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Technical Series

No 46

The ECU premium: recent behaviour
and a framework for analysis

by
David Barr

November 1991

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The object of this Technical Series of Discussion Papers is to give wider circulation to research work in the Bank, and to invite comment upon it; any comments should be sent to the author at the address given below.

The author would like to thank Bill Allen, Michael Foot, Jim Trott and numerous other Bank of England colleagues for comments and suggestions. The author also benefitted from discussions with staff at a number of financial institutions including Graham Bishop (Salomon Brothers), the ECU Banking Association, NatWest Capital Markets and West Pac.. All remaining errors are the responsibility of the author. The views expressed are those of the author and not necessarily those of the Bank of England.

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SUMMARY AND CONCLUSION

The ecu has traded at a significant premium over the basket of component currencies for much of the past year, but has recently moved to a discount. Moreover, short-term ecu interest rates are normally significantly lower than the relevant weighted average of short-term interest rates in the component currencies; the same is true of bond yields. These facts raise questions about the relationship between the ecu and the component currencies, which have possible relevance for the functioning of the ecu in the foreign exchange and money markets, and, on a more detailed level, for the measurement of the foreign exchange risk taken on by market participants.

The paper puts forward an analytical framework in which the exchange rate premium of the ecu and the interest rate discount are jointly determined. The main determining factors are:

- (a) investor demand for ecu-denominated assets;
- (b) borrowers' demand to incur ecu-denominated liabilities;
- (c) the willingness of intermediaries to create ecus in exchange for national currencies.

Recent market behaviour can be plausibly explained by reference to these three factors.

THE ECU PREMIUM: RECENT BEHAVIOUR AND A FRAMEWORK FOR ANALYSIS.

(i) The exchange rate premium and interest rate discount: definition and recent behaviour.

1 Until early last year it was widely believed that the foreign exchange value of the ecu was determined by the value of its component currencies, after allowing for a small margin to cover the costs of bundling them together.

Similarly, rates of return on ecu assets were thought to be closely related to those available on the appropriate basket of assets denominated in the components.

From January 1990 to March 1991, however, the ecu traded in the foreign exchange market at a premium to (ie was worth more than) the basket, while in debt markets ecu yields have been at a discount to (ie below) basket yields, at all maturities, since June 1990 (see figures 1, and 2)¹. It is clear that taking positions in ecu against the component currencies carries a foreign exchange risk.

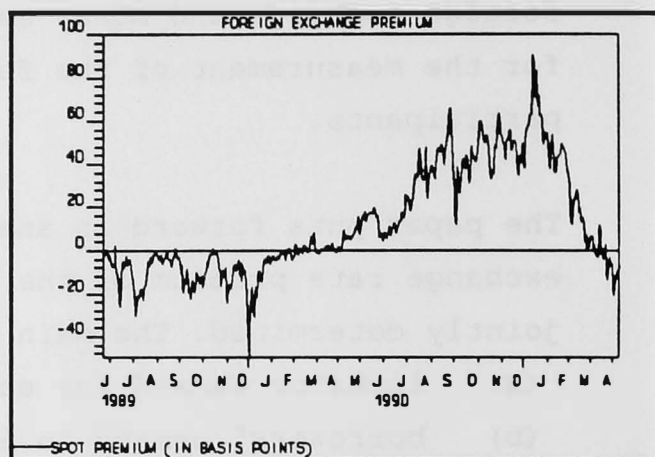


Figure 1

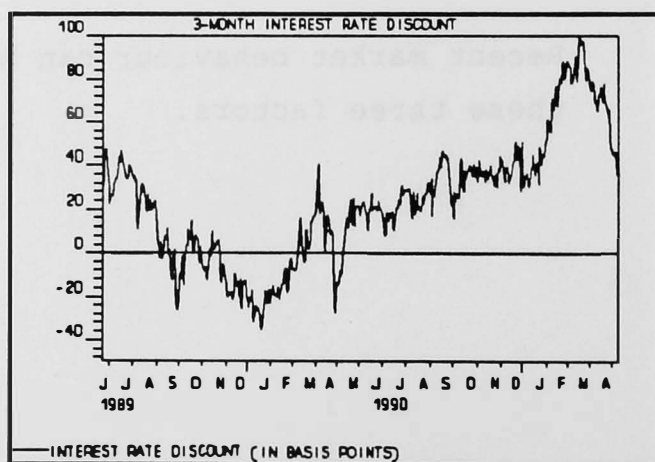


Figure 2

1 Since the time of writing, the interest 'discount' at three-months has moved much closer to zero and has been negative on occasion.

2 The exchange rate premium and interest rate discount are not independent of each other, although as explained below, the nature and strength of their relationship has changed over the last few years. The most straightforward way of looking at the two together is to consider the investment opportunities that they offer to market participants. A number of banks, for example, issue ecu deposits (on which they pay ecu interest rates) and 'hedge' this position by holding assets denominated in the component currencies (on which they earn the 'basket rate')¹. Since the hedge is not perfect, as the behaviour of the premium has made clear, they take an exchange risk just as if they were short dollars and long sterling. The total profit from their position depends upon how the premium moves in the period for which the position is held; a narrowing of the premium, for example, would generate a capital gain. A bank considering taking such a position will calculate the expected profit as,

$$\text{profit} = p - p(t+1) + d$$

where p = the current value of the exchange rate premium

$p(t+1)$ = the exchange rate premium expected at the maturity date of the deposit

d = the interest rate discount, $r_b - r_e$

r_b = the interest rate on the basket components

r_e = the interest rate on the ecu

3 Banks will be prepared to create ecus (ie ecu-denominated deposits, see Annex 2) out of the basket components (ie by holding these components on the asset side of their balance sheet) if the expected profit is sufficient to compensate them for the risks involved and the costs of bundling up the components. There is of course no observable measure of the profit margin the banks require, or of the expected future exchange rate premium.

1 This analysis concentrates on the relationship between ecu deposit rates and the forex premium. However, it also applies to rates on ecu bonds, to the extent that a basket of bonds is available as a hedge.

Nevertheless, if expectations about the premium are assumed not to be extrapolative, the analysis suggests that, other things being equal, there is likely to be a negative relationship between the exchange rate premium and the interest rate discount. This indeed appeared to be the case up to the end of 1989. Since then, however, there has been a sharp widening of both the exchange rate premium and the interest rate discount (now partly or fully reversed); these developments need to be explained by reference to other factors.

(ii) Developments in the ecu foreign exchange and deposit markets.

4 The ecu markets have developed through four distinct stages, all but one of which have caused a significant change in the behaviour of the ecu forex premium and the interest rate discount.

Stage 1: to November 1988

5 The main features of this period were a steady growth of ecu lending by banks, sales of some of the corresponding ecu deposits for other currencies by the non-bank sector, hedging of the consequent long ecu position on banks' balance sheets with the basket of component currencies (according to anecdotal evidence from some of those active in the market at the time) and a relatively stable ecu foreign exchange premium.

6 The main structural feature of the ecu deposit market concerned the ecu-clearing (see Annex 2). **Until October 1987, banks that entered the ecu-clearing with a short position were able to settle their positions by delivering the basket of component currencies.** The rate at which ecu positions were settled by basket deliveries was one for one ie so far as the clearing was concerned, the ecu premium was zero.

7 The facility was withdrawn in October 1987 because, under the terms of the clearing, deliveries of the component currencies were made too late in the day for the recipients to be able to place

them in the relevant money markets. In addition, because it was not clear whether the recipient was obliged to accept the components or whether he was merely permitted to, large deliveries typically led to arguments that threatened the entire clearing for the day.

8 A consequence of this clearing arrangement, while it lasted, was that banks could hedge their long ecu positions with positions in the component currencies safe in the knowledge that the hedge could be exchanged at par for ecu in the clearing. As a result, **several banks, referred to as 'hedging banks' henceforth, made two-way markets in the ecu against the basket**, earning a profit from the bid-ask spread, but not taking on a significant exchange risk. The rate at which the two exchanged was close to par, though in a thin market, the influence of supply and demand frequently pushed the rate above and below this level.

9 In addition, a sub-group of the hedging-banks exchanged the ecu for the basket at par, though to cover the cost of bundling the components to form the hedge, flat-rate fee was charged for each transaction.

10 Throughout this period, the non-bank sector had a stronger demand for ecu loans than for ecu deposits (this remains the case - see the table below). Hence, while the majority of the banks' assets were matched by ecu liabilities, a proportion were matched by liabilities in the basket components.

Table 1

BIS reporting banks' net position in ecu (billion ecu).¹

	1985	1986	1987	1988	1989	1990			
						Q1	Q2	Q3	Q4
Assets	64	70	80	102	124	137	137	145	142
Liabilities	58	60	66	89	112	131	134	144	141
Net assets	6	10	14	13	12	6	3	1	1
o/w CMIs	(1)	(1)	(2)	(4)	(6)	(7)	(7)	(9)	(9)
non-banks	7	10	14	18	17	18	19	17	17

1 Assets and liabilities consist mainly, but not exclusively, of loans and deposits.

11 In November 1988 the character of the ecu foreign exchange market changed as the sub-group ceased to offer the ecu for the basket at par and many of the other hedging banks withdrew from the ecu-basket market.

Stage 2: November 1988 to around March 1990

12 The result of these changes was that there was now no assurance that the ecu could be exchanged for the basket at par, and riskless arbitrage between the two became impossible.¹ Henceforth, the exchange rate premium would be determined by market supply and demand. Nevertheless, there was no obvious break in the behaviour of the foreign exchange premium, although there were some sharp movements.

Stage 3: April 1990 to January 1991

13 This period was marked by two substantial changes that caused demand for the ecu to increase. First, the Japanese became serious buyers of the ecu as they increasingly came to view it as an attractively safe means of buying exposure to European currencies, the appeal of the DM having declined due to the uncertainties surrounding GEMU.

14 Second, the number and size of ecu bond issues increased significantly; of the total of ecu79bn of issues between March 1981 and April 1991, ecu13bn took place in this stage. This issuance may have enhanced the perception of the ecu as a 'serious' currency; the bond markets became more liquid and investors may have wanted to hold more ecu liquidity in order to trade in them. There was also a greater willingness on the part of some issuers to retain the proceeds in ecu rather than convert them into other

1 For example, the 'best' that a bank with an ecu liability could do would be to buy the basket currencies as a hedge and hope that their aggregate value would move in line with that of the ecu. The bank could not expect to be able to exchange its basket of currencies for an amount of ecu known with certainty in advance.

currencies. As table 1 shows, the major new deposit demand came from 'central monetary institutions'. Thus **the new supply of public sector issues increased the demand for ecu assets as a whole and caused a switch out of other currencies.**

15 These developments caused both the forex premium and the interest rate discount to increase (see Annex one for an analysis). The exchange rate premium reached a peak of 0.9% on January 14 1991, at which time the 3-month interest rate discount was 0.4%. Essentially, increased demand for the ecu relative to other currencies increased its value while the greater demand for deposits allowed banks to offer lower rates on them. As the demand for ecu assets increased, the net long position of the banks declined, to almost zero by 1990Q3. Had there been more banks willing to create ecu deposits backed by the basket the premium would probably not have widened as far as it did.

16 **It was during this stage that awareness among the banks of the fact that the foreign exchange value of the ecu could diverge from the basket became widespread.** Prior to this, any divergence had been too small to attract widespread attention.

Stage 4: January 1991 to date.

17 If the rise of the premium in the period up to January 1991 was partly a consequence of the increase in bond issuance, the further spate of issues in February and March this year (totalling ecullbn) might have been expected to widen the premium even further. However, as figure 1 shows, the premium narrowed significantly. This may partly be explicable by the further widening of the interest rate discount.

18 In addition to this, however, **there is anecdotal evidence to suggest that there was substantial speculation against the ecu by many institutions,** by a number of means including creation of ecu deposits by banks. **This position taking against the ecu appears to have been responsible for the narrowing of the forex premium.** The

motivation for this speculation may have been a market feeling that although the premium could, technically, widen without limit, it was likely eventually to return to close to zero and that once the divergence reached 100bp this 'hunch' was worth backing. Anecdotal evidence suggests that some participants drew some support for this view from the expectation that at the start of Stage 3 the ecu will be exchangeable into some national currencies at the basket/national currency exchange rate.

(iii) The ecu bond markets.

19 Much of the analysis presented above can be applied to ecu bond yields, but there are some additional aspects that deserve comment.

20 Ecu bond yields at the 10-year maturity (see figure 3¹) fell below the theoretical basket rate at about the same time as did 3-month rates. This move was

probably a reflection of increased demand for ecu bonds just as the movement in short rates reflected increased demand for ecu deposits. The main reason for the increase in bond demand was probably that ecu bonds became more attractive to investors seeking a long-maturity European asset (they could not buy a complete

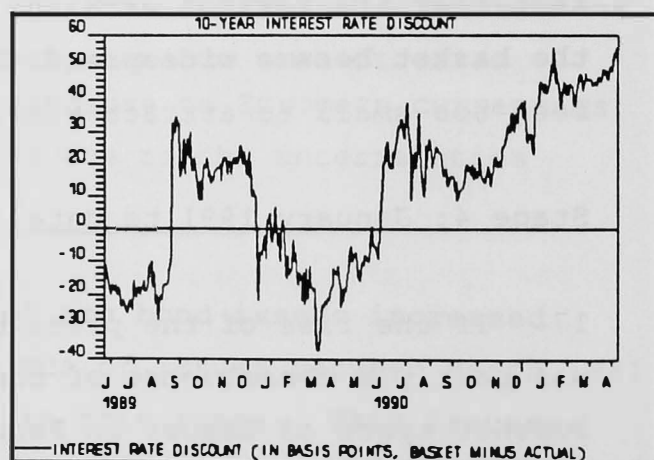


Figure 3

'basket' of bonds owing to the shortage of bonds in some of the component currencies. In addition, as the ecu market grew, its developing liquidity may have further encouraged demand.

21 Although the interest discount at 3-months has declined in the recently, that at 10-years has not (although its trend increase

1 Source: UBS Phillips and Drew.

does appear to have slowed). This may reflect the growing perception that the ecu will be hardened during the life of the bonds (which would make the assets more attractive and would tend to keep their rate of return down - a hardening within the life of recent bank deposits would be unlikely). Thus while some of the speculative ecu sales that closed the forex premium were financed by sales of ecu bonds, an underlying growth of bond demand may have

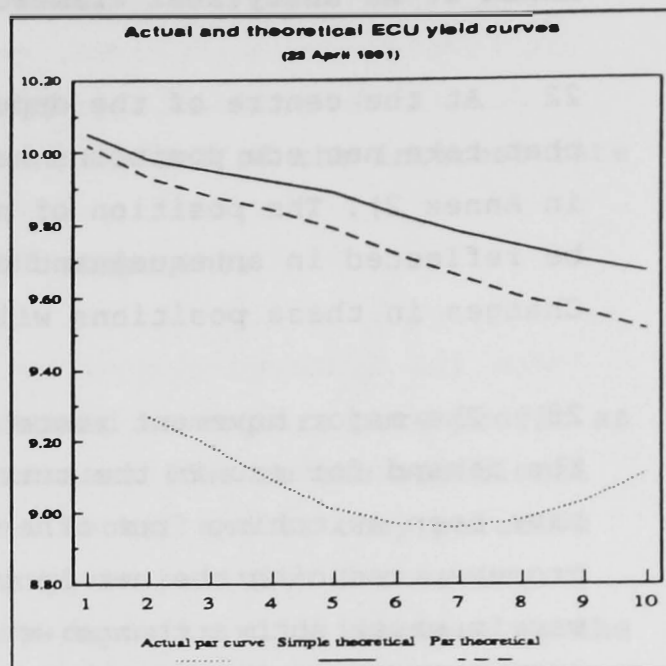


Figure 4

helped to sustain the bond rate discount. It is curious that the yield discount is narrower at 10 years than at shorter maturities (see figure 4), though this may reflect the fact that the shortage of bonds to make up the 'bond basket' is even more acute at these maturities.

ANNEX 1: An analytical framework

22 At the centre of the deposit market is a small group of banks that take net ecu positions hedged against the basket (as explained in Annex 2). The position of non-banks (ie long or short ecu) will be reflected in an equal and opposite position for this group. Changes in these positions will be similarly related.

23 The major movement since early 1989 has been an increase in the demand for ecu in the currency portfolios of non-banks, which have been switching from other currencies into ecu and, in the process, reducing the net long positions of the hedging banks. The way in which such a change would impact on the banks is described below.

24 Assume that the initial transaction is a non-bank sale of dollars into ecu and is executed by one of the hedging banks. The bank is being asked to take a long dollar position against a short in ecu; a position it will hedge by selling the dollars to buy the basket. Ordinarily, the bank will want to on-sell the ecu at a dollar price in excess of the dollar price of the components ie it will charge a premium. Similarly, it will offer a lower rate on its ecu liability than it receives on its basket asset ie it will hope to obtain a discount on the cash flow side.

25 Clearly there are two potential sources of profit and as one offers more so the hedging bank will tend to require less from the other ie so far as the bank is concerned there is an acceptable negative relationship between expected changes in the premium and the discount, for a given profit target.

26 An analytical framework can be constructed as follows: Assume for simplicity that the value of the basket components against the dollar, say, is constant so that movements in the forex premium mirror changes in the ecu/\$ rate. The total expected profit from a hedged position is,

$$\text{profit} = p - p(t+1) + rb - re$$

where p = the forex premium today

$p(t+1)$ = the expected premium at the end of the interest rate term (assumed to be zero)

rb = the rate on the basket components

re = the rate on the ecu

27 The banks can reasonably be assumed to require more profit as their total ecu/basket position increases (due to the additional currency risk being taken onto their books) and as they perceive the degree of currency risk for any given position increasing. Thus their **willingness to supply ecu deposits will increase as the (expected) profit rises** ie

$$s = s(\text{profit}, \text{risk})^1$$

This relationship can be drawn with reference to either the ecu interest rate or the forex premium, assuming all the other variables to be fixed. Taking the premium first, the supply curve will be upward sloping, and will move up as the expected future premium increases, up as the ecu interest rate increases, down as the basket rate increases and up as perceived risk increases.

28 The **demand for ecu comes from two separate groups, 'fundamentalists' and speculators**. The former group holds ecus because they represent a store of value that can be used to fund later economic activity such as investment, or, in the case of some international financial institutions, because they wish to promote the ecu and its use. The cost of holding ecu for this group is likely to be seen in terms of the ecu returns relative to those on other (individual) currencies. Under the assumption that all cross rates are held constant, the demand curve can be drawn as downward sloping in the same diagram as the supply curve.

1 Total ecu deposits will include those backed by ecu assets. This framework looks only at the those deposits hedged by the basket.

29 Speculators will look at the market in much the same way as the hedging banks. However, as a starting point, it is reasonable to assume that they stay out of the market until the expected profits from position taking reach a specific threshold (plus or minus 'k' basis points for example) and that when they enter, they do so in such large amounts that they prevent any further widening of the premium¹. While the premium remains within the threshold range the downward sloping fundamentalists' demand will dominate.

30 The complete market is represented in figure 5. The change that initiated the rise in the premium, in 1990, was an increase in 'fundamental' demand, which can be represented by a rightward shift of the (aggregate) demand curve.

Assuming for convenience that the interest discount does not respond, the forex premium will start to rise, increasing the expected profits available to the hedging banks. The result will be an increase in their positions ie while the traders set prices independently of events and prices in other

markets (see Annex 2), the banks' managements will alter their target quantity positions (those banks that trade ecus against the basket could do this by changing their ecu for basket exchange rates; any of the hedging banks could simply sell ecu and immediately instruct their traders to buy the components). Overall the premium increases as demand for ecu rises.

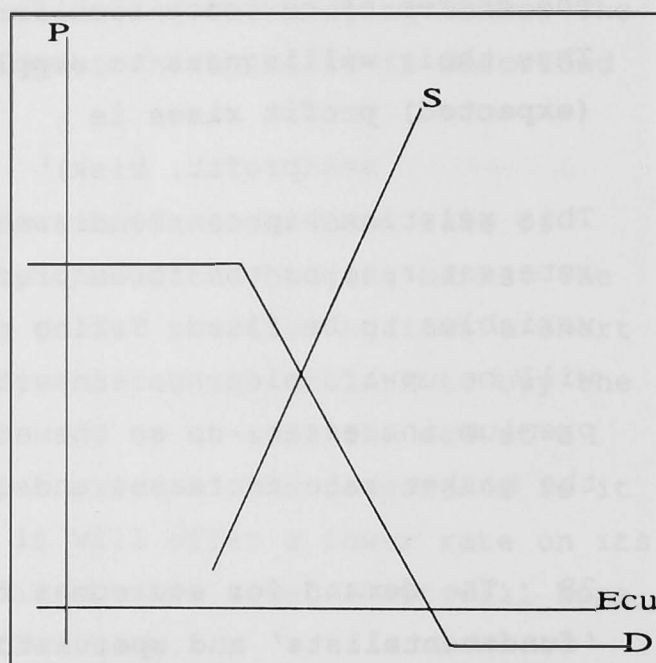


Figure 5

¹ A plausible simplifying assumption is that most speculators go 'short' of ecu by selling ecu bonds ie their actions will impact more on the interest discount at longer maturities than the actions of the banks.

31 These movements are shown in figure 6. As explained in the text, the speculators were initially unaware of the potential profits in this market, so the premium increased to point (b) (in 1990Q4), and total ecu deposits increased appropriately. At the same time, some of the banks became aware that the premium could rise without limit, ie they reassessed the potential risks of their existing positions. This would have had the effect of moving the supply curve to the left, raising the premium further and restraining the growth in deposits.

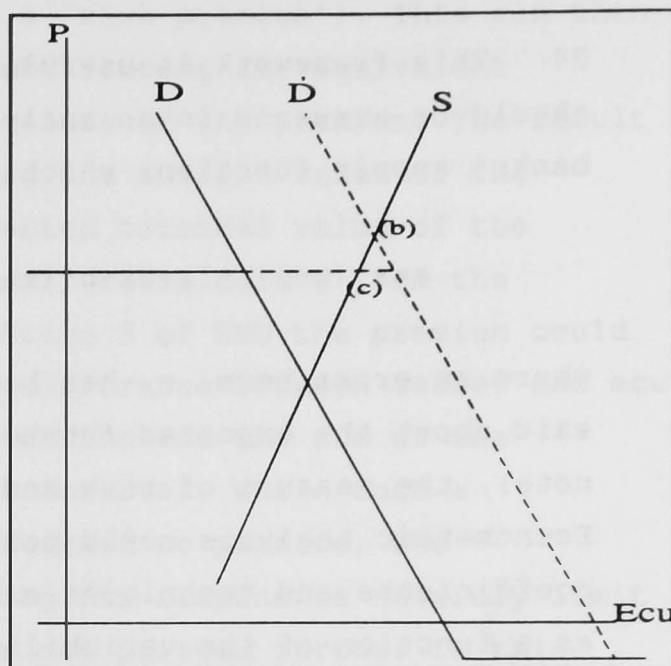


Figure 6

32 The size of the premium then attracted the attention of the speculators (in 1991Q1) and the relevant demand curve changed from being that of the fundamentalists to being that of the aggregate of the two groups; the premium declined sharply to point (c). There should also have been some decline in deposits outstanding (unless the banks reassessed their risk positions back again in the light of the bounce back in the premium); deposit data for 1991Q1 is not yet available.

33 The relative simplicity of this analysis is corrupted to some extent by the fact that the interest discount should also be accounted for. Unfortunately, since the participants are (probably) indifferent between profits generated by movements in the foreign exchange premium and the level of the interest rate discount, all that can be achieved is a prediction of the way in which the sum of them moves. For example, the analysis suggests that the expected profit should have declined in 1991Q1, as indeed it did (assuming as before that position takers always expect the premium to fall to

zero) but this has been made up of a decline in the forex premium and a widening of the interest discount.

34 This framework is useful in identifying the questions that should be answered in an analysis of the market. Starting with the banks' supply function, which can be written as

$$s = a * (p - p(t+1) + d) + b * (\text{risk}) + e$$

where an error term, e , has been included, something needs to be said about the expected future premium (assumed to be zero in this note), the measure of risk and the two coefficients a and b . Econometric analysis could possibly provide estimates of the coefficients and techniques exist that could estimate the risk term as a function of the variability of the error term, e . This latter exercise could be misleading however, because during the period in question, the risk measure would have been influenced by the growing awareness that the premium could widen indefinitely; a development not picked up by estimates of the historical variability of e .

35 The fundamental demand function could also be specified. Demand would have grown with perceived riskiness of the DM, liquidity of the ecu bond market and so on. Again, it might be possible to estimate an equation.

36 The speculative demand function could be analysed in terms of the boundaries at which speculators would regard it as worthwhile to enter the market. Estimates of k would allow some prediction of the future course of the level of expected profits; if we assume that in January 1991, the premium was expected to fall to zero over a year, the annual expected profit would have been about 180bp. The analysis above suggests that the boundaries should be somewhat less than this.

37 Once the various demand and supply factors have been identified, the equation determining profit can be rearranged to

give the current premium as a function of the expected premium in the next period, the current interest differential and the current profit level (more usually termed a 'risk premium'). This can then be solved forward by repeatedly substituting the equivalent equation for all expected future values of the premium. The result of this would be an equation giving the current value of the premium as a function of some expected terminal value of the premium (which, as noted in the text, could derive from the expectation that at the start of Stage 3 of EMU the premium could be zero), the sum of the expected difference between basket and ecu interest rates up to the terminal period and the sum of the expected risk premia over the same interval. While such a theoretical construct is straightforward to produce, the difficulties involved in quantifying its components severely limit its practical importance and it is not pursued further in this paper.

ANNEX 2**The structure of the ecu markets;****A Ecu loans and deposits.**

38 The market participants can be divided into three groups;

- (a) banks that are willing to run net positions in ecu;
- (b) banks that offer loans and deposits but run a matched;
book; and
- (c) customers (including central banks).

39 While the banks that are willing to take ecu deposits currently number forty-five, the number willing to take on a loan (or deposit) hedged against a basket of liabilities (or assets) made up of the components of the ecu is very small.

40 The majority of ecu banks match their ecu loans with ecu liabilities to clients or other banks. This matching can be achieved in any of three ways. In the case in which a bank receives a deposit of ecu from a client, for example, the bank is actually in receipt of a claim on another bank (since this is all that private ecus are). This claim can be offset by making an ecu loan to another bank or to a client. In either of these cases the bank will enter the ecu-clearing for the day with a flat position overall. The alternative is to do nothing and enter the clearing with a net claim on the other banks. While this is not standard practice, there may be some banks that prefer to do this.

B The ecu foreign exchange market.

41 The ecu forex market has a similar structure to that of the deposit market except that the participants can be sub-divided into three groups;

- (a) banks making two-way markets in ecu against the basket;
- (b) banks making two-way markets in ecu against single currencies;
- (c) banks that will obtain ecu for clients but who do not make markets; and
- (d) clients.

42 The first two groups (all of (a) are in (b) not surprisingly) are usually referred to as 'professionals', while members of the third are known as 'traders'. A trader who wishes to obtain ecu for a client will call a professional and explain that he needs, say, ecu30m for a client and ask for a price against DM, sterling or whatever, for this amount. The professional in search of ecu however, will call another professional and be quoted a two-way price without any prior discussion of the amount, provided that it does not exceed the conventional 'standard amount'. (The term 'trader' is used henceforth in its more general sense, ie to refer to an individual sitting at a trading desk, regardless of his employer.)

43 At present, only a small number of banks are willing to exchange ecu for the basket of component currencies. The other banks will usually attempt to keep their books matched (and make their money by trading volume through the bid-ask spread rather than by position taking). Thus if a trader sells ecu that he does not hold (in an exchange for DM say), he can obtain the ecu by selling the basket to either of the two banks willing to do this business. Some traders maintain computer programs giving a list of the amounts of each of the components that the trader must deliver if ecu have been purchased in this way.

44 There is very little difference, in terms of the affect on the total supply of ecu, between banks that make a market in the ecu against the basket and those who merely hedge their ecu positions. Both 'create' ecu liquidity; those making two-way markets in ecu against the basket simply have their bundling done for them by others if they are selling ecu.

45 Apart from the operational dependence of the forex market on the underlying deposit market, the two are linked by the relative prices of the ecu against other currencies in each market. In particular, the forex price of the ecu against the basket will be influenced by the rate of interest on the ecu compared to that on the basket of components.

46 The key point here is that the relationship between differentials in the two markets depends on the extent to which speculators are willing to take positions one way or the other; there is no mechanical or institutional link between the two.

47 The only direct linkage between the two markets appears to be the institutions who take positions in both. These fall into two groups, banks who take ecu positions and hedge them with the basket components as part of their everyday business ie institutions that always have a presence in the deposit market, and speculators (which may include the ecu banks from time to time) who take similar positions in order to exploit what they perceive to be profit opportunities. The point to note here is that the everyday business taken place almost continuously (as part of the fundamental operation of the market) while speculators may be absent from the market for long periods of time.

C The creation of ecu.

48 Ecu can be created in three ways;

- (a) by banks making loans, as described above;
- (b) by banks creating ecu deposits in exchange for the basket;
and
- (c) by any bank creating an ecu deposit in exchange for another
currency.

49 Each of these will leave the 'creator' short of ecu when the ecu market clears, (unless it has previously passed on its shortage to another bank in the ecu deposit/loan market). The second and third leave the bank with an ecu liability and a currency asset. Again, most banks will pass the position on by buying ecu from other banks with their newly acquired currency or, if the basket/ecu rate is favourable, by bundling the basket and passing it to one of the banks willing to exchange ecu for baskets. This transaction leaves the initial ecu-creating bank with a matched position in ecu and creates an automatic hedge for the exchanging bank. In this case the entire burden of the newly created ecu is left on the balance sheets of these two banks. An alternative is for the initial bank (or any of the others to whom the shortage is passed) to purchase the basket components individually and hold them as a hedge. In this case, there is no ecu-for-basket transaction and the burden of ecu creation is shared within a wider group.

D The ecu clearing.

50 The ecu clearing has passed through three distinct phases. In 1981, Kredietbank(Brussels) (KB) and Lloyds established ecu credit lines to allow them to offset their positions against each other. Additional banks were admitted to this arrangement until the group eventually numbered seven (KB(Brussels), Lloyds, Credit Lyonnais, Generale Bank, KB(Luxembourg), Banque Belge pour l'Industrie and Istituto Bancario San Paulo di Torino) and took on the name Mutual Ecu Settlement Account (MESA).

51 The size of the credit lines was limited to ecu20m (mutual agreement being required for further amounts) with any excesses being settled by delivery of the basket. MESA was eventually found to be insufficient to cope with the volume of business in ecu and the seven members reconstituted themselves as the Ecu Banking Association (EBA) in 1986 and set up a new clearing system through the BIS and SWIFT. The credit-line/basket-delivery system was retained when the EBA clearing was created but was abandoned in 1987 because it was not clear whether there was a right to deliver the basket or whether it was negotiable; this led to arguments that frequently put the day's clearing at risk. The principal objection from those in receipt of baskets was that they arrived too late in the day for them to be invested in the component currencies' overnight markets. In 1987, the basket delivery option was dropped and all subsequent outstanding balances had to be settled by ecu loans and advances.

52 The basket based system had had the effect of keeping the value of the ecu close to that of the basket; any significant discrepancy could have been arbitrated away by a bank going short (or long, as appropriate) of ecu to buy the basket components and then delivering the required amount of these components in the clearing. To the extent that the bank had been able to buy the components at less than the clearing rate of one basket for one ecu it would have made a riskless profit.

E Pricing behaviour of market participants.

53 The basic forex rate for the ecu is that against the deutschemark (DM); ecu rates for other currencies are calculated using their rates against the DM. The traders in the forex market set their ecu/DM rates according to their perceptions of where the currency should be trading and to their short-run positions. They do not calculate an ecu rate by first calculating the rate for the basket and then applying a mark-up to it. Those banks making markets in the ecu against the basket would set their rates with

reference to the calculated premium and the direction in which they wished their ecu-basket position to go; this in turn would depend upon interest rates on ecu and basket component deposits. Hence the ecu premium is generated by the strength of demand for ecu relative to supply.

54 A similar story can be told for the deposit/loan markets. Furthermore, in neither market do traders appear to take into account developments in the other one in setting their prices.

Bank of England Discussion Papers

Title		Author	Title		Author
1-5, 8, 11-14, 16-17, 19-22, 31		<i>These papers are now out of print but photocopies can be obtained from University Microfilms International^(a)</i>	53	The determination of average earnings in Great Britain	M A S Joyce
6	'Real' national saving and its sectoral composition	C T Taylor A R Threadgold	54	Cross-border savings flows and capital mobility in the G7 economies	Shelley Cooper
7	The direction of causality between the exchange rate, prices and money	C A Enoch	Technical Series		
9	The sterling/dollar rate in the floating rate period: the role of money, prices and intervention	I D Saville	1-11, 13, 20, 23	<i>These papers are now out of print but photocopies can be obtained from University Microfilms International^(a)</i>	
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