The role of brokers in the London money markets

This article[1] describes the role of broking firms in the London markets through which banks and other financial institutions conduct their money-market operations. It draws on the Bank of England's longstanding and close relationship with these firms, which now forms the basis of a supervisory framework appropriate for providers of a specialised service to an exclusively professional customer base.

Turnover through the money-market brokers supervised by the Bank has been growing quite steadily during the past two years, with a particularly marked increase in business in forward rate agreements, over-the-counter options and swaps. During the last six months total daily turnover averaged over £115 billion. Competitive pressures are strong in this market, and traditional money-market broking will face new challenges over the next few years.

Introduction

The London money markets are professional in nature and mainly used by institutions in their 'treasury' operations—ie in the management of their own balance sheets. Although these are often referred to as 'interbank' markets, participants also include building societies, other large financial institutions, UK local authorities and, to a lesser extent, industrial and commercial companies. Foreign exchange and deposits dominate trading in terms of volume, but increasing use is also being made of derivative instruments—notably forward rate agreements (FRAs), over-the-counter options and swaps—which provide greater flexibility.

The function of broking firms in these markets is, and always has been, solely that of agent, bringing together principals wishing to deal at mutually-agreed prices. They are therefore referred to as 'name-passing' brokers, a label which accurately encapsulates their role. They provide an efficient alternative to direct, principal to principal, trading, facilitating the activities of professionals seeking to undertake large size transactions in these high-volume, often fast-moving, markets. It is a fundamental principle of broking in these markets that firms offering this service never, even fleetingly, act as principals in transactions: deals arranged through them always involve settlement directly between the principals involved.[2]

The brokers charge commission (brokerage) for the name-passing service they provide. Brokerage rates—which have always varied according to the instrument and often the maturity involved—became freely negotiable several years ago.

The Bank's relationship with the money-market brokers

The Bank of England's links with the money-market brokers can be traced back to before the Second World War and have their roots in a desire to foster the development and operation of orderly and efficient foreign exchange and currency deposit markets in London. The early 1970s saw the beginning of a formalisation of the Bank's role in bringing together representatives of the banks and brokers and in encouraging the development and standardisation of market practice. This dialogue led to the preparation and promulgation of codes of conduct setting out standards of best practice to which all London market participants were expected to adhere. In 1979 the Bank became directly involved in a quasi-supervisory role *vis-à-vis* the brokers when, with the agreement of the banks' and brokers' representative bodies, non-statutory procedures were adopted for the 'recognition' by the Bank of any broking firm wishing to offer a London-based service in foreign exchange and/or currency deposits.

It was these arrangements which in turn formed the natural basis for the current so-called 'Grey Paper' regime, introduced in April 1988.[3] Under Section 43 of the Financial Services Act 1986 the Bank was given powers to establish a list of institutions which would be exempt from the Act when transacting or arranging large deals in the main money-market instruments. This provision gave the Bank the opportunity to bring together the various aspects of its traditional non-statutory oversight of the money markets to create a particular supervisory framework appropriate to principals and brokers operating in professional markets where, because of the financial sophistication of their participants, investor

(1) Prepared in the Bank's Wholesale Markets Supervision Division.
(2) The inter-dealer brokers in gilt-edged stock and US government securities are exceptions to this rule. They operate as 'matched principals' in order to provide anonymity for market makers using their services, with settlement taking place through their books. The business of the gilt-edged inter-dealer brokers was described in an article in the February 1989 *Bulletin*, pages 49–58. Two inter-dealer brokers in US government securities are listed by the Bank as money-market brokers.
(3) This is described in detail in the Bank's paper, *The regulation of the wholesale markets in sterling, foreign exchange and bullion* (April 1988).

protection was not a major concern. Conduct of business requirements did not therefore need to be as onerous as those imposed under the Act on providers of financial services to retail investors.

The new regime meant that the previous list of 'recognised' foreign exchange and currency deposit brokers was replaced with effect from April 1988 by one which also includes firms specialising in sterling instruments and capital market products. The main criteria for 'listing' are adherence to the London Code of Conduct and passing a capital test designed to ensure that each firm has sufficient liquid resources to continue meeting its running expenses in the event of a temporary downturn in brokerage income, including the payment of 'differences' to its customers arising from any broking errors. This test normally requires the maintenance of capital equivalent to at least two months' running expenses in the previous financial year, but it may be higher for brokers which specialise in arranging transactions in instruments where, because of their relative volatility or long maturity, there is a particular risk of large differences arising.

In addition, as part of its more general market oversight, the Bank continues to maintain close contact with the brokers—both individually and collectively through their trade associations[1]—on issues of current concern to the market and on questions of best broking practice. Broker and principal representatives sit on two Joint Standing Committees—covering sterling and foreign currency instruments respectively—which meet regularly under the Bank's chairmanship to consider matters of mutual interest, including market practice and possible amendments to the London Code of Conduct to ensure it remains up-to-date. The Code, a revised version of which will be published shortly,[2] sets out standards of best practice which should be adhered to by all participants in the London money markets, whether or not they are listed by the Bank, and it remains a significant factor in maintaining these markets' reputation for high standards of professionalism and business conduct.

Brokers are also represented on an ad hoc committee dedicated to swaps which is convened by the Bank from time to time to discuss specific market issues, and they take part in working parties organised under the auspices of the British Bankers' Association to agree trading terms and conditions. Last year, for example, such a committee developed terms for a new type of 'contract for differences'—the Synthetic Agreement for Forward Exchange (SAFE)—and work is currently in progress on revising the London International Currency Options Market (LICOM) trading terms. It is hoped that a new version will gain wider international acceptance, encourage good market practice and reduce the potential for disputes.

The money-market brokers

There are fourteen separate broking houses in London but because some groups include a number of different legal entities specialising in specific market sectors there are currently twenty-eight 'listed' name-passing money-market brokers.[3] These firms arrange a high proportion of broked transactions in foreign exchange and deposits, although a number of continental European, Channel Islands and North American brokers also arrange deals for principals in London, especially in foreign exchange. In some capital market instruments (particularly swaps) it is by no means uncommon for banks or securities houses to arrange deals rather than—or as well as—acting as principals. The listed brokers are therefore not the only institutions carrying out a broking function in the London money markets but they are believed to constitute the main channel of broked deals and the regular returns they now submit to the Bank provide a reasonable measure of market turnover through the brokers (see below).

The listed broking firms range from those which are niche specialists (in, for example, spot foreign exchange, or currency options or swaps) employing, say, 5–30 broking staff to much larger companies offering a service in virtually all money-market instruments and employing several hundred brokers. The Bank monitors the financial soundness of all but two listed brokers;[4] their combined capital requirements are about £40 million.

More than half these firms are owned by their managements or by UK companies; the controlling shareholders of the others include Japanese, US, Canadian and Swiss companies. A prohibition on shareholding links between market principals and foreign exchange or currency deposit brokers included in the 1979 'recognised broker' arrangements to prevent conflicts of interest was relaxed in 1986. Principals were then permitted to become partial or whole owners of brokers active in these markets but were denied access to such connected firms to arrange their foreign exchange or currency deposit transactions. Similar arrangements were introduced in the bullion market. It has now been decided that in future this restriction will not apply. Instead, all deals arranged by brokers for related principals must continue to be done on an arm's length basis, and where a material connection exists brokers must disclose this to their customers before arranging deals for them.

Successful money-market broking depends to a considerable extent on access to potential customers in other financial centres. The London brokers achieve this either through related companies worldwide—many of the most internationally-successful broking groups are UK-owned or based—or by using correspondent brokers in other centres. Particularly valuable links have been formed with several Japanese tanshi brokers, which are reflected in joint ventures, shareholding connections or

(1) The Foreign Exchange and Currency Deposit Brokers' Association (FECDBA) and the Sterling Brokers' Association (SBA).
(2) *The London Code of Conduct* (May 1990) will shortly be available from the Bank of England.
(3) These firms are identified in the appendix to this article.
(4) The exceptions are branches of US brokers whose capital adequacy is supervised by the National Association of Securities Dealers Inc (NASD).

exclusive correspondent relationships. Direct dealing lines to financial institutions overseas are also increasingly common outside the foreign exchange market, particularly for the more complex instruments such as swaps and options where correspondent brokers overseas are less likely to have specialised knowledge of the product. The proportion of London brokers' incomes which comes from customers overseas appears to vary considerably, depending mainly on the degree of cross-centre trading in the instruments in which they specialise. However, data from several of the larger broking groups suggest that between 10% and 25% of these groups' income comes from overseas. This indicates that the listed brokers may have contributed more than £70 million to the United Kingdom's invisible earnings in 1989.(1)

Share of total money-market turnover arranged through brokers

Comprehensive information is not available on the proportion of turnover in the London money markets arranged through brokers. However, a survey of the foreign exchange market made in April 1989 indicated that in value terms 38% of principals' business in that sector was being conducted through brokers, some 5% less than when the previous survey was made in 1986.(2) In New York and Tokyo, the next most active centres for foreign exchange in 1989, the proportion of turnover arranged through brokers was reported to be 44% and 35% respectively. Informal enquiries by the Bank of England of a few principals active in the other sectors of the London money markets suggest that the proportion of business transacted through brokers in instruments other than foreign exchange is also sizable, and probably higher in some products such as FRAs and options. Market contacts suggest that swaps related to capital market issues and longer-dated swaps are mainly arranged direct between principals. The smallest proportions of broked turnover seem to be in bullion and those markets which typically involve a considerable amount of direct distribution from principals to their customers, like CDs and commercial paper. In these markets, and also that for commercial bills, the broked share of the market is probably no more than 25% and may be significantly less.

This divergence can be explained by variations in the nature of the markets: their liquidity; level of inter-professional dealing; and the degree of secondary trading and distribution direct to customers. It is also a function of the size and experience of the firms involved (their customer bases, dominance in the market and willingness to have their names seen there).There is no evidence that the complexity of the product has in itself inhibited the market share claimed by brokers.

Listed brokers' turnover

Since the Grey Paper regime was introduced in April 1988 the listed brokers have reported monthly turnover to the

Table A
Listed brokers' turnover, April 1988-March 1990[(a)]
£ billions

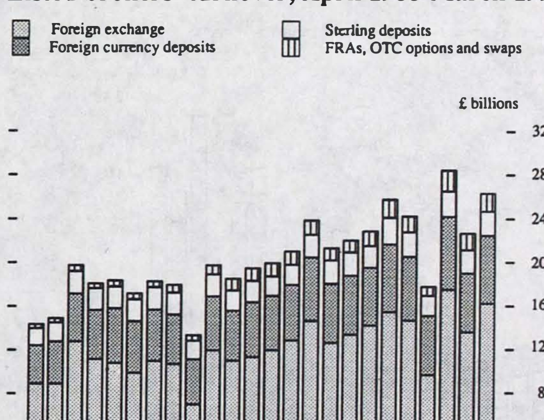
		Foreign exchange (spot, swaps and outright forwards)	Foreign currency deposits (b)	Sterling deposits (b)	FRAs, OTC options and interest rate, currency and asset swaps(c)	Total turnover (d)
1988	Apr.	917	350	159	38	1,464
	May	920	385	175	39	1,518
	June	1,305	439	207	52	2,003
	July	1,146	450	197	44	1,837
	Aug.	1,111	502	195	58	1,866
	Sept.	1,017	474	199	55	1,746
	Oct.	1,129	469	206	53	1,857
	Nov.	1,101	453	200	72	1,827
	Dec.	727	415	171	51	1,364
1989	Jan.	1,223	496	202	84	2,006
	Feb.	1,130	459	187	104	1,880
	Mar.	1,161	505	197	111	1,975
	Apr.	1,224	501	178	122	2,026
	May	1,316	512	182	124	2,134
	June	1,496	582	205	131	2,415
	July	1,293	542	217	110	2,162
	Aug.	1,368	542	214	111	2,235
	Sept.	1,453	528	200	131	2,314
	Oct.	1,579	616	246	164	2,605
	Nov.	1,499	586	224	146	2,455
	Dec.	996	544	186	82	1,808
1990	Jan.	1,782	666	229	192	2,870
	Feb.	1,393	539	213	154	2,298
	Mar.	1,645	622	222	163	2,652

Source: Supervisory reports to the Bank of England.

(a) Counting only one side of each transaction broked. Because of some initial reporting difficulties the figures for April-July 1988 probably overstate turnover in deposits and understate business in FRAs, OTC options and interest rate, currency and asset swaps.
(b) Including turnover in commercial bills, certificates of deposit, other debentures with an original maturity of not more than one year (eg commercial paper), UK local authority debt with an original maturity of not more than five years, and other public sector debt with an original maturity of not more than one year.
(c) A breakdown of this business is provided in Table B.
(d) Excludes some turnover in minor money-market instruments and in instruments not covered by the Grey Paper regime.

Bank. Their reporting burden has been deliberately kept to the minimum necessary for supervisory purposes and a detailed breakdown of their business is therefore not available. It is nevertheless clear that, although levels of activity fluctuate considerably reflecting market conditions and seasonal factors, there has been steady underlying growth in broker turnover during the two years since April 1988. This seems likely to reflect higher overall money-market turnover rather than an increase in the

Chart 1
Listed brokers' turnover, April 1988-March 1990



(1) Further invisible earnings accrue from the profits of UK brokers' related companies overseas, although these are offset to some extent by profits earned in the United Kingdom by overseas-owned brokers. No figures are available.
(2) The results of the April 1989 survey were reported in detail in an article in the November 1989 *Bulletin*, pages 531-5.

share going through the brokers. In the first six months of this period monthly turnover in all instruments averaged almost £1,740 billion (counting only one side of each transaction arranged)—ie about £83 billion each trading day. During the six months to March 1990 it was £2,448 billion—over £115 billion each day—see Table A and Chart 1. The most interesting development during this period has been a threefold increase in broker turnover in FRAs, over-the-counter options and interest rate, currency and asset swaps—see Table B and Chart 2. The growth in these types of business is discussed below.

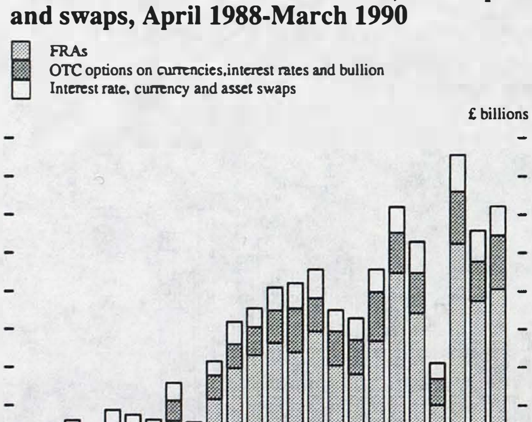
Table B
Listed brokers' turnover in FRAs, OTC options and interest rate, currency and asset swaps [(a)]
£ billions

		FRAs	OTC options on currencies, interest rates and bullion	Interest rate, currency and asset swaps	Total(b)
1988	Apr.	27.2	5.9	5.3	38.4
	May	28.8	4.9	5.0	38.6
	June	35.3	9.5	7.4	52.2
	July	31.0	7.0	6.0	44.0
	Aug.	40.9	7.9	8.8	57.6
	Sept.	39.3	7.8	7.9	55.0
	Oct.	37.9	8.3	6.4	52.6
	Nov.	52.3	10.6	9.2	72.1
	Dec.	37.1	7.5	6.6	51.1
1989	Jan.	63.7	12.7	7.3	83.7
	Feb.	79.9	12.7	11.7	104.3
	Mar.	86.6	14.8	9.8	111.2
	Apr.	92.9	17.3	11.9	122.2
	May	87.8	23.1	13.3	124.2
	June	99.1	17.4	14.9	131.4
	July	81.1	17.9	11.3	110.3
	Aug.	80.4	18.0	12.3	110.8
	Sept.	94.1	25.4	11.9	131.4
	Oct.	129.6	20.9	13.4	164.0
	Nov.	108.4	21.1	16.3	145.8
	Dec.	60.4	13.7	8.3	82.3
1990	Jan.	145.1	27.7	19.3	192.0
	Feb.	114.4	23.4	16.0	153.9
	Mar.	119.4	29.0	15.0	163.4

Source: Supervisory reports to the Bank of England.

(a) Counting only one side of each transaction broked. Because of some initial reporting difficulties the figures for April-July 1988 probably understate turnover in FRAs, OTC options and interest rate, currency and asset swaps.
(b) Excludes some turnover in off-balance-sheet instruments not covered by the Grey Paper regime, such as options on gilt-edged stock.

Chart 2
Listed brokers' turnover in FRAs, OTC options and swaps, April 1988-March 1990



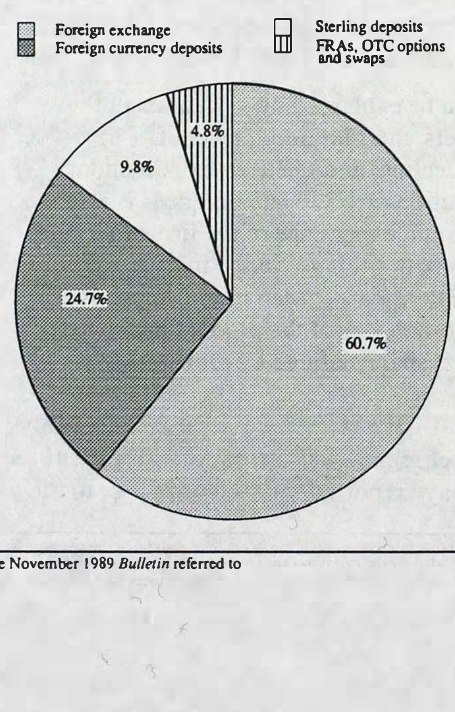
Slightly more than three quarters of total turnover by value is consistently achieved by the four largest broking houses; their dominance is rather greater in foreign exchange and deposits than in the newer instruments. There is no evidence to suggest that business has generally been polarising towards the larger firms over the last two years. Market shares do not change much from month to month in the high volume areas of the market, ie foreign exchange and deposits, but are more volatile in FRAs, options and swaps. This may partly reflect greater 'lumpiness' in such business but the gradual entry to these markets, especially the latter two, of new principals, each using only a small number of brokers, may also be a factor.

Foreign exchange

About 60% of total reported broker turnover is in foreign exchange (spot, swaps and outright forwards)—see Chart 3. Monthly turnover averaged £1,482 billion—over £70 billion per day—during the six months to March 1990, over 38% more than the average level of business during the first six months of reporting (April-September 1988)—see Table A.

Seven broking houses offer a specialised service in foreign exchange, although not all in the same range of currencies, and several others arrange foreign exchange deals for specific customers or as part of arbitrage transactions. Three broking houses currently account for about three quarters of total business. Cross-currency transactions (ie those not involving the US dollar), EC currencies other than the deutschemark and ECUs have recently been the main growth areas, although the core of the market remains transactions involving the US dollar against the deutschemark, sterling and the yen respectively.[(1)]

Chart 3
Composition of listed brokers' turnover, April 1988-March 1990



(1) Further information about the business of London's foreign exchange brokers is given in the article in the November 1989 *Bulletin* referred to above.

Deposits and related instruments

Deposits and similar long-established instruments, such as certificates of deposit and local authority debt, account for just over a third of broker turnover—currently about £38 billion per day on average. Foreign currency instruments account for more than 70% of this business—see Table A. Eight broking houses are active in the foreign currency deposit market and ten in sterling deposits, with some 'full-service' firms involved in both. Business is less concentrated among a few brokers in this market than in foreign exchange. However, foreign currency deposits are often identified as having recently been the most competitive sector of the London broking market, perhaps because there is less potential for niche specialisation than in foreign exchange. During the last few years several smaller broking firms specialising in foreign currency deposits have withdrawn from the market or been bought by larger companies.

FRAs

While the last two years have seen steady growth in traditional deposit business, there has been a much more striking rise in the value of FRA transactions arranged by the brokers. Average daily turnover has more than tripled since April 1988 to £5.3 billion in the last six months—see Table B. The FRA has become an increasingly popular instrument among banks, in part no doubt because of its advantages over forward-forward and other cash market transactions in terms of credit lines and capital requirements, and its flexibility compared with exchange-traded futures. London is one of the main centres for FRAs. The brokers' turnover in FRAs remains relatively small in absolute terms compared with, say, their deposit business, but it has been particularly buoyant recently in deutschemarks, Swiss francs and sterling. Nine broking houses are active in FRAs, with the four largest participants having a combined market share of about 60%.

Options

Listed brokers also play an active part in the markets for over-the-counter (ie non exchange-traded) options on currencies, bullion and interest rates, including caps and floors. Turnover has grown rapidly during the period under review from a daily average of about £335 million in the second quarter of 1988 to more than £1 billion now. About 80% of this business consists of currency options. There were a number of new broker entrants to the currency options market in 1988, and a corresponding increase in competitiveness in what remains a fairly specialised area with fewer active principal participants than the mainstream money markets and in consequence more cross-centre trading. Although it appears to have been difficult for some new entrants to gain a foothold, the increased number of players seems to have been generally accommodated by expansion in the overall market; while there has been a marked increase in the number and average size of deals, brokerage income will not necessarily have risen commensurately. Eleven broking houses are currently active in options, with over 80% of business in terms of value going through the five largest participants.

Interest rate, currency and asset swaps

The notional principal of interest rate, currency and asset swaps arranged by listed brokers currently averages almost £15 billion per month (over £695 million per day), more than twice as much as during the second quarter of 1988. The majority of this business consists of interest rate swaps. This turnover compares with an International Swap Dealers Association estimate that new interest rate and currency swaps written by its members worldwide averaged $78 billion (£47 billion) per month in notional principal during the first half of 1989, a 50% increase on the first half of 1988. The London brokers' figures suggest that this survey may considerably understate global swaps activity.

The legal powers of UK local authorities to engage in swaps, options on swaps and similar off-balance-sheet business have recently been the subject of court proceedings and no such contracts are in consequence currently being written. Practitioners have also expressed doubts about the performance of such contracts with other entities not within the scope of the UK Companies Acts. This may have affected liquidity in the sterling swap market although anecdotal evidence suggests interbank business has not been affected. Total swaps turnover through the brokers has continued to grow recently. In the six months to March 1990 total swaps turnover through the brokers was more than 50% higher than during the first quarter of 1989, with brokers appearing to have been particularly successful in attracting more business from Europe. Eleven broking houses are active in swaps, with business being less concentrated among a few firms than in other sectors of the money markets.

Recent market developments

Money brokers have had to live with a rapidly changing and highly competitive environment. Successful firms have therefore become used to having to adapt quickly to financial innovations and to competitive pressures. There has recently been strong pressure from their major customers to reduce brokerage payments, particularly through volume discounts. The extent of this pressure has meant that the overall increase in the volume of business arranged by the brokers has not generally been translated into a corresponding increase in brokerage income.

Costs have also been rising sharply. Salary pressures have inevitably been strong in an industry where individual skills, experience and contacts are at a premium, and staff mobility is traditionally high. In addition, the growing popularity of more complex instruments and trading strategies has required the recruitment of highly-qualified specialised staff, and greater investment in broker training and software. Premises and communication links have also required upgrading to provide the integrated service major customers now require. Foreign exchange brokers have also been improving the quality of the open line systems used for spot business. Automatic dispatch of telex confirmations has become common, and participation by brokers in the automated confirmation service (ACS) has been a welcome innovation; both these improvements in service have required substantial additional investment. Marketing costs have also risen as new customers have been sought, often abroad.

In a market-place characterised by many of the elements of 'perfect competition', it is not surprising that London's broker population has not been static. Over the last two or three years, several broking firms have been acquired by competitors and their operations amalgamated, new specialist firms have entered the market and a few loss-making firms have withdrawn. Other brokers have decided to withdraw from areas of business which they no longer find economically viable or to rationalise their corporate structure to reduce costs and/or sharpen their market identity by trading under a single name. None of these departures or amalgamations has caused disruption to the efficient operation of the broked sector or the money markets.

Changes in broking market practice

Broking market practice continues to develop, in part to reflect regulatory requirements. One recent change has been in the foreign exchange market where last year the Bank sought market practitioners' views on the use of 'points' as an alternative to settling differences by cash.[1] The banks which use the London foreign exchange brokers were divided fairly evenly between those willing to endorse the use of points in order to allow brokers to substantiate firm price quotations, and those not wishing to accept points and recognising that they might receive an inferior price service from brokers in consequence. The Bank accepted that it would be preferable to accommodate the wishes of both kinds of banks, and devised a framework accordingly. As supervisor of both banks and brokers, the Bank will ensure that there is proper recording, management control and supervisory reporting of points by all institutions involved. The new arrangements came into effect as of 1 February 1990 and appear to have settled down well.

Recent strong pressures on brokers' costs and commission levels show little sign of diminishing in the near future. Their continuing profitability also depends on growth in turnover which, to the extent that it depends on the general level of money-market activity, is outside their control. Competition may further intensify once the single European market in financial services is fully established and brokers from other EC member states are able to obtain 'passports' to offer a full broking service in London. The degree of supervision to which brokers here have become accustomed, particularly as regards capital adequacy, does not yet apply in the majority of overseas financial centres. Nor is best market practice usually as clearly defined as in the London Code of Conduct, nor always as consistently applied. Arguably all market participants, including the money brokers, should benefit considerably from the common perception that the London markets are well-regulated and clean.

Another challenge facing the traditional money-market brokers is the advent of 'screen broking systems' which will match deals electronically. Such systems—which are being developed along the lines of similar matching systems in the securities markets—have yet to come on stream but they have the potential to become an established part of the market-place, especially if they eventually incorporate clearing and settlement facilities. Screen broking systems are likely to prove more successful, at least initially, in very liquid markets with a high degree of standardisation, such as the spot foreign exchange market where they are being introduced; there is perhaps rather less scope for screen dealing in the more tailor-made capital market instruments.

Possible responses from the traditional brokers to the challenge from screen broking might include joint ventures with partners with expertise in systems development or the distribution of information, seeking new customers who have not previously tapped the money markets, and continued diversification into new and more complex instruments, especially in the off-balance-sheet area in which London brokers have particular expertise. The greater harmonisation of European financial markets should also provide significant opportunities, although the costs of developing such new areas of business may be high.

The brokers are confident that they are ready and able to face up to these further challenges.

(1) The use of points to settle differences was described in a market notice issued by the Bank in October 1989, *Operating a dual broking system in the London foreign exchange market*. This will be included as an annex in the revised London Code of Conduct to be published shortly.

Appendix

Listed money-market name-passing brokers[1]

Babcock Fulton Prebon Ltd
Barclays de Zoete Wedd Money Market Services Ltd
Butler Harlow Ueda Ltd
Euro Brokers Ltd
Euro Brokers Capital Markets Ltd
Euro Brokers Sterling Ltd
GFI Group Inc
Garvin GuyButler Corporation
Godsell, Astley & Pearce (Capital Markets) Ltd
Godsell, Astley & Pearce (Eurocurrency Deposits) Ltd
Godsell, Astley & Pearce (Foreign Exchange) Ltd
Godsell, Astley & Pearce (Sterling) Ltd
Intercapital Brokers Ltd
Intercontinental Exchange Ltd
KBW Capital Markets Ltd
M W Marshall (Capital Markets) Ltd
M W Marshall (Options) Ltd
M W Marshall (Sterling) Ltd
Marshall Woellwarth & Co Ltd
R P Martin plc
Mayflower Brokers Ltd
Tradition Financial Services Ltd
Tradition (UK) Ltd
Tullett & Tokyo (Currency Deposits) Co Ltd
Tullett & Tokyo (Euro Currencies & Forwards) Ltd
Tullett & Tokyo (Foreign Exchange) Co Ltd
Tullett & Tokyo (Money Markets) Co Ltd
Tullett & Tokyo (Options) Ltd

(1) As at 1 May 1990.