These 'losses' are normally dealt with through balance sheet reserves**

Types of foreign exchange risk – Translation risk (continued)

2. The profit and loss account effect

- Currency changes can have an adverse impact on the group's profits because of the translation of foreign subsidiaries' profits
- This often occurs even though the subsidiaries' managers are performing well and increasing profit in terms of the currency in which they operate, as the case of GSK (see relative slide) indicates

Types of foreign exchange risk – Economic risk

- **Economic risk**
  - A company's economic value may decline as a result of forex movements causing a loss in competitive strength
  - The worth of a company is the discounted cash flows payable to the owners
  - It is possible that a shift in exchange rates can reduce the cash flows of foreign subsidiaries and homebased production **far into the future** (and not just affect the near future cash flows as in transaction exposure)

Types of foreign exchange risk – Economic risk (continued)

There are two ways in which competitive position can be undermined by forex changes:

- **Directly**

  If your firm's home currency strengthens then foreign competitors are able to gain sales and profits at your expense because your products are more expensive (or you have reduced margins) in the eyes of customers both abroad and at home

Types of foreign exchange risk – Economic risk (continued)

- **Indirectly**
  - Even if your home currency does not move adversely vis-à-vis your customer's currency you can lose competitive position
  - For example suppose a South African firm is selling into Hong Kong and its main competitor is a New Zealand firm - if the New Zealand dollar weakens against the Hong Kong dollar the South African firm has lost some competitive position
  - Another indirect effect occurs even for firms which are entirely domestically oriented
  - For example, the cafés and shops surrounding a large export-oriented manufacturing plant may be severely affected by the closure of the factory due to an adverse forex movement

Economic risk can badly damage a business

Siemens warns Brazil strong real could damage industrial exports

By Samantha Pearson in São Paulo

Brazil faces the risk of 'deindustrialisation' unless it imposes more extreme capital controls to rein in the surging local currency, the head of Siemens in the country has warned.

Adilson Antonio Primo, the Siemens chief executive for Brazil, told the Financial Times that the strong real was crushing the group's export business in the country.

Siemens, the German industrial group that ranks as Brazil's biggest electronics conglomerate, now only exports some 12 per cent of its products made in the country compared with 20 per cent four years ago.

'We need wider measures, harsher measures. If the currency strengthens beyond 1.50 [per dollar], that would be a real disaster for us,' Mr Primo said.

Economic risk can badly damage a business (continued)

‘We’re not advocating protectionism, but you need to be able to compete on equal terms. This is fundamental; there is a risk of deindustrialisation.’

The real has soared about 50 per cent against the dollar since the start of 2009, making exports less competitive and encouraging a flood of cheap imports, mainly from Asia. It was trading at about 1.584 to the dollar by midday in Brazil.

Siemens, which has more than 10,000 employees in Brazil and provides the equipment for about half the country’s electricity generation, has also had to compete with a flood of imports, such as cheap electronic transformers from China.