London as an international financial centre

This article[1] reviews the contribution of financial services to the UK economy and assesses the position of London as a world financial centre, indicating some of the factors that have underpinned its performance over the years. The article goes on to consider various potential influences on the future development of its role, including the progress of deregulation in other countries, and regulatory, factor-market and technological conditions at home.

Two points of clarification are necessary at the outset. First, although activity in financial services is spread throughout the country, international business, which is the focus of this article, is largely—though not exclusively—undertaken in London. Thus, throughout the article 'London' is used as shorthand for the financial sector of the UK economy, except where the context is clearly specific to London as distinct from other regions. Second, the article focuses on the performance of various parts of the financial services sector in the United Kingdom, and of the sector as a whole, but does not address in any depth questions of the nationality or ownership of participant firms; nor does it discuss the activities of British firms abroad.[2]

Financial services and the UK economy

The financial sector serves the UK economy in a number of ways. Developed capital markets contribute to the efficient allocation of funds and hence help the supply side of the economy more generally, as well as offering effective payments services and a spectrum of choice to savers.[3] The sector also provides a significant amount of employment, both directly and in ancillary services, makes a consistent and substantial positive contribution to the balance of payments and contributes tax revenues. The United Kingdom probably has a comparative advantage in the provision of financial services, the exploitation of which should benefit the economy as a whole. The sector's performance in capturing international business also suggests that London may enjoy advantages in its own time zone, largely as a result of internal and external economies of scale, which yield further economic gains that might not be realised from alternative activities.

There may of course be disadvantages in hosting a major financial centre. Salaries and wages may be forced up, thus driving up rents and house prices, with undesirable social consequences. Regional disparities may be exacerbated and the congestion of local transport systems may be aggravated. The economy may face risks due to over-dependence on a single sector. The operation of monetary policy may become complicated by the need to nurture the financial sector. Regulation may need to be more complex than otherwise. Finally, it has sometimes been argued that the financial sector merely preys on the rest of the economy,[4] adding to costs and distorting other markets—by, for instance, attracting able individuals who might be more socially productive in other areas such as manufacturing.[5]

Such potential disadvantages should not, however, be exaggerated. Local congestion and regional imbalances probably arise from any growing sector. There is anyway evidence of certain activities of the financial sector previously concentrated in London (eg insurance administration and share registration) having been redeployed to other parts of the country. Neither UK monetary policy nor regulatory policy have in practice been dictated or constrained by London's international role. And, although it would be hard to deny that net private benefits may exceed social benefits in some financial transactions, the evidence nonetheless suggests that the rest of the economy has benefited from the evolution of an efficient financial sector, notably through cheaper and more effective intermediation[6] than might otherwise have been the case. On balance, the financial sector may be judged to offer substantial net benefits to the economy.

The accompanying tables illustrate the status of the financial sector in the UK economy. They provide macroeconomic data for the period 1975–85 and

(1) Prepared mainly by E P Davis and A R Latter of the Bank's International Divisions.

(2) It may, however, be noted that these activities (for example, of insurance companies) do generate significant earnings for the UK economy. In 1988, financial companies and institutions' income from abroad totalled £8.2 billion, of which returns from direct investments accounted for £1.3 billion. (Source: *National Income and Expenditure*, CSO.)

(3) However, not all these services need necessarily be provided domestically for the benefits to be realised.

(4) See, for example, J Tobin, 'On the efficiency of the financial system', *Lloyds Bank Review*, June 1984.

(5) The financial sector is also accused of excessive turnover to generate commission income, of causing volatility of securities prices in excess of what could be justified by fundamental factors, of encouraging 'short-termism' and of fostering proposals for takeovers, buyouts, etc that may disrupt other sectors. See also 'Capital markets and industry', a speech by D A Walker reproduced in the December 1985 *Bulletin*, pages 570–75.

(6) For example, the Cecchini Report on the benefits of European integration (see *1992, the European Challenge* by P Cecchini, Wildwood House, Aldershot) showed that, of eight EC countries studied, the United Kingdom had on average the second-lowest prices for financial services after the Netherlands. Efficiency has increased over time: UK clearing banks' average interest margins declined from 4.6 percentage points in 1980 to 3.7 in 1988, while those for wholesale international business fell from 2.4 percentage points to 1.9.

Table A
GDP at factor cost[(a)]

£ billions, *percentages in italics*

	1975	1985	1987	1988
Banking, finance, insurance, business services and leasing (BFIBsL) (including net interest receipts)	10.0	48.5	65.6	76.9
Rest of economy	88.1	273.4	309.3	339.9
Total of above	**98.1**	**321.9**	**374.9**	**416.8**
Total after adjusting for net interest in financial services = GDP	94.7	305.9	355.7	394.6
BFIBsL (including net interest receipts) as a percentage of GDP	*10.6*	*15.9*	*18.4*	*19.5*
BFIBsL (excluding net interest receipts) as a percentage of GDP	*7.2*	*10.6*	*13.0*	*13.9*

Source: *National Income and Expenditure* (CSO).

(a) In the national accounts, the contribution of BFIBsL is measured before deducting net receipts of interest by financial companies and institutions. This is offset in the aggregate gross domestic product (where interest flows within the economy must net to zero) by a negative 'adjustment for financial services' equal (and opposite) to those net interest receipts.

Table B
Income from employment

£ billions; *percentages of income from employment in the whole economy in italics*

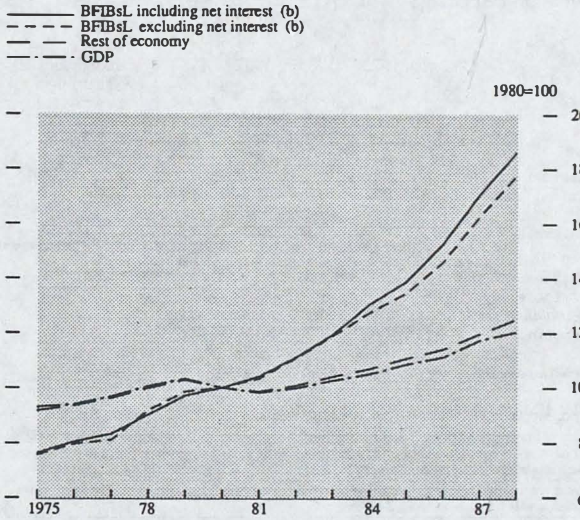
	1975		1985		1987		1988	
Financial companies and institutions	2.5	*4*	12.0	*6*	15.6	*7*	18.1	*17*
Rest of sector	2.7	*4*	10.6	*5*	16.4	*7*	19.0	*8*
Sub-total (BFIBsL)	5.2	*8*	24.6	*13*	32.0	*14*	37.1	*15*
Rest of economy	63.3	*92*	170.3	*87*	193.9	*86*	212.7	*85*
Total, whole economy	**68.5**		**194.9**		**225.9**		**249.8**	

Source: *National Income and Expenditure* (CSO).

separately for the 'Big Bang' period, 1985–88. Note that the narrowest category to which GDP data refer is 'Banking, finance, insurance, business services and leasing' (BFIBsL), which extends well beyond the traditional perception of the financial sector, into, for example, accountancy and computer services (as well as, of course, covering the financial sector nationwide).

Table A shows that the output of BFIBsL grew more than fourfold in nominal terms over the years 1975–85, while the rest of the economy only grew threefold. During 1985–88 the sector grew by 59%, the rest of the economy by 24%. Thus the share of GDP accounted for by the sector has grown sharply. As shown in Chart 1, the output of this sector rose in real terms by 82% in the period

Chart 1
Real gross domestic product[(a)]



Source: National Income and Expenditure (CSO).

(a) Output-based measure by industry at constant factor cost.
(b) Banking, finance, insurance, business services and leasing.

1975–85 and 34% in the period 1985–88, while that of the rest of the economy grew by 17% and 11% respectively. Finally, income from employment grew twice as rapidly in BFIBsL as elsewhere over the whole period (see Table B).

There was a 259,000 increase in employment in the sector over the period 1981–84, an additional 321,000 over 1984–87, and 321,000 over 1987–89 (Table C). However, the proportion of this attributable to banking and insurance alone was small, at 41,000, 84,000 and 76,000 respectively.[(1)] Data for employment in Greater London show an increase of 121,000 in employment in BFIBsL over 1984-87, while the increase for banking and insurance alone was 27,000.[(2)]

The contribution of financial activity, defined broadly to include net interest receipts, to the balance of payments grew sharply in real as well as nominal terms until 1986,

Table C
Employees in employment

Thousands ; *percentages of employees in employment in italics*

		Sept.(a) 1981		Sept. 1984		Change	Sept. 1987		Change	Mar. 1989		Change
Banking and finance:	Great Britain	465	*2*	507	*2*	+42	574	*3*	+67	618	*3*	+44
	Greater London	162	*5*	167	*5*	+5	198	*6*	+31	..		..
Insurance:	Great Britain	224	*1*	223	*1*	-1	240	*1*	+17	272	*1*	+32
	Greater London	60	*2*	59	*2*	-1	55	*2*	-4	..		..
Business services:	Great Britain	849	*4*	1,037	*5*	+188	1,271	*6*	+234	1,473	*7*	+202
	Greater London	302	*8*	354	*10*	+52	450	*13*	+96	..		..
Other(b):	Great Britain	191	*1*	221	*1*	+30	224	*1*	+3	266	*1*	+42
	Greater London	45	*1*	52	*2*	+7	51	*1*	-1	..		..
Total BFIBsL:	Great Britain	1,729	*8*	1,988	*10*	+259	2,309	*12*	+321	2630	*12*	+321
	Greater London	569	*16*	632	*18*	+63	753	*21*	+121	784	*22*	+31
All industries and services:	Great Britain	21,309		20,846		-463	21,271		+425	22,233		+962
	Greater London	3,567		3,463		-104	3,505		+42	3,590		+85

Source: Department of Employment.

(a) The breakdown of BFIBsL is not available for earlier years.
(b) Renting of movables and owning and dealing in real estate.

(1) There may of course have been second-order employment gains in other sectors (such as the legal profession).
(2) Estimates by the London Chamber of Commerce suggest that employment by foreign banks and securities houses rose by 20,000 over 1984–87, before falling by 2,000 in 1988 to stand at 53,000.

Table D
Net overseas earnings[a] of UK financial institutions

£ billions

	1975	1985	1987	1988	Memorandum item: 1988 earnings from services(b)
Insurance	0.5	3.3	4.7	3.8	2.7
Banking	—	1.3	1.3	0.9	0.9 (c)
Investment trusts, unit trusts, pension funds	0.1	0.9	1.1	1.1	—
Securities dealers, brokers and leasing	0.5	1.3	1.7	1.6	1.1
Total	**1.0**	**6.8**	**8.7**	**7.4**	**4.7**
Memorandum items:					
Visible balance	*-3.3*	*-3.1*	*-10.9*	*-20.8*	
Invisible balance	*1.7*	*6.3*	*7.3*	*6.2*	
Current balance	*-1.5*	*3.2*	*-3.7*	*-14.6*	

Source: *United Kingdom Balance of Payments* (the Pink Book): CSO.

(a) Equals net direct contribution to UK balance of payments.
(b) Excluding net interest and other income from portfolio investment. Bank estimate based on the assumption that the contribution of investment trusts, unit trusts and pension funds to the balance of payments is entirely portfolio earnings.
(c) If net interest earnings from intermediation between overseas residents are classified as earnings from services, this figure rises to £2.2 billion.

since when it has declined slightly (Table D). Estimates suggest that more than half of this total represents payments for services (ie value-added) rather than portfolio earnings. Insurance makes the largest contribution, though banking is also shown to play a major role if net interest earnings from intermediation between overseas residents are classified as earnings from services.

London's position as a global financial centre

Besides its domestic banking and securities business, London is a major centre for international eurocurrency business, eurobond transactions, insurance, foreign exchange, fund management and corporate financial advice. It is also the location of a significant volume of international equity business, and the volume of activity on London's futures and options exchanges, though modest in comparison to that in the United States, has grown rapidly of late.

International banking

London has maintained its position as one of the world's largest international banking centres, accounting for around a fifth of total international business.(1) London's position over the years has been aided by factors such as the absence of reserve requirements on international business and relatively free establishment for international banks. Over the 1975–88 period the international assets of banks in the United Kingdom grew from $184 billion to $1,124 billion. In recent years, however, London's position has been challenged, especially by Tokyo. London's share of outstanding international banking business within the BIS-reporting area fell from 27% in 1980 to 20½% in the second quarter of 1989. Over the same period, Japan's share grew from 5% to 20½%, while that of the United States declined from 13½% to 10%. Tokyo's expansion has, however, been quite heavily based on foreign currency business with Japanese residents (which falls within the BIS definition of international business). In terms of outstanding cross-border business alone, London's share of global total assets was 19% at the end of the second quarter of this year, while Tokyo's was 16%.

Table E
International banking analysed by centre

Outstanding lending as percentage share of total market

End period	1975(a)	1980(a)	1985	1987	1988	1989 H1
Belgium (b)	8.8 (c)	4.2	3.8	3.8	3.4	3.5
Luxembourg (b)		6.7	4.1	4.2	4.1	4.2
France	9.1	10.8	7.1	6.7	6.3	6.7
Germany	7.1	5.5	3.2	4.0	3.8	3.7
Italy	3.4	2.3	2.2	1.9	1.9	1.8
Netherlands	3.9	4.7	2.6	2.5	2.5	2.8
Switzerland	5.7	4.5	2.6	2.8	2.4	2.2
Swiss trustee accounts	..	..	3.8	3.4	3.2	3.5
United Kingdom	27.1	27.0	25.4	22.1	20.9	20.5
Canada	3.1	2.7	2.3	1.5	1.3	1.3
Japan	4.6	5.0	10.8	18.7	21.0	20.6
of which:						
Japan offshore market	..	..	..	*4.0*	*6.8*	*7.1*
Other	..	..	..	*14.7*	*14.2*	*13.5*
United States	13.5	13.4	13.3	9.9	10.1	10.0
of which:						
International banking facilities	..	..	*6.5*	*5.4*	*5.6*	*5.8*
Other	..	..	*6.8*	*4.5*	*4.5*	*4.2*
'Offshore' banking centres	11.6	10.7	18.5	18.0	18.5	18.4

.. not available.

Source: Bank for International Settlements.

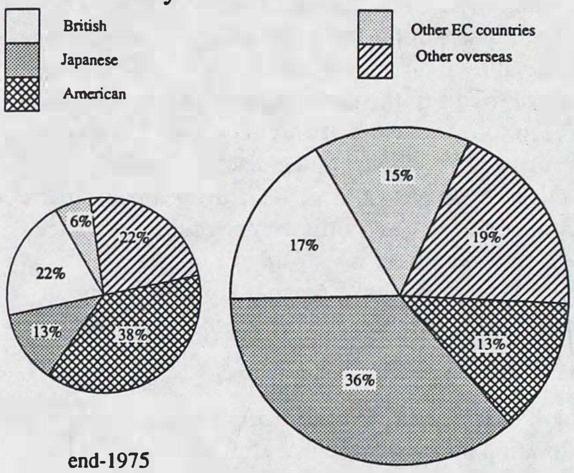
(a) Data for 1975 and 1980 were compiled using less comprehensive information than was available for later years.
(b) Lending by banks in Belgium to Luxembourg and vice versa is classified as lending to residents and is therefore excluded. Similarly, lending by these banks both in Belgian and Luxembourg francs is classified as domestic currency lending.
(c) The breakdown of lending from Belgium and Luxembourg is not available for 1975.

A marked feature of recent years has been the expansion of Japanese banks' international role, both from Tokyo and through overseas establishment. Since 1982 they have been the largest national banking group, as measured by balance sheet size, in the world. London is the largest centre for Japanese banks' international business outside Japan itself, with some 26% of Japanese banks' international assets booked here (at end-1988), bringing their share of all international lending out of London to 36%, as against 13% in 1975. Another group that has gained share in London since 1975 has been banks from other EC countries, whose market share has increased to 15%. The share of US banks in international lending out of London has fallen from 38% to 13%, partly reflecting retrenchment after the 1982 debt crisis, and that of British banks has fallen from 22% to 17%.(2)

Another indicator of the growth of London as an international banking centre is the number of foreign banks, which has risen from around 330 in 1975 to 521(3) at end-February 1989. Throughout this period US banks have maintained the largest presence, with around 75 branches and offices. The number of Western European and Japanese banks has doubled to 219 and 52 respectively. Among the former group, there has been a

(1) On the basis of BIS statistics, where 'international' is defined to include both cross-border business and foreign currency business with residents.
(2) More detail on recent developments in international banking is given in 'Developments in international banking and capital markets in 1988', in the May 1989 *Bulletin*, pages 252–63.
(3) The figures cover branches, representative offices, consortium banks and subsidiaries.

Chart 2
Banks in the United Kingdom: international claims, bank nationality breakdown



end-1975 ($184.1 billion)   end-1988 ($1,124.2 billion)

Source : Bank of England.

marked increase in German, French and Italian representation.

International bonds
Largely because of relatively restrictive regulatory and fiscal conditions in other centres—though also owing something to the innovativeness of London firms[1]—the eurobond market developed principally in London. For those currencies in respect of which the home authorities allow bonds to be issued out of foreign centres, most structuring of issues and about 65% of primary issuance have taken place in London in recent years. For example, most eurodollar, euroyen, Canadian dollar and Australian dollar eurobonds are issued out of London. Structuring does not merely involve routine tasks but also often requires complex financial engineering, in which houses based in London have developed considerable expertise over the years. The development of the market for eurodollar bonds with equity warrants attached has proved a particular spur to activity in London recently, while the rapidly growing swaps market, the outstanding value of which was $1,300 billion in the second half of 1988,[2] is located principally in London and New York.

Most secondary market trading of eurobonds also takes place in London. As a rough indicator of the location of market-making, it may be noted that 80 out of 114 dealers reporting prices daily or weekly to the Association of International Bond Dealers (AIBD) in January 1989 were located in London (Table F).

Market estimates suggest that approximately three quarters of secondary market turnover in dollar eurobonds (which amounted to $358 billion in the first half of 1989[3]) occurs in London. One influence is the fact that eurobonds cannot be sold into the United States

Table F
Location of AIBD member firms
Number of firms by centre; January 1989

	All firms	Reporting dealers(a)
United Kingdom	209	80
Switzerland	152	2
Luxembourg	67	6
Germany	66	1
Hong Kong	45	1
Netherlands	55	3
United States	40	—
France	44	7
Belgium	37	3
Other	196	11
Total	**911**	**114**

Source: AIBD handbook, January 1989.

(a) Those which report prices on a daily basis.

before the end of a 90-day seasoning period. Trading in other centres tends to be driven mainly by local customer needs. In contrast to eurodollar bonds, the proportion of trade in US government bonds taking place in London is, according to market sources, perhaps 5%–10%, yet, given the size of that market, the absolute amount is quite large.[4]

Market estimates suggest that about 30% of the turnover of German government bonds (bunds), 50% of the turnover in international deutschemark straight issues, and 80%–90% of the turnover of deutschemark FRNs occur in London. Several German banks have in recent years set up capital market units in London to trade deutschemark corporate and government bonds. Trading takes place in London partly to avoid Germany's turnover tax on corporate bonds. Trading of euroyen bonds (which totalled $70 billion in the first half of 1989[5]) is concentrated in London. Trading in London of straight Swiss franc issues is minimal given the limited investor base outside Switzerland.

Equities
London is a major world centre for the trading and distribution of both domestic and international equities, reflecting both the importance of equity financing to UK business and the role of London as an international distribution centre. London benefits from liquid and well-capitalised markets as well as strength in ancillary activities such as research. Recently, considerable over-capacity in both equity and bond markets has been evident, following the rapid expansion in capacity at the time of Big Bang and the decline in turnover after the crash. (See the note on page 527.)

As shown in Table G, London has the fourth largest domestic equity market in the world by capitalisation, and only NASDAQ has more companies listed (many of which are very small). More foreign companies are listed in London than on any other exchange despite 'listing' as such not being required for trading to take place on SEAQ International.

(1) For example, S G Warburg launched the first eurobond, for the Italian issuer Autostrade, in 1963.
(2) Source: International Swap Dealers Association.
(3) Source: Euroclear. References to turnover count a purchase and sale once only.
(4) The *Federal Reserve Bulletin* reports an average turnover of $50 billion per day in 1988, implying a volume of $2½–5 billion in London.
(5) Source: Euroclear.

Table G
Comparison of major stock exchanges at end-1988

Exchange	Market value of domestic equity (US $ billions)	Number of listed companies: Domestic	Foreign	*Foreign as percentage of total*
Tokyo	3,840	1,571	112	*7*
Osaka	3,270	1,091	—	—
New York	2,367	1,604	77	*5*
London	711	2,054	526	*20*
NASDAQ	355	4,179	272	*6*
Frankfurt	230	355	310	*47*
Paris	224	459	217	*32*
Zurich	141	161	219	*58*
American	76	840	55	*6*

Source: ISE *Quality of Markets Quarterly*, Spring 1989.

Foreign equities account for over a quarter of transactions reported to London's International Stock Exchange (ISE). Overseas residents account for nearly one half of this turnover in foreign equities and about a quarter of all reported transactions on the London exchange. Part of the turnover is in American Depository Receipts where the ISE has been competing successfully for a share of trade in 23 of the 120 ADRs that are traded in the United States.

In 1988, London's turnover in foreign equities, at £40 billion ($71 billion), was nearly one and a half times that of New York and ten times that of Tokyo, and represented nearly half of measured global foreign equity turnover. In comparison, London's share of world domestic equity turnover was a mere 5%, reflecting the relatively small size of the UK economy. One contributory factor to London's share of foreign equity trading is the low commission rates for large deals in London.

Insurance
London remains a major centre for international insurance. The market falls into two main categories: life and non-life. The market itself can be sub-divided into the primary market, involving the sale of insurance to individuals and companies, and the secondary market where risks are reinsured. In general, primary business with individuals and most of life business is domestic, and in many countries is heavily regulated. In contrast, both primary business with companies and the secondary market are wholesale businesses with a strong international dimension. There is considerable competition between companies and brokers based in London, New York and continental Europe.

In the United Kingdom, re-insurance is primarily provided by specialist re-insurance companies (which are often subsidiaries of the major primary insurance companies), by re-insurance divisions of primary insurance companies and by Lloyd's syndicates where capital cover is provided on an unlimited liability basis by wealthy individuals. The companies and Lloyd's combine to provide a major re-insurance market. London's importance as an insurance centre as well as its comparative freedom from regulation and restrictions on investment have attracted many foreign re-insurance companies including the world's largest. London has also attracted many re-insurance brokers. Indeed, a new reinsurance bourse, supported by 20 major reinsurance companies, is due to open in London in 1991. This should complement Lloyd's in the high-value catastrophe market where large amounts of capacity are required. London caters for much of the re-insurance placed abroad by the United States, Japan and continental European countries. An indicator of the size and importance of the insurance sector to the UK economy is its £3.8 billion net contribution to the balance of payments in 1988 (the largest net invisible earner), of which Lloyd's contributed £1.0 billion.

The strength of competition both from the increasingly outward-looking major overseas centres and from some offshore centres such as Bermuda, Guernsey, the Isle of Man and Luxembourg has probably eroded London's share of the international insurance and re-insurance markets, although in absolute terms growth has remained brisk. The intensity of competition, together with the massive underwriting losses experienced in certain lines of US liability business[1] in recent years have also caused many UK insurers (both companies and Lloyd's syndicates) to withdraw from these markets, previously a major source of business.

Foreign exchange
A survey of turnover in all main foreign exchange trading centres (except Frankfurt) carried out in April 1989 confirms that London remains the largest market. London's net daily turnover amounted to $187 billion, compared with $129 billion for New York and $115 billion in Tokyo. The rate of growth in turnover since similar surveys were conducted three years earlier had, however, been somewhat faster in Tokyo (140%) and New York (120%) than in London (108%). The survey results for London are presented in detail in an article on page 531.

Futures and options
In London there are six markets trading futures and options: the Baltic Futures Exchange, which trades agricultural and freight futures; the International Petroleum Exchange (IPE), which trades energy products; the London Futures and Options Exchange (LFOX), which trades sugar, coffee and cocoa; the London International Financial Futures Exchange (LIFFE), which trades financial futures and options; the London Metal Exchange (LME), which trades base metals contracts; and the London Traded Options Market (LTOM), which trades equity options, gilt options, a FTSE index option and foreign currency options.

London's share of global turnover in options and futures markets was 7.5% in the first half of 1989, having risen from 3.1% in 1985 (Table H). Most of the UK share—and its recent growth—are accounted for by financial futures

(1) Such as medical malpractice, professional indemnity, product liability, asbestosis and environmental pollution.

and equity options (LTOM and LIFFE). Indeed, there has been a shift of emphasis worldwide towards financial futures and options relative to contracts based on commodities. Within the global picture, London has been losing share of futures trading in some commodities. Within financial futures[1] there has been a shift into domestic contracts (the UK long gilt and three-month sterling interest rate contracts on LIFFE), most of which face little effective competition. Nevertheless, in the absence to date of a futures market in Frankfurt, LIFFE's deutschemark bond futures contract has rapidly attained high turnover and liquidity. An ECU short-term contract will be launched shortly. The US markets, particularly the three Chicago options and futures markets, dominate world activity (78%), although their share has been reduced by expansion in Tokyo, Paris and London.

Table H
Futures and options exchanges
Percentage shares of total lots traded(a)

Region	Exchange	1985	1987	1988	1989 H1
London:	Baltic	0.1	0.1	0.1	0.1
	IPE	0.1	0.2	0.3	0.5
	LIFFE	0.8	2.0	2.5	3.1
	LFOX	0.6	0.4	0.7	0.6
	LME	0.7	0.7	1.4	1.4
	LTOM	0.7	1.9	1.5	1.8
	Total	**3.1**	**5.2**	**6.6**	**7.5**
United States:	CBOE (Chicago)	35.8	28.7	20.5	19.8
	CBOT (Chicago)	17.0	16.0	21.4	18.1
	CME (Chicago)	12.5	11.2	12.0	13.9
	Total	**94.1**	**84.0**	**80.7**	**78.1**
Canada:	**Total**	**0.3**	**0.4**	**0.6**	**1.1**
Europe:	EOE (Amsterdam)	1.7	1.7	1.6	2.1
	MATIF (Paris)	..	1.9	3.0	4.0
	Total	**1.8**	**5.5**	**6.1**	**7.1**
Far East:	Tokyo	0.1	2.9	3.9	3.2
	Total	**0.7**	**4.8**	**6.0**	**6.2**
Memorandum item: World total number of contracts (millions)		*416*	*635*	*547*	*657* (b)

.. not operating.

Source: Bank of England, based on a sample of individual exchanges.

(a) The subtotals may exceed the totals for individual exchanges owing to the omission of some smaller markets.
(b) First half-year at an annual rate.

Fund management
Partly owing to the size of the UK institutional sector (life assurance and pension funds, unit trusts, etc), the assets of which are larger in relation to GDP than those of any other major country, London and Edinburgh have become major centres for both domestic and international fund management. No figures are available for total funds under management, but UK institutional investors had assets totalling £450 billion at end-1987, and a substantial proportion of funds from other European countries, as well as the European specialist sectors of major US and Japanese funds, are managed from the United Kingdom. For example, in 1988 US pension fund foreign assets totalling $16 billion were managed here—a considerable increase in volume terms from the $9 billion recorded in 1985 (though UK managers' share of the total declined from 34% to 26% over the same period).[2]

UK fund management faces a growing challenge from Luxembourg, where investment funds benefit from several regulatory and fiscal advantages. Implementation of the UCITS[3] directive (freeing cross-border trade in collective investments in the EC) will sharpen this challenge. A number of recent foreign purchases of UK fund management firms may be indicative of international regard for UK expertise in this field, but leaves open the question whether future expansion will take place here or offshore.

Corporate financial advice
The burgeoning of merger and acquisition activity and the increasing complexity of corporate finance *per se* have generated a large amount of advisory business for banks and securities houses in London—notably UK and US institutions. This has related not only to acquisitions and transactions involving UK firms, but also to advice for continental European firms on their own domestic and international acquisitions.

Factors underlying the development of London

For a firm in any industry, the choice of location is likely to depend on several influences. These include the availability of such items as premises, labour, materials and technology, the nature of demand for its output, and the prospect of any benefits that accrue from establishment in the same location as related firms (in other words, external economies of scale). In addition, the choice will be influenced by the availability (and perceived reliability) of information about business conditions in different locations, and the degree of confidence in the durability and stability of those conditions. Such decisions are made infrequently because 'sunk' (ie irrecoverable) costs are incurred in any new establishment or relocation.

The evolution of London can be interpreted in this framework. London has offered a pool of suitably trained labour; relatively free access to markets, which have not been heavily regulated; in recent years, declining levels of personal and corporate taxation; a reasonable tax regime for financial instruments (eg ability to issue bearer eurobonds that pay interest gross); a supply of suitable premises; the absence, since 1979, of exchange controls; prudential and monetary regulations that have not historically tended significantly to raise the cost of funds, distort or prevent competition (compared, for example, with heavy reserve requirements elsewhere); English law (widely accepted as a basis for financial business); the English language; and political stability. There has also been a degree of confidence among firms that regulations will not be altered without good reason and appropriate consultation.

Among the most important factors supporting London's position have been external economies of scale—the mutual benefits arising from the concentration of

(1) A survey of interest rate futures contracts was published in the August 1989 *Bulletin*, pages 388–98.
(2) Source: Salomon Brothers.
(3) Undertakings for Collective Investment in Transferable Securities (ie unit trusts and open-ended investment companies).

Table J
Recent liberalisation and deregulation of financial markets—selected countries[a]

	United Kingdom	United States	Japan	Germany	France	Switzerland
Deregulation						
Exchange controls	Abolished.	Non-statutory restrictions on foreign currency bank accounts to be abolished 1990.	Largely abolished.	—	Phased abolition to be completed 1990.	—
Interest rate controls	—	Largely abolished.	Progressive abolition on large time deposits.	—	—	—
Credit controls	Abolished.	—	Quantitative controls abolished.	—	Quantitative controls abolished.	—
Restrictions on establishment	Entry of foreign securities houses under Big Bang.	—	Entry of foreign firms to stock exchange (in limited numbers), and to trust banking.	—	—	—
Restrictions on activity	Banks allowed to purchase/set up brokers under Big Bang. Access to discount market liberalised.	Limited securities underwriting by securities subsidiaries of bank holding companies.	Limited deregulation of banks' securities operations. Banks allowed to deal in JGBs and JGB futures.	—	Financial institutions allowed to purchase stockbrokers.	Foreign banks domiciled in Switzerland allowed to lead manage bond issues.
Restrictions on bond issuance	Abolition of minimum maturity. Abolition of formal issue queue.	Shelf registration permitted. Steps towards mutual recognition of home country disclosure rules (for all securities).	Shelf registration permitted. Minimum maturities reduced. Partial auction system for government bond issues. Certain rating restrictions liberalised.	Minimum maturities reduced. Notification period abolished.	Auction system and primary dealers for government bond issue.	(As above)
Restrictions on secondary markets.	—	Banks allowed into discount broking.	Seasoning period on eurobonds reduced. Warrant trading liberalised.	—	—	—
Offshore banking	—	Establishment of IBFs permitted.	Japan Offshore market established.	—	—	—
Fiscal restrictions	Reduction of stamp duty.	Abolition of withholding taxes on bonds and equities.	Reductions in transactions taxes—more comprehensive capital gains tax.	Abolition of withholding tax.	Abolition of withholding tax on interest payments to non-resident bond-holders.	—
Modernisation of existing markets	Electronic screen based stock market. Abolition of minimum commissions.	Proposal for after-hours trading by some exchanges.	Increased computerisation. Reform of short-term money markets.	Links between regional stock markets; planned screen-based trading system.	Electronic screen based stock market. Removal of fixed brokerage commissions.	—
Establishment of new markets	LIFFE—futures; LTOM—options; commercial paper market.	Full range of markets already established.	TIFFE—futures. Stock index options and futures. Bond lending market. Commercial paper market.	Establishment of futures and options market (1990).	MATIF—futures. MONEP—options. New short term markets. Repo market.	SOFFEX— options and futures.
Principal remaining restrictions[b]						
Scope of activity	—	Glass Steagall separation of banking/securities business. Restrictions on interstate banking.	Article 65 separating banking/securities business. 3 bureaux agreement restricting bank involvement in euroyen issue. Separation of city, long-term and trust banking.	Only banks may become Stock Exchange members.	—	—
Bond issuance	Eurosterling bond issues to be made in United Kingdom.	Strict disclosure and registration requirements on domestic issues. Restrictions on resale of private placement bonds (some easing proposed).	Limits on corporate issues, minimum maturities and eligible issuers.	DM bond issues must be made in Germany. Strict disclosure and credit quality requirements for domestic bonds. Non-residents not permitted to buy certain types of government bond.	—	Swiss franc bond issues must be made in Switzerland. Restrictions on private placements.
Other restrictions	Stamp duty.	Seasoning restrictions. Bank reserve requirements (IBFs exempt).	Window guidance (indicative). Seasoning restrictions. Withholding taxes. Minimum commissions. Transaction taxes. Rates on retail deposits.	Bank reserve requirements. Stock exchange turnover tax. Absence of short term paper markets. Limited official stock exchange trading hours. Tight regulation of insurance.	Bank reserve requirements. Ban on interest bearing current accounts.	Stamp duty. Restrictions under bank cartels (fixed brokerage, price fixing in forex and custodian business, syndicate to issue public bonds)—currently under parliamentary challenge.

(a) This table covers key changes implemented over approximately the last ten years. Some controls had already been removed before the beginning of this period.
(b) Abolition or easing of some of these restrictions is currently under consideration.

financial firms in one location. These have accumulated over a long period, owing something initially, no doubt, to the industrial revolution, the legacy of Empire, and the associated importance of trade, and aided by a general philosophy of openness. Firms participate in organised markets whose liquidity (enabling rapid execution of large orders with minimum disturbance to prices) and efficiency (in establishing prices which reflect all available information) increase with the number of participants. Groups of different markets (as well as different firms in the same market) are sufficiently inter-related also to benefit from location in London. Firms, whether in the same or related activities, need and benefit from close business contacts with each other: for example, close contact is helpful to dealers in markets subject to rapid price change, who need to keep up-to-date on all relevant information; the lead manager and other participants in a bond issue require close links. In the Square Mile, there is such a concentration of business that most firms can be reached on foot. A group of trades and professions has grown around the core financial institutions to provide other services—lawyers, accountants, actuaries, security printers, computer programmers and consultants. Customers of financial institutions such as industrial and commercial companies often find it convenient to be located in the financial centre too. A supply of skilled labour is readily available to newcomers. Joint services for clearing and settlement have developed.

In such an environment business may grow in a self-sustaining manner. The benefits arising from contacts and participation in markets may increase progressively with the number of firms in the locality, and firms continue to be attracted to the centre because of the numbers already there. Business becomes concentrated and competing centres may find it hard to become established.

While such a process has certainly been evident in London, London is by no means immune to challenge from other countries, where business conditions might, as a consequence of deregulation and more open access, become more attractive by a sufficient margin to outweigh the economies of scale and any inertia associated with sunk costs. Changing conditions are unlikely to have a uniform effect since some types of financial activity are potentially more footloose than others. The obvious distinctions are between wholesale and retail business, and between domestic and international, but in practice the divides may be less clear-cut.[1] It is to the nature and potential impact of recent changes in business conditions at home and overseas that this article now turns.

The changing global environment

The impact of regulatory changes

Stimulated by rapid growth in intermediation, under the influence of evolving technology, competition and large external payments imbalances, global financial markets have undergone a period of rapid change in recent years. Access to many markets has been eased, and restrictions on activities lifted—although prudential regulation has often been tightened—and fiscal and other conditions have been amended. This process reflects decisions by the authorities in a number of countries to encourage development of the financial sector and to reap the wider economic benefits of efficient financial markets. Many of these developments have implications for the development of the UK financial sector and the position of London as a financial centre.

Table J reviews recent developments in other centres. The broad picture is indeed one of growing competition. For example, in *Japan* measures such as the progressive deregulation of interest rates and development of the Japan Offshore Market may further increase Tokyo's competitiveness as an international banking centre. In the *United States* changes in rules relating to private placement bonds could lead to the repatriation of some dollar eurobond business, while the ending of restraint on residents holding foreign currency deposits could influence the development of international banking in that country. *Switzerland* offers potential competition to centres throughout the EC: weakening of the cartel for bond issuance and the opening of a futures market may attract business, although the stamp duty remains a disincentive to securities business there. The deregulation of securities markets in *France* is a significant move, which could both draw French equity trading back to Paris and increase the attraction of conducting international business there. Bond trading and issuing is also being stimulated by the recent introduction of bond auctions and futures markets and by a loosening of the tax regime, and insurance regulation is being liberalised. *Luxembourg,* with its attractive fiscal and regulatory regime, presents a strong challenge to fund management activity. *Germany,* although currently rather heavily regulated (notably by bank reserve requirements, insurance regulation, turnover taxes and disclosure requirements on domestic bonds), looks set to mount a challenge in some areas, such as futures where long-standing legal obstacles have recently been removed.

Completion of the single European market has varying implications for the competitiveness of the UK financial sector (see the note on page 524). EC legislation on minimum standards—for example of capital adequacy—should generally be helpful to the extent that standards are raised to UK levels, but inasmuch as they fall short the United Kingdom could be at a disadvantage. For the time being at least, conduct of business rules seem likely to be left to host country control, which could also imply a looser regime in some other EC states than in the United Kingdom. On the other hand, if common EC regulatory standards or taxation regimes emerge too tight, some business could be driven outside the EC altogether.

(1) A distinction can also be made between self-stabilising and self-reinforcing changes in business conditions. Moves prompted by freely available or cheap labour or accommodation may be self-stabilising in that, for example, if firms arrive because of low rents, rents will tend to be bid up, thus discouraging further arrivals. On the other hand, a move prompted by a change in, say, regulatory or fiscal arrangements could convince others to follow suit, each decision giving greater encouragement to the next, especially if economies of scale come into play.

The European single market for financial services

The basic objective of the initiative for a single European market is to benefit consumers and efficient producers by a variety of mechanisms, including reductions in costs resulting from removal of non-tariff barriers, greater competition, higher investment, and achievement of economies of scale. Competition in financial services is expected, through various channels (including a reduction in the cost of capital to industry and the cost of services to individual consumers), to make an important contribution. Moreover, by reducing or removing certain distortions in the market (including those caused by significant disparities in regulatory standards for financial institutions and products), and by encouraging some rationalisation and concentration of investment, the single market should promote the efficiency of financial institutions within the EC and help strengthen their capacity to compete in global markets.

The main barriers to trade in financial services are market entry requirements, differences in prudential standards and differences in rules of market conduct. The proposed changes in the EC legislative and regulatory framework are primarily intended to tackle obstacles of these types to cross-border establishment and delivery of services. Complementing this, the Directive on the Liberalisation of Capital Movements—requiring the removal of all restrictions on capital movements in the EC—was adopted by the Council of Ministers in June 1988 and is due to be implemented by eight Member States by July 1990 and by the remaining four by the end of 1992 (with limited provision for retention or re-introduction of controls in emergency situations). Some Member States such as the United Kingdom are in fact already free of exchange controls. But for residents of others this Directive will open new possibilities, inter alia, for investment and for the purchase of financial services anywhere in the world. It should therefore encourage potentially broader, but also more discriminating demand for financial assets and services throughout the Community and provide increased opportunities for enterprising suppliers.

The main headings under which financial services are to be liberalised by EC legislation are banking, investment services, collective investments and insurance. The table summarises the current status of the relevant Directives.

For a long time an important principle underlying much Community legislation was that of complete harmonisation of laws in all Member States. However, the practical difficulties inherent in such an approach are evidenced by the length of the negotiations which have often been necessary to reach agreement on Directives. A more pragmatic approach was introduced as part of the measures to speed up progress towards completion of the single market. The new approach, in the case of financial institutions, involves three main elements: harmonisation of key prudential standards only, notably capital adequacy; home country control of application of those key standards (the home country being that in which the institution is incorporated); and mutual recognition of the way in which these standards are applied in each Member State. On that basis the intention is that financial institutions authorised in one Member State should be able to market their products and services, through branches or cross-border, throughout the Community without further vetting in the host country. This is the so-called 'passport' principle.

Principal EC directives liberalising trade in financial services

Directive	Current status
Collective Investments	Implemented
Banking (Second)	Preliminary agreement (subject to parliamentary approval)
Investment Services	Under discussion
Non-life insurance	Progress made in some areas (primarily large commercial risks)
Life insurance	Little progress to date

The harmonisation of key prudential standards should ease any doubts about the completeness or rigour of firms' home regulatory regimes, which could have given rise to concerns in the host country (for example about the possible failure of foreign firms), or to concerns about unlevel playing fields (if the foreign firms' home regulatory regime was relatively light and therefore less costly to the regulated institutions). However, it will be important to ensure that the harmonised standards are adequate. Meanwhile, some aspects of regulation can in practice only be performed effectively by host country authorities, particularly in the field of conduct of business rules (for example, covering the relationship with counterparties or promotional activities). The principal proposals for EC legislation on banking and securities business do not in fact refer to conduct of business, which therefore remains basically a host country responsibility.

The freeing of cross-border trade and capital flows envisaged in the EC single market should offer several opportunities to the United Kingdom. The Cecchini Report[1] showed that the United Kingdom was one of the lowest-cost suppliers of a wide range of financial services. Non-EC firms may wish to use London's well-established deregulated markets and relatively sophisticated infrastructure as a European base from which to move into other EC markets. The results of the Bank's 1992 survey, summarised in the August 1989 *Bulletin,* suggested that the majority of UK firms interviewed would retain London as their main base for pan-European and wider international business, at least for the time being; some non-UK EC firms felt there were advantages in running European business out of London rather than their home base; and several of the US and Japanese banks and securities houses interviewed indicated they would continue to base their European operations in the United Kingdom, albeit with a presence in other EC markets. These opportunities must be seen, however, in the context of the generally more competitive climate that is likely to evolve within the EC.

Recent discussions on European Monetary Union suggest that in due course a European Community monetary institution may be established, in which case its location could have an influence on the preferred location of major financial institutions. However, there is no strict necessity for the policy-making and operational arms of a central authority to be in the same place, as the division between Washington and New York suggests in the US context.

Prudential regulation in the United Kingdom—stemming from the Financial Services Act (FSA) and the Banking Acts—has been tightened significantly in recent years. Financial firms are concerned in particular about the technical and administrative costs of compliance with the FSA. Some aspects of banking supervision, including the large exposures policy and the requirement in the Banking Act for accountants' reports, have added to reporting requirements. Arguably, however, business may be attracted by firm regulation. Moreover, to the extent that tightening occurs by international agreement—as in the Basle agreement on banks' capital ratios—the United Kingdom's relative position should be unaffected. Where UK regulation has been extended by statute, the authorities have sought to show flexibility: certain features of recent regulatory changes have been amended: under changes to the FSA incorporated in the Companies Bill, the Securities and Investment Board (SIB) rulebook is to be greatly simplified and the right of clients to sue intermediaries for losses caused by breaches of rules laid down by the SIB or the self-regulatory organisations is to be restricted to private investors. Moreover, co-operation between regulators will be facilitated by one of these amendments, thus reducing overlap. Meanwhile other countries are in any case tightening their securities regulation, as is evident in the establishment of new securities commissions in the Netherlands and Spain, in greater powers of investigation and prosecution being assumed by the French authorities, and in new initiatives on insider trading and takeovers in most EC countries. Similar tendencies are apparent in banking supervision. For example, the main EC centres have large exposures policies of their own, which are in some respects stricter than those in the United Kingdom. It may also be noted that international discussions on possible convergence of regulation of securities firms are underway, albeit at an early stage.

The markets for accommodation and labour

The broad conclusion of the analysis of conditions in factor markets which follows is that, although certain costs of location in London are high, current and prospective conditions overall are not seriously out of line with other centres.

Table K compares the costs of *office space* in major financial centres, taking into consideration not only rent but also service charges, local taxes and energy and cleaning costs. Accommodation in London is more expensive than in its main rivals other than Tokyo—a situation that is likely to be aggravated by introduction of the uniform national business rate. However, in the long term, concerns over the costs and availability of office space may be eased by the large developments in and around the City, including the Docklands and, later, Kings Cross.

Table K
Recurrent costs per square foot for prime office space
£(a); Spring 1989

Location	Total recurrent costs	Of which: rent
London:		
City	88	65
West End	83	65
New York:		
Downtown	29	25
Midtown	41	36
Tokyo	109	99
Paris	48	34
Frankfurt	29	22

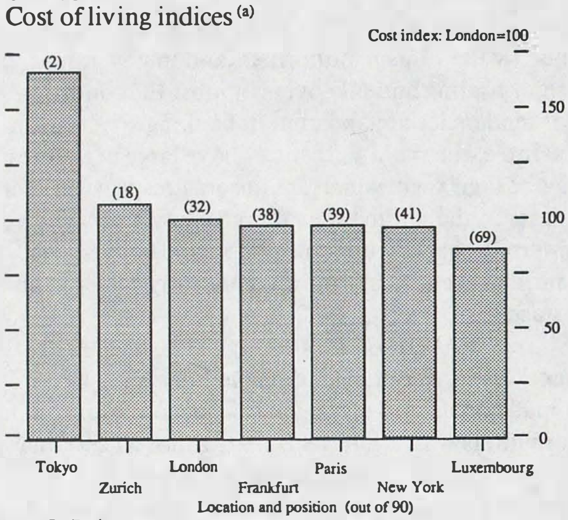
Source: Weatherall Green and Smith.

(a) Per square foot of net internal area based on notional 5,000 sq ft suite: other currencies converted to sterling at March 1989 rates.

As regards general *living expenses* and the daily cost of undertaking business, a recent survey of a number of major international locations (summarised in Chart 3) concluded that, in respect of a basket of goods and services typically bought by executives' families, London was not far out of line with its main European counterparts or New York, considerably cheaper than Japan but dearer than Luxembourg. Another recent study,[2] which encompassed a wide range of staff and office costs, was slightly more favourable to London: taking the cost of living, personal tax, office overheads, property and direct employment costs into consideration, London was deemed a cheaper location than Paris, Frankfurt or Brussels.

(1) Summarised in P Cecchini, *1992, the European challenge*.
(2) By Tyzack Turner.

Chart 3
Cost of living indices[a]



Source : P - E Inbucon.
(a) Survey conducted April 1989.

Staff costs are a substantial item on the profit and loss account of international banks, ranging in 1986 from 24% to 41% of total income.[1] A recent survey[2] of the basic salaries of top managers in finance in the United Kingdom indicated, however, that these were significantly below those in the United States (at £65,000 compared with £81,000); bonuses tended to be larger in the United States (28% of total rewards compared with 16% in the United Kingdom), suggesting higher average costs but greater flexibility of overall labour costs, which might be an advantage at times of business downturn.

One of the attractions of London is purported to be a large, flexible *labour market.* According to one study[3] the growth of London's population and increases in the proportion of the population which is economically active have resulted in an improved labour supply in London during the 1980s. However, for the capital as a whole, employment growth has outstripped the growth of resident labour supply, while the populations of East Anglia and the South East have been growing more rapidly than that of London. This has led to an upsurge in commuting and greater congestion in transport, which is a factor that may reduce the attraction of London. This congestion is likely to become a serious concern unless major improvements, currently under active examination, can be made in the foreseeable future.

As discussed earlier, employment in the financial sector as a whole has grown rapidly during the 1980s. However, any tightness of the labour market in the financial sector in London has to some extent been eased by the retrenchment (partly precipitated by the October 1987 stock market crash) which followed the creation of excess capacity after Big Bang (see the note on page 527).

As regards the likely future demand for labour in the financial sector in London, a recent report[4] envisaged employment growing by about 3% per annum up to 1992, with 37,000 extra jobs created by that year. These were to be largely in accountancy, management consultancy and software engineering. Job losses were forecast in securities. A loss of as many as 25,000 jobs in the securities field has been predicted by some brokers' analysts, reflecting excess capacity and low profitability, though these estimates appear to be less well researched.

Meanwhile, the birthrate in recent years suggests that the absolute number of persons in the 20–34 age group will fall significantly between now and the year 2005. This decline will have an adverse impact upon the potential labour supply to the core of the UK financial sector, which employs a high proportion of graduates and young professionals as well as school leavers. However, other countries face similar trends. Projections for US population, taken from the *Statistical Abstract of the United States,* suggest that numbers in the 20–34 category will decline between 1990 and 1995. The absolute number of young workers in Japan is expected to stabilise in coming years, but will fall as a proportion of total population. In sum, therefore, although staff availability and costs are of concern for London, the problems are common to other centres.

The challenge of technology
Besides office space and labour, a key input to the financial sector is fixed capital, in terms of machinery and computer systems. Generally speaking, the same equipment or systems are ultimately available in all competing locations, but high quality information technology experts do appear to be more plentiful in London than in some other centres. The potential is therefore present to exploit new technologies to the full, not just in individual firms but in the provision of collective arrangements for London as a whole. In this section selected dealing, settlement and clearing activities are examined to illustrate the progress that is being made to harness new technologies, and the challenges that lie ahead.

The ISE is refining its strategy for the development of *equity trading* systems. Responses to a recent consultative paper issued by the ISE suggested that members' concerns centred on matching and settlement of trades, as well as the cost of new and existing trading and settlement systems.

One such system is the SAEF system, which was introduced in February 1989 and provides automatic execution of small deals by routing brokers' small orders to the most competitive market maker. It is designed to simplify low value share dealing, by reducing telephoning, paperwork and time delays. The project was, however, subject to extensive delays, and competing private systems have been established.

(1) Derived from the consolidated accounts of major international banks.
(2) By Arthur Young (International).
(3) By the London Chamber of Commerce (May 1988).
(4) By the Institute of Manpower Studies and sponsored by the London Human Resources Development Group, entitled 'Create or abdicate: the City's human resource choice for the 90s'.

Excess capacity in securities markets

The emergence of excess capacity in bond and equity markets has been a notable feature of recent years. Prior to Big Bang, financial firms in equity and bond markets were protected in some degree by barriers to entry.[1] Big Bang, together with associated trends such as 'global' trading, extended trading hours and the emergence of multinational securities firms, produced a more competitive and uncertain environment, which increased the focus on strategy. There was a spate of takeovers and mergers, as well as rapid expansion of existing firms into new markets.[2] But the expansion appears to have led to capacity in excess of that which could be profitably sustained in more typical market conditions. In the London domestic markets this problem was aggravated by the effects on turnover of the October 1987 stock market crash and the turnround in government finances. The eurobond markets have in turn faced increasingly stiff competition from domestic bond markets as a result of deregulation.

With hindsight, it is apparent that firms experienced difficulty in predicting customer demand under completely new market conditions, and may in the event have overestimated the sustainable level. A number of firms may also have had problems in achieving the synergies expected of newly formed structures. Those that sought to grow organically may have faced fewer problems of this type. Firms also had to face the challenge of creating and managing new systems of risk control and of exploiting new developments in information technology.

For a while after the emergence of excess capacity, a number of firms, particularly some large domestic and international conglomerates with diversified operations, appeared willing to continue loss-making securities operations. It has become increasingly evident, however, that few institutions are content continuously to cross-subsidise loss-making operations for the sake of customer relationships. They have responded to excess capacity in a variety of ways, but generally by seeking to concentrate on their perceived areas of expertise. Some are focussing on areas such as swaps and derivatives, which can give them an edge in the primary bond market. Another response has been to withdraw from 'commodity' type financial markets (such as commercial paper, foreign exchange and government bonds), where profitability is low, in favour of more specialised activities[3] which generate fee income, and require less capital than does trading or issuance. Examples are fund management and corporate finance. Firms that remain in commodity-type business are under particular pressure to contain their costs, given that success in such markets typically flows to the lowest cost producer. Finally, in the eurobond market firms are seeking to reform issuance procedures in a bid to reduce the current pressures on profitability, one underlying cause of which has been excess capacity.

A further motive for rethinking organisational structures has been the growing awareness of potential conflicts of interest. Conglomerates can find themselves faced with contentious negotiations involving clients of different parts of the same institution. A return to specialisation reduces this risk.

Withdrawal from some types of business and geographical retrenchment may reduce representation in London markets. Such developments are, however, not necessarily to the benefit of any other centre. Orderly removal of excess capacity should be seen as a normal component of London's evolution.

(1) Some of the momentum for change that was developing among members of the Stock Exchange may in the event have been held back during the investigation of these practices by the Office of Fair Trading.

(2) For a discussion of the rationale for such market entry in the context of modern theories of industrial economics see Davis, E P 'Industrial structure and dynamics of financial markets; the primary eurobond market' Bank of England ***Discussion paper*** No 35.

(3) The key distinction between 'commodity' and specialised markets is that in the latter a firm may differentiate itself from its competitors in exploitation of factors such as its perceived reputation and expertise, its capacity to innovate, and asymmetries of information between intermediaries and customers. In these circumstances relationships are important. In 'commodity' markets the product tends to be homogeneous, with strong competition limiting profitability; relationships tend to be less important. See, for example, Bleeke, J A and Bryan, L L 'The globalisation of financial markets', *McKinsey Quarterly*, Winter 1988, pages 17–38.

The ISE faces increasing competition from foreign stock exchanges. Many are trying to harness new technologies to reduce costs and improve service. The Paris Bourse has used Toronto's 'CATS' technology to produce its own CAC automated order-matching system on which all major shares are now traded. The Frankfurt exchange is also set to introduce a new trading system, IBIS, which will enable it to extend trading hours.

The trading and settlement of international equities in London should be aided by the recent introduction of SEQUAL, which provides for trade confirmation and on-line matching services. This improves on the old system where trade details were matched bilaterally between counterparties' back offices, with a large initial failure rate. SEQUAL is available round the clock, and provides real time feedback and an enquiry facility. It faces competition, however, from European systems.

UK domestic *equity settlement* currently suffers from a dependence on physical movement of stock, with occasional long backlogs. It is hoped that the development of the TAURUS system (in which shareholdings are dematerialised and ownership transferred by electronic book entry) will obviate this. However, the implementation timetable for TAURUS is considerably behind original estimates.[1] The implementation of TAURUS may be phased, with institutional investors' holdings the first to be dematerialised. But substantial gains in settlement efficiency will probably not be realised until small shareholders' holdings are included, for their dealings account for nearly three quarters, by number, of share deals.

Replacement of the Stock Exchange account system by one of rolling settlement would also tend to reduce the incidence of settlement backlogs. It would even out the workload, and would also be an opportunity to shorten the settlement period. It is unlikely to happen, however, until dematerialisation has begun. In addition, such a change would have liquidity implications, at least in the short run, through its likely effect on the ease and cost of short-selling in London and possibly also, therefore, on the requirement for stock lending facilities.

The *Central Gilts Office* (CGO) is an example of an arrangement that has successfully utilised modern technology to improve settlements processes and to minimise settlements risk. It provides a central depository with book-entry transfer, linked to an assured payments arrangement, for the market in gilt-edged stocks. The *Central Moneymarkets Office* (CMO) is now being developed to provide a similar book-entry-transfer system for money-market instruments, with the possibility of later development to embody delivery versus payment arrangements. In both cases the initiative has been led by the Bank of England[2]—in the case of CGO in collaboration with the ISE.

London has well developed *clearing systems for sterling payments,* which compare favourably with domestic arrangements in many other centres. Nevertheless, there is an over-dependence on paper-based systems and attention is currently focused on the possibility of shifting further away from the paper-based Town Clearing for large-value same-day sterling payments towards the automated system known as CHAPS. At the same time increasing attention is being paid both in this country and internationally to the risks inherent in the large intra-day exposures which can build up in the payments system, to which both the clearing banks and the Bank of England are exposed.[3]

In sum, London faces some major challenges in certain aspects of market technology which, if not met and effectively resolved, could erode its competitive position. Some areas of dealing and settlement relating to traditional UK markets are potentially vulnerable to competition from other centres[4] although some activities, such as settlement of sterling banking payments, may remain effectively captive to London.

Indeed, the advance of technology could alter the conventional view of the economics of financial services, if information technology (IT) advanced to the point where there remained little need for direct personal contacts or the other benefits of location in a particular centre. To date, however, there is little sign of any IT-induced dispersion, as opposed to the removal of various clerical operations to other regions, which has mainly been prompted by comparative costs of staff and premises. Indeed, it could be argued that IT is as likely to provoke renewed concentration as it is dispersal: for instance, attempts by some futures exchanges to attract 24-hour trading would, if successful, tend to produce increased concentration, by eliminating the need for a centre in each time zone. Whichever tendency may prevail, neither gives the UK financial services industry grounds for complacency.

Conclusions

London has developed over a long period as a leading international financial centre and the financial sector plays a central role in the UK economy. London's success owes much to its history of openness, in contrast to other countries where for many years restrictions on entry or operations inhibited the development of their financial sectors. Recent moves, and others afoot, to dismantle many of these restrictions combine with rapidly advancing technology to present an international environment in which competition between locations is intensifying. However, the wealth of experience and expertise available in London, the advantages of an established centre displaying the full range of financial and ancillary services and the determination to improve systems where necessary suggest that London should be well placed to meet the competitive challenge. But neither the authorities nor firms operating here can afford to be complacent.

(1) The Securities Industries Steering Committee On TAURUS (SISCOT) was formed at the end of last year. It represents a cross-section of interests whose role is to recommend a design for TAURUS. A number of options are being investigated and, although work has advanced substantially in some areas, little has yet been finalised. More recently, the Exchange proposed that the TAURUS project be incorporated separately as a clearing house combining the existing TALISMAN settlement system with TAURUS under industry-wide ownership and control. This proposal, too, is under discussion.
(2) In the case of CMO, the Bank took on the role after a collective initiative among certain City institutions had failed to gain adequate support.
(3) See 'Challenges facing the sterling wholesale payment systems' in the August 1989 *Bulletin*, pages 401–406.
(4) It should be noted that technological developments may also pose problems for regulators. For example, screen-based trading systems located in several countries may make it difficult to determine where a given deal is transacted.