

Ian J. Martin

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**ACCOUNTING  
IN THE FOREIGN  
EXCHANGE MARKET**

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**Butterworths**

# **Accounting in the Foreign Exchange Market**

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# Preface

More than half the profits earned by Britain's top 100 companies are generated either overseas or from exports. The majority, if not all, of those companies would probably claim that they have an excellent understanding of their currency exposures, that there are staff in place to monitor group-wide flows of foreign currency and that they adopt a sophisticated 'risk averse' approach to hedging. Their shareholders could therefore be forgiven for being confused if they read in the annual report that the performance of their company has been adversely affected by exchange rate movements. Cynics would probably also note that it is far less common for a company to cite exchange rate movements as having been responsible for a more beneficial outcome than might otherwise have been expected.

Unfortunately, of course, it is not just the larger companies that are affected by foreign exchange rate movements and there is probably no economic activity in Britain today which is not affected in some way, either directly or indirectly, by the value of sterling. For some it might be a very direct exposure arising from an international trading relationship; with others the linkage may be more subtle and consist of indirect relationships such as the company's underlying cost base as compared with that of an overseas competitor.

The foreign exchange market is the largest market on earth and now accounts for something in excess of US \$250 billion of transactions a day. Although much of that activity is represented by inter-bank trading on the 'spot' market, a growing volume is in the more esoteric and far less understood hedging products that have been developed over the last few years. Faced with a continual barrage of new instruments and yet lacking the experienced personnel required to choose between such products, many companies find themselves ill-placed to cope with ever increasing fluctuations in exchange rates. Of even greater concern, perhaps, is the apparent lack of overall understanding of foreign exchange risk amongst senior management. Problems such as the recently discovered Volkswagen forex losses would be far less common if general management had a better grasp of the business implications and control requirements relating to foreign exchange exposure.

Many larger companies have been able to address these difficulties through the establishment of experienced treasury operations which are charged with the responsibility for managing the group's currency positions and, wherever possible, optimising the value of any foreign currency cashflows. Others have adopted a more pragmatic approach, arguing that the extent of their currency exposures is so great that it is virtually impossible to manage them realistically and that, on balance, the group probably wins on some exposures and loses on others. There are even a few large corporations which appear to have ignored the question altogether, and where the managing director may still be heard to say that acquiring a forward foreign exchange contract is essentially no more than currency speculation.

Because foreign exchange rate fluctuations have now become a fact of life, it is very easy to lose sight of the size of some of the currency swings now taking place. If one looks at the period from the, so-called, plaza accord (September 1985) through until the end of 1986, sterling fluctuated by between 20% and 30% against each of the yen, the Deutschmark, the Swiss franc and the French franc. The appreciation of the pound against the US dollar between March 1985 and March 1986 amounted to almost 40%. Even if Britain does eventually join the EMS, and assuming that this in itself does not cause major currency tensions within Europe, it will not stop sterling from suffering from fairly major fluctuations against the US dollar and the yen. There may also be the prospect of a long series of periodic re-alignments between sterling and other EMS currencies.

Accounting is central to the issue of foreign exchange exposure in that it provides the methodology for measuring and evaluating that exposure. The accounting profession has, however, suffered just as much as anyone else from the rapid development of the foreign exchange market, and general confusion and misunderstanding has sometimes been left to mix with fairly conservative accounting concepts to produce what has been, in retrospect, a meaningless result.

This book has been prepared for accountants with the objective of providing the reader with a fairly broad understanding of the foreign exchange market and the numerous hedging products now available to the corporate treasurer. It establishes a comprehensive approach to foreign exchange accounting which broadly accords with current professional guidance, whilst at the same time providing a realistic and commercially sensible result. Considerable emphasis is placed on the need to move progressively towards a more realistic accounting approach which better matches the underlying commercial activity. Although the book does not set out to be provocative, some of the concepts discussed herein are likely to be unfamiliar to many readers.

The first two chapters describe the development of the foreign exchange market as it exists today and discuss in some detail, its current structure and operation. Chapters 3 and 4 examine the nature of foreign currency exposure and the ways in which a corporation can manage that exposure on both a short-term and a long-term basis. Chapter 5 then reviews the financial reporting environment and the development of accounting standards in this area. The recommended approach to foreign exchange accounting is described in general terms in chapter 6, with the following three chapters then exploring the key elements of that approach in more detail. Chapter 7 covers transactions accounting, chapter 8 deals with the question of balance sheet translations and chapter 9 sets out the approach to consolidations. Finally, chapter 10 covers the subject of accounting systems and internal controls.

The final part of the book consists of a series of self-contained reference sections. The first of these contains a detailed description of many of the hedging products now available on the market — ranging from fairly standard forward transactions and currency futures through to currency swaps, options and the so-called ‘third generation’ products such as range forwards or swap options. The following three sections cover in turn each of the accounting aspects reviewed in chapters 7, 8 and 9. These sections provide a summary of the recommended accounting approach in each area and include examples, where appropriate, of some of the more complex accounting approaches required.

Finally, I would like to take this opportunity of thanking Roma Holmes, for her extraordinary typing efforts, Theresa Martin for her persistence and encouragement in helping me reach the end, and the commissioning staff at Butterworths for their patience and understanding.

Ian J Martin

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CHAPTER 1

# Setting the scene

## A BRIEF HISTORY

The era of fixed exchange rates  
The Snake  
The international marketplace  
Increasing intervention  
The future

## A EUROPEAN PERSPECTIVE

Operation of the EMS  
The ECU



## A BRIEF HISTORY

Some might argue that history has no place in a book which sets out to be 'forward looking' or in a market which is driven by change. Without, however, considering the nature of the current market in the context of developments over the course of the last 40 years or so, it is difficult to appreciate the speed with which the market has moved and continues to move. It is sometimes difficult today to recall that as recently as the mid-1960s a simple division on a mechanical calculator took as long as 30 seconds, and that the use of electronic calculators was only introduced into the exams of the Institute of Chartered Accountants as recently as 1972. The computer-driven, 'high tech' dealing environment of today's foreign exchange markets is, in point of fact, still a fairly recent development.

### **The era of fixed exchange rates**

The history of today's foreign exchange markets probably begins somewhere between the two World Wars when, certainly up until the Wall Street Crash, there was a system of fixed exchange rates linked to gold and silver. The currencies of many of the larger Western economies were 'convertible' to the extent that their governments stood ready to redeem them against one of those key metals. The market itself was, of course, extremely small by modern-day standards and those transactions which occurred were generally only for small amounts. International communication was by telegraph and settlement generally by airmail.

Although convertibility came to an end in the 1930s it was re-established after the Second World War as a result of the Bretton Woods agreement. The Bretton Woods conference in 1944 laid the foundations of what was to be the world's new international monetary system. It confirmed the post-war dominance of the US dollar by establishing par values for the convertibility of the dollar against gold, and provided for a series of fixed exchange rates between the US dollar and the other principal convertible currencies. Convertibility in a true sense, however, probably did not become a reality until about 14 years later, as the period of reconstruction of the Western economies was beginning to come to an end. By this time international trade had begun to grow and the telex had significantly enhanced the ability of international centres to communicate with each other.

The next ten years saw a period of fairly stable fixed rates of exchange where the only 'excitement' in the foreign exchange market tended to be the occasional rumour concerning a potential revaluation or devaluation. Markets remained extremely insular with, in particular, the New York and European markets rarely trading with each other. The US economy appeared to be immune from international developments and there was little or no concern in Europe as to the growing balance of payments deficits emerging on the other side of the Atlantic. By now many of the major currencies were emerging as either 'strong' or 'weak', depending upon their country's economic performance. The British pound was fast losing its status as a major reserve currency and the French franc was suffering as a result of France's economic and political instability, whereas the Deutschmark and the Swiss franc were becoming favourite alternative homes for capital.

#### 4 *Setting the scene*

The first major upheaval in the foreign exchange markets came in 1967 when the pound finally came under insurmountable pressure to devalue. Despite the Bank of England's sales of well over US\$1 billion in support of the currency, the pressure was too great and a devaluation eventually took place during the weekend of 18 November. It was the first, but by no means the last, example of massive Central Bank intervention failing to prevent a currency adjustment which economic circumstances had made unavoidable. Meanwhile, in the US, the American involvement in Vietnam and the increasing deficits of the American economy had created such a drain on gold reserves that in early 1968 official international gold payments were suspended. Although international capital controls were quickly introduced, they could not prevent large capital outflows from France and inflows into Germany. The German authorities, reluctant to see their currency revalued at that time, found themselves having to absorb billions of dollars in order to keep down the value of the Deutschmark. Towards the end of 1969, the pressure became too great and there was a devaluation of the French franc and a subsequent revaluation of the Deutschmark.

This was the beginning of the end for Bretton Woods and its eventual demise was presaged in 1970 by the 'floating' of the Canadian dollar. By the end of 1970 the downward pressure on the US dollar fuelled by the ever-increasing US payments deficits and the corresponding upward pressure on the Deutschmark was beginning to completely 'seize up' flows of international finance. The situation deteriorated in 1971 and on one day alone in May of that year the Bundesbank took delivery of in excess of US\$1 billion. The pressure was too great and in quick succession West Germany, the Netherlands, Switzerland and Japan all either formally revalued their currencies or allowed them to float upwards as the Canadians had in 1970.

#### **The Snake**

Throughout the troubles seen in Europe, the US government had consistently refused to accept that there was a 'dollar problem'. Their view had been that there might be a problem with the Deutschmark, but not with the dollar. After the events of early 1971, this became an untenable position, and during that summer President Nixon finally put an end to the convertibility of the dollar. No longer was there to be a fixed link between the US dollar and gold. By the end of 1971 the dollar had been formally devalued, certain other currencies had been realigned and the Bretton Woods system had been replaced by the so-called Smithsonian Agreement.

The Smithsonian Agreement involved the introduction of 'Central Rates' around which exchange rates were to be allowed to fluctuate. The so-called 'Snake' was in fact to have a relatively short history - in the Spring of 1972 the Germans introduced additional regulations to try and restrain the Deutschmark once again, and shortly afterwards the major European currencies created a mini-system within the main Snake. Massive intervention was required in mid-1972 to support the dollar at its pre-determined rate and, within Europe, some of the weaker currencies had difficulty in keeping pace with the stronger Deutschmark. The pound itself eventually left the Snake, but only after the UK had spent billions of dollars attempting to support it.

The situation deteriorated further in 1973, initially with Italy taking regulatory measures to support the lira, and then with Switzerland, flooded

now like Germany with capital flows, allowing the Swiss franc to float upwards. Within a matter of weeks, both the German and Japanese central banks were refusing to purchase more dollars, eventually resulting in a formal 10% devaluation of the US dollar. To all intents and purposes the Smithsonian Agreement was now already a thing of the past.

The Snake did not completely disappear, as six European currencies continued its operation. It is also wrong to label the initial post-Smithsonian era as a period of truly floating exchange rates – it was more a case of a series of ‘dirty floats’, with the majority of central banks being committed to some form of intervention. The extent of that intervention, its objectives and the way in which it operated, varied substantially from country to country. This gave rise to considerable confusion in the foreign exchange markets; confusion which became far more serious as those active in the market slowly became aware of the knock-on implications of the 1973 Yom Kippur War. The subsequent quadrupling of oil prices, and the fact that oil still had to be paid for in US dollars, led to a sudden reversal in the decline of the US dollar to such an extent that those restrictions on capital flows previously instituted by the US and West Germany could eventually be abandoned.

Such gyrations in the currency markets resulted in substantial losses by some foreign exchange traders (the most notorious of which was probably the bankruptcy of the Herstatt Bank in Cologne). With the world’s press focusing on the foreign exchange markets to an ever-increasing extent and with losses such as those of Herstatt and, closer to home, the difficulties of Lloyds Bank Branch in Lugano, bankers and corporates alike were forced to take far greater notice of what was already rapidly becoming a far more sophisticated market.

## **The international marketplace**

Although technology and improved communications had resulted in a considerable increase in the volume of international foreign exchange trading, the majority of transactions in the early 1970s were still driven by the local marketplace, even if settlement took place in another location. Furthermore, for largely historic reasons, New York was still a far less sophisticated player in the currency markets than, for example, London. The introduction of SFAS 8 (see chapter 5) in 1975, however, required American companies with overseas operations to take account of current market rates when preparing their financial statements. American companies were forced to take far more notice of exchange rate fluctuations than previously, and the New York financial market responded by increasing its own involvement internationally. Most of the New York banks had already established sizeable operations overseas and it was simply a case of transferring the experience that those branches had acquired back to their head offices.

The other important development over the course of the 1970s was the emergence of the international currency broker. These brokers, with their direct links between the major centres, allowed an almost total integration of trading activities between these centres, and brought the pace of activity in New York up to that of centres such as London. By the end of the decade, the American markets had even abandoned their approach to quoting the price of another currency in dollars and substituted it for the ‘European’ approach of quoting currencies against the US dollar.

The second half of the 1970s witnessed a series of currency 'shocks' which generally originated from underlying economic pressures. From late 1974 through until the end of 1976, the pound was under fairly continual pressure against the dollar and this only abated when the dollar itself came under pressure in 1976. The traditional 'British problem' of high inflation and bad trade figures, together with the impact of capital flows out of countries which had been using sterling as a reserve currency, resulted in the pound falling to all-time lows against a number of key currencies, with the turning point only being reached in early 1977 after a substantial amount of help had been received from the IMF and other major countries.

After a brief respite in the second half of 1973, courtesy of the price of oil, the US dollar had continued something of a switch-back ride against the Deutschmark until 1977, when the increasing size of the US deficit again set it on a firmly downward path. The depreciation of the dollar accelerated in 1978, by which time the majority of western countries were becoming somewhat alarmed at its apparently unstoppable fall. The fear of a financial crisis resulted in fairly heavy intervention by all of the major central banks - most of it to no avail - with the dollar's 'free fall' only really being brought to an end by the 'Carter package' of November 1978. Pressure on the dollar continued, though at a reduced level, until 1980 when yet another change of sentiment led to the start of what was to become, over the next five years, an inexorable rise - particularly against the Deutschmark.

### **Increasing intervention**

The Bundesbank had not, over the last decade or so, been slow to intervene in the foreign exchange markets on behalf of the Deutschmark, but over the course of the early 1980s, it became increasingly frustrated with the continued reluctance of the US government to take any action itself to stem what it now saw as an unacceptable rise in the level of the dollar. It was becoming increasingly clear, both to the German and most other central banks, that the increasing size of the foreign exchange markets was making it extremely difficult for any one country to have very much influence over the longer-term level of a particular rate of exchange. Whilst it was perhaps possible to 'influence' a trend, or to start a trend when the market appeared to be indifferent in terms of the direction it was taking, it was certainly not possible for any one central bank to reverse a trend which was not to its liking.

The central banks accordingly became more subtle in their approach, selecting their timing with care and attempting to move when the market was very shallow and/or when other indicators might support a change of direction. The best example perhaps, is the so-called 'Bloody Friday' in September 1984 when the Bundesbank launched a fairly blatant attempt to bolster the Deutschmark against the dollar by carrying out an extremely visible open market operation right under the nose of the Federal Reserve in New York. The Deutschmark purchases were carried out during the course of the London lunch-hour, when only a few early risers were active in the markets in New York. Apart from its timing, Bloody Friday was also seen as a direct protest by Germany against the inactivity of the Federal Reserve.

The pressure continued to mount on the Americans to do something to limit the rise in the dollar, particularly against the yen, culminating in a Group of Five meeting in January 1985 which announced the intention of the

participating governments (the US, Japan, West Germany, France and the UK) to mount concerted efforts to influence foreign exchange markets as and when they considered it appropriate. The next month saw the first action taken under that accord when the central banks of those countries committed approximately US\$11 billion to selling the dollar against a selection of other currencies. Despite initial views that even this level of activity was insufficient to move the market, within six weeks all of the major European currencies had strengthened against the dollar by between 10 and 15%. A similar operation took place in September and October of 1985, where intervention to the tune of another US\$10 billion resulted in further substantial falls in the dollar against, in particular, the yen and the Deutschmark.

The difficult question to be addressed is the extent to which this intervention was successful due to the size of the operation itself, as opposed to the sentiment which underlies it. Many commentators find it surprising that a market now well in excess of US\$200 billion per day can be swayed by an operation of only US\$10 billion mounted by the central banks. What those observers perhaps fail to take into account, however, is the extent to which the current volume within the market comprises primarily inter-bank trading, rather than real 'third party' activity. Some estimates put the inter-trader element of the market as high as 99.5% of the total, suggesting a 'real world' activity of something closer to US\$1 billion daily. The extent to which the dilution effect of the inter-bank volume can spread the impact of a concerted central bank operation is unknown, but it is reasonable to assume that a significant amount of the pressure created by the operation must flow through to the ultimate price-maker.

## **The future**

The great problem with concerted central bank intervention is that, for it to be effective, it requires that those central banks involved in the operation all have, in broad terms, the same view as to the direction in which a particular exchange rate needs to move. During 1985 there was no question amongst key economists that the US dollar was grossly overvalued. The very fact that those countries were expressing those sentiments as well as backing them up with US dollar sales was more than enough to convince the markets that, come what may, there was going to be a fairly determined effort to 'push the dollar down'. The question was, of course, how far? It is accordingly not surprising that towards the end of 1986 and in early 1987 the consensus began to crumble. The US began to indicate that 'the right level' had been reached whilst some other countries involved let it be known publicly that they did not necessarily agree. It was necessary to resort to a compromise whereby the finance ministers of the major countries concerned began to speak of commitments to particular 'ranges' and to the general need for 'stability'. Intervention across the spectrum started to become more patchy, and the whole debate soon developed into another field day for economic commentators to provide their views as to the 'most appropriate' level for a particular exchange rate.

Another problem with trying to manage what are quite clearly freely floating exchange rates is the question of 'over-shooting'. This is the name provided to the now fairly common phenomenon whereby most markets, particularly those subject to a certain amount of speculation, tend to 'over-correct' when moving in a particular direction. The process of over-shooting

introduces yet further instability into the exchange rate process, providing still more opportunity for speculators to move in and out of the markets.

Whilst accepting that, for the time being, intervention in the markets is certainly the order of the day, it is inconceivable that such intervention can continue to be effective other than for fairly short periods of time. The underlying economic objectives of the major Western economies are such that it is quite conceivable that they will be prepared to create a consensus in relation to a particular exchange rate for a while; but the period of that consensus can all too quickly come to an end as the exchange rate concerned reaches, or over-shoots the levels originally anticipated. Neither foreign exchange dealers nor central bankers have particularly good reputations for playing poker, and yet the environment in which we currently find ourselves is not so very dissimilar to that of a card game for exceedingly high stakes. One wonders which side has the best qualifications for such a game?

The future then is likely to be one permeated with periodic agreements by the major central banks to target particular levels for some of the more important exchange rates; sharp short-term fluctuations, sometimes within a long-term trend brought about through an economic readjustment; continuing demand for the nimblest of those currency dealers able to operate within such an environment; and of course increasing losses by those that are exposed to currency fluctuations and yet not sufficiently in control of their exposures.

#### A EUROPEAN PERSPECTIVE

No review of the foreign exchange market, however brief, would be complete without a short section on the European Monetary System (the EMS) and the European Currency Unit (or ECU). The EMS as we know it today was formed in 1979 out of the ashes of what had long become a very unmanageable currency Snake (see earlier comments) and attempts by most European countries at managing what very quickly became known as 'dirty floating'. The idea had first been mooted in 1977 but it took a considerable amount of political will over the course of the next two years to make it a reality.

The EMS had ambitious objectives of leading to a zone of monetary stability in Europe through the convergence of economic and financial policies. In its original form many of its supporters had also envisaged it leading very quickly to a European currency and, ultimately, to full economic integration. These objectives have clearly not been achieved but generally speaking the EMS is seen by those within it and by many outside it as having been a broad success. There have been a fairly limited number of realignments over its life so far and it has kept exchange rates fairly stable in between those movements. If one allows for differential levels of inflation in the various countries concerned, there has in fact been a considerable amount of stability over the first seven years of its life.

Sterling has never been a member of the EMS but ever since its formation, the question of whether or not the UK should join has been a regular topic of political conversation. The arguments for and against membership are regularly aired by the Press on occasions such as the annual Tory Party Conference or the Budget. The government appears to have blown hot and cold on the issue throughout this period, probably quite simply because it is extremely difficult to determine whether or not it would be a 'good' or a 'bad'

thing for the UK to become a full member. Arguments tend to centre around whether or not the pound has reached a stable level, the extent to which it would inhibit the government from freedom of action in either fiscal or monetary areas, the need for completing the 'long-term readjustment' of the UK's economy prior to embarking on such a linkage, etc etc.

### **Operation of the EMS**

The countries currently participating in the EMS comprise Belgium, Denmark, France, Italy, The Netherlands, Ireland and West Germany. These countries have agreed central rates or 'par values' against each other's currencies and against the ECU. The ECU itself comprises a theoretical currency which is based upon a weighted average or 'basket' of the participating currencies. There is a 'band' around the central rate around which each currency is allowed to fluctuate against any other currency. Within this band the lowest permissible level is known as the 'floor' and the highest, as one would expect as the 'ceiling'. The rates are maintained within the bands by the participating central banks which, together, undertake to intervene in the market by buying or selling the appropriate currency to compensate for any undesirable pressures. Although the detailed way in which central banks must intervene is left very much to the discretion of the individual institutions, the points at which intervention is required are specified in the terms of the agreements. If a floor or a ceiling is in danger of being breached, the two central banks for the respective currencies which are reaching their intervention points are required to go into the market to counteract the pressures which have brought the rates close to the intervention points. The periodic (but far from frequent) changes in central rates are approved as and when necessary by all participants.

### **The ECU**

The ECU was initially seen as very much a political statement by the newly formed EMS to provide, in the words of Michel Candesus, 'the international expression of our solidarity'. It has, however, long since broken out of its 'official' role and has become an active artificial currency in a number of important markets. The ECU's most noticeable achievement is probably its use as a Eurobond issuing currency. Total ECU issues in 1986 were in the order of the equivalent of US\$10 billion. Total outstanding lending denominated in ECUs is probably now in the region of US\$75 billion, giving it a share of around 10% of all non-US dollar Euromarket lending.

Foreign exchange turnover in the ECU has grown to an extraordinary extent, so much so that Kredietbank announced in March 1986 that its foreign exchange turnover in ECU was second only to its dollar trading, with an average daily volume in excess of ECU100 million and average daily deposit transactions in excess of ECU700 million. There are now ECU futures and options contracts being traded in Amsterdam, New York, Chicago and Philadelphia, with a contract in London shortly to be launched. It would be unfair to say that any of these contracts have proved particularly successful to date but there appears to be a general degree of optimism concerning future growth.