The recent evolution of the UK banking industry and some implications for financial stability

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1. Introduction

The UK financial system experienced significant structural change during the 1970s and 1980s. Before then the system was segmented. Different institutions existed to provide the differentiated services of commercial banking, investment banking, housing finance, life assurance, fund management and securities trading. Within the banking sector, there was a clear demarcation between *clearing banks* which provided commercial banking facilities and money transmission services largely to domestic customers, *investment banks* which provided a range of largely market intermediated financial services to both domestic and overseas corporate clients such as equity issuance and portfolio investment advice, and *building societies* which were the main source for housing finance. These demarcations were maintained by various forms of official regulation such as exchange controls and lending constraints (including credit ceilings), which served to restrict competition and thus impart stability to the oligopolistic structure of the market.

Changes to the institutional architecture took place progressively over the 1970s and 1980s. This was largely an evolutionary process, but a number of factors contributed to an intensification of competition and tended to erode the functional distinctions between firms. Five in particular are worth noting. First, the entry of foreign banks, associated with the continued growth in the eurodollar market and London's prominent role in this market, prompted the major clearing banks to expand their businesses into non-traditional markets such as corporate and unsecured lending. Initially, this was typically achieved through acquisitions in order to circumvent existing credit control regulations. But deregulation in the form of Competition and Credit Control (1971) and the abandonment of supplementary special deposits (the "corset") in the early 1980s eventually removed a number of barriers to the activities of the clearing banks.[1] The UK merchant banks were most affected by this increased competition from the traditional retail clearing banks and foreign banks, largely due to their small scale, which restricted their ability to compete for international capital projects/syndicated loans. Second, the removal of exchange controls in 1979 increased the global nature of competition. Previously banks' domestic sterling activities were effectively ring-fenced from competition from overseas banks, including those foreign institutions already established in London. Again UK merchant banks perhaps bore the brunt of this increased internationalisation in their markets, as in particular the large US banks such as Citibank and Chase Manhattan, freed from their restrictions at home, expanded into wholesale and corporate banking in the United Kingdom. Third, in the early 1980s retail banks entered the domestic mortgage market, a market that had previously been dominated by the building societies. This increased competition led to the abandonment of the lending cartel in mortgages that had restricted prices and encouraged quantity rationing in the provision of housing finance. It also encouraged banks and building societies to compete in other markets in which

[1] Specific changes in regulation have clearly influenced how the financial system evolved. The Appendix highlights the major regulatory changes that have affected banking over the past three decades (see Robb (1997)). In particular, the Building Societies Act (1986) increased the range of activities in which building societies were permitted to engage. But more generally, the changes in the financial system reflect an intensification of competition, not driven by deregulation alone. Indeed, some authors have argued that the process of deregulation through the 1970s and 1980s was largely a response to competitive pressures and financial innovation rather than a policy change designed to create greater competition (Llewellyn (1990), Fforde (1992)).

they had previously enjoyed significant market power, in particular retail deposits and money transmission services. Fourth, during the 1980s in particular, the financial system became more "market-oriented". Banks faced growing competition from other providers of savings media and credit financing for households as well as competition from capital markets for the provision of external finance to firms (Llewellyn (1990)). Finally, deregulation in the UK securities market in 1986 (the so-called "Big Bang") to remove restrictive practices in securities trading tended to bring the traditional banking system and the securities industry closer together and the functions performed by each institution have increasingly been merged. Indeed, this reform encouraged a number of the large UK and overseas retail banks to build-up a presence in the securities markets in London through acquiring existing securities houses/investment banks.

The upshot of these changes for the UK financial system was that by the end of the 1980s the traditional structure of specialist institutions had given way to a more conglomerate structure, at least in the retail banking market. Retail banking conglomerates attempted to learn the trade and techniques of investment banking and began to offer a wider range of services than traditional asset-liability transformation. And building societies, freed from regulatory barriers, began to compete with banks in unsecured lending and raise funds in wholesale markets. Moreover, some large retailers (e.g. Marks and Spencer) and large industrial companies (e.g. British Petroleum) set up their own banking arms to compete with banks in supplying some traditional banking services.

The UK investment/merchant banks, at least the ones that remained independent, continued to offer specialist services. Indeed, during the 1980s, the diversity of business structures increased with different firms adopting different strategies to compete in the increasingly global financial markets. Until the mid-1980s, UK merchant banks were fairly homogeneous with all providing trade finance, a limited volume of lending, fund management and corporate finance business. Since then, institutions have begun to concentrate more on particular niche services to compete against the dominant US investment banks. The latter typically sought to provide a global service in all aspects of investment banking – broking, lead management/underwriting of bond and equity issues, securities trading, corporate advisory business, fund management and traditional corporate lending.

Is this characterisation of banking in the United Kingdom still true for the 1990s? Have there been any further structural changes in the provision of banking services? Sections 2 and 3 of this paper attempt to address these questions by drawing out some stylised facts about the UK banking industry over the past twenty or so years. More specifically, Section 2 examines the recent trends in bank and non-bank financial intermediation with a view to establishing whether banks are in anyway still "special". In Section 3, the underlying issue is whether the competitive environment within which banks operate has intensified further in the latest decade. The section considers five aspects: the size of banks and market concentration; the profitability and efficiency of UK banks; the scope of services provided and, in particular, the evidence of increased diversification; the presence of new entrants to markets and the exit of firms from the industry; and changes in the means of delivery of banking services. Given the historical development of the UK banking system along functional lines, the section draws a particular distinction between investment and commercial/retail banking.

One of the key findings is that despite increased competition facing UK retail and investment banks in the 1990s, profits have remained high. Section 4 considers what factors might account for this somewhat puzzling result. Section 5 reviews the implications for financial stability. The latter is defined quite broadly to encompass not only systemic risk but also the financial fragility of particular UK financial institutions (and markets). In the light of continuing structural change and, in particular, given the blurring of the distinction between banks and non-banks, the section considers whether the UK banking system has become more susceptible to shocks and whether such shocks have a greater impact and are transmitted more widely across the financial system. Section 6 offers some conclusions.

2. Trends in bank and non-bank financial intermediation

The growth in the assets of the UK financial system and its institutional subsectors is illustrated in Chart 1. The period of most rapid asset growth for the system as a whole was the first half of the 1980s, when the assets of all the main institutions increased by at least 50% more than nominal GDP, which itself rose by around 60%. By comparison, growth in the second half of the 1980s was much more subdued; the total assets of financial institutions increased by around 15% more than nominal GDP between 1985 and 1990.

Chart 1
Total assets of financial institutions
As a percentage of GDP

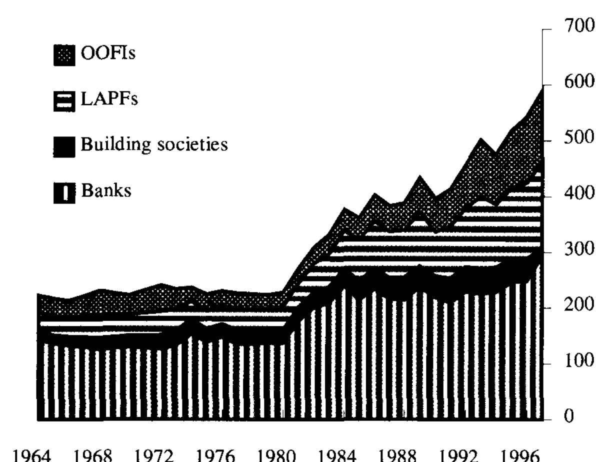
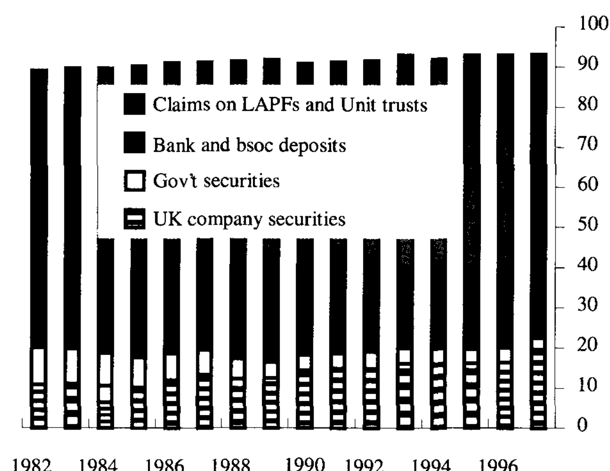


Chart 2
Selected assets of the personal sector
As a percentage of total assets



For the bank and building society (mutual) sectors, growth has continued in the 1990s, although at a slower pace. Between 1990 and 1997, their assets rose by around 4% more than nominal GDP. In contrast, the assets of non-bank financial institutions (NBFIs) (which includes life assurance and pension funds (LAPFs) and other non-bank financial institutions (OOFIs) have grown more rapidly over the past five or six years. In order to understand the reasons for this growth, it is useful to review the developments in the balance sheets of the UK non-bank private sectors. These reflect the behaviour of the domestic customers of, and in some cases the competitors to, the traditional banking sector. The trends can therefore illustrate how financial intermediation is carried out and evolves over time.

2.1 Personal sector

As shown in Chart 2, personal sector deposits with banks and building societies have gradually fallen as a share of households' stock of gross savings. Most of the decline is accounted for by building society deposits, which represented only 3% of total assets in 1997, down from around 15% in 1982. Some of this decline reflects conversions of building societies into banks. Other "traditional" savings media have also become less important. For example, the share of the Government's National Savings scheme has more than halved. In contrast, there has been a significant increase in the proportion of assets held via institutional investors. Indeed, indirect savings via institutions now represent more than half of the personal sector's financial assets. LAPFs account for by far the biggest element, although saving through unit and investment trusts has also become more important during the 1990s.

The shift in the composition of the personal sector's assets represents a shift away from capital-certain, low-risk savings vehicles towards higher-risk, higher-return assets. It reflects not merely an increase in awareness by households of the need to make adequate provisions for retirement but also increased financial sophistication in searching out higher returns for their savings. Privatisation of public sector activities in the 1980s may also have encouraged households to hold equities. Table 1 shows that this movement from direct to indirect savings vehicles has occurred in a number of other countries, most notably in the United States. And even where the deposit share has held up, claims on institutional investments have become more significant.

Table 1
Household sector balance sheet: proportions of total gross financial assets

		1970	**1975**	**1980**	**1985**	**1990**	**1995**
United Kingdom	Deposits	0.34	0.40	0.43	0.30	0.31	0.26
	Bonds	0.07	0.08	0.07	0.02	0.01	0.01
	Equities	0.24	0.15	0.12	0.11	0.12	0.12
	Institutional claims	0.23	0.26	0.30	0.47	0.48	0.54
United States	Deposits	0.28	0.36	0.33	0.30	0.25	0.18
	Bonds	0.13	0.13	0.10	0.10	0.12	0.12
	Equities	0.36	0.24	0.21	0.16	0.15	0.19
	Institutional claims	0.22	0.26	0.28	0.35	0.41	0.44
Canada	Deposits	0.31	0.37	0.38	0.34	0.36	0.33
	Bonds	0.14	0.12	0.08	0.10	0.05	0.04
	Equities	0.27	0.22	0.24	0.23	0.21	0.25
	Institutional claims	0.22	0.20	0.21	0.25	0.28	0.31
Germany	Deposits	0.59	0.62	0.59	0.52	0.48	0.45
	Bonds	0.08	0.09	0.12	0.15	0.16	0.14
	Equities	0.10	0.07	0.04	0.06	0.07	0.06
	Institutional claims	0.15	0.15	0.17	0.19	0.21	0.28
Japan	Deposits	0.55	0.59	0.69	0.65	0.60	0.62
	Bonds	0.06	0.06	0.09	0.11	0.09	0.06
	Equities	0.12	0.10	0.07	0.08	0.09	0.07
	Institutional claims	0.14	0.13	0.13	0.15	0.21	0.25
France	Deposits	0.48	0.60	0.59	0.50	0.38	0.32
	Bonds	0.06	0.07	0.09	0.07	0.04	0.04
	Equities	0.26	0.15	0.14	0.27	0.27	0.32
	Institutional claims	0.06	0.06	0.07	0.08	0.26	0.29
Italy	Deposits	0.45	0.63	0.58	0.42	0.35	0.29
	Bonds	0.19	0.14	0.08	0.17	0.19	0.20
	Equities	0.11	0.02	0.10	0.10	0.21	0.24
	Institutional claims	0.08	0.07	0.06	0.11	0.08	0.09

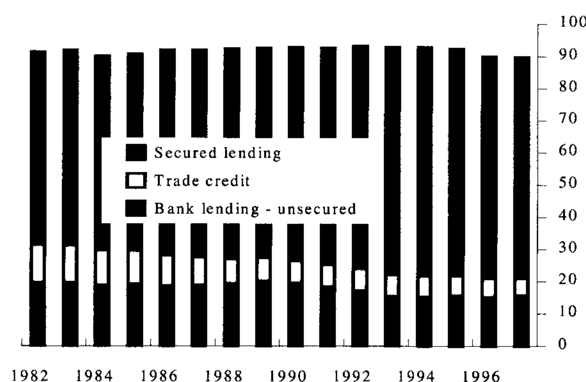
Source: E. P. Davis (1996).

It should be noted, however, that apart from the provision of current and cheque account facilities by some building societies, UK bank deposits remain the main provider of transaction and settlement services. Improvements in technology, such as the development of credit and debit cards, and centralised payment-settlement systems such as Clearing House Automated Payments System and Banking Automated Clearing System, have led to a decline in cheque usage; in 1997, cheques were used in around 20% of transactions by the personal sector compared with around 45% of transactions

in 1976. But, in contrast to the United States, where money market mutual funds offer cheque-account facilities, banks and building societies have remained the key providers of such services. Moreover, given the move away from the payment of wages in cash, banks have witnessed an increase in demand for such services. The proportion of adults with a bank current account rose steadily from 44% in 1976 to over 80% in 1996.

On the liabilities side, secured lending remains the largest liability of the personal sector. More specifically, mortgages secured on property are typically the most significant debt taken out by households. They accounted for around 70% of total personal sector liabilities in 1997 – a ratio that has only increased marginally since the early 1980s (Chart 3). Banks and building societies are the main providers of household mortgages. Together they account for over 90% of the stock of outstanding mortgages held by domestic residents. But, as in the deposit market, there has been a change in their relative positions. Banks have gained market share at the expense of other lenders since the early 1980s, when they first entered the domestic mortgage market. This process has accelerated over the very recent past with the conversion of many building societies into banks. In 1997, banks accounted for around 70% of total personal sector mortgages, compared with only 5% in 1984. In contrast, the share of building societies fell from over 80% in 1984 to only 23% in 1997, following the conversion of several building societies into banks.

Chart 3
Selected liabilities of the personal sector
As a percentage of total liabilities



Personal sector mortgage debt in the UK has typically been priced at a variable rate; i.e. the interest paid by the borrower varies in line with market rates over the life of the mortgage. But in recent years there has been an increase in the proportion of new mortgages written at fixed rates. In the first quarter of 1998, over 60% of new mortgages were written at fixed rates, up from 25% in 1995. However, the fixed-rate period is typically quite short – usually five years or less – and much shorter than in the United States. As a result, even though new business conducted at fixed rates has increased, its significance in the overall outstanding mortgage stock has remained modest. By value, around 20% of the stock of outstanding mortgages were at fixed rates in 1997, broadly unchanged from the proportion in 1994.

Given the scale of mortgage borrowing, unsecured debt is a relatively small part of personal sector liabilities, accounting for around 16% of total liabilities in 1997, broadly comparable with its share in the mid-1980s. But this comparison masks a rapid increase in the growth of unsecured borrowing since the mid-1990s. Banks are the lead providers of such consumer credit, currently accounting for around 73% of the total market. Competition has nonetheless increased. Until the late 1980s, the banks' market share had been increasing and was close to 80% in 1987. Building societies entered

this market following the change in regulation in 1986. But, at their peak, they only accounted for around 2% of the market. More recently, the major competition to banks has come from specialist lenders, whose market share has grown from around 10% in 1992 to over 20% in 1997. It should be noted, however, that a significant proportion of these specialist lenders are subsidiaries of banks.

2.2 Corporate sector

The trends in lending to the corporate sector are less straightforward than those for the household sector. Debt and equity of industrial and commercial companies (ICCs) increased during the 1980s, although there was a decline in the relative importance of trade-credit finance. But in the 1990s, the structure of debt finance has shown signs of shifting. In particular, ICCs as a whole have moved slightly away from reliance on bank loans and increasingly tap capital markets directly through the issue of bonds and commercial paper (Chart 4). Debenture and preference share net capital issues (which are largely corporate bonds) have increased in significance in the 1990s – they represented around 5% of ICCs' liabilities in 1997 compared with around 2% in 1980. This should not be over-emphasised; bond finance still represents a relatively small share of total liabilities, and, in flow terms, internally generated funds are likely to be more important in financing ICCs' expenditure (Chart 5). Compared to some other countries, most notably the United States and Canada, where bonds represented around 20% of corporate sector liabilities in 1994 (Davis (1996)), bond finance in the United Kingdom remains modest. Traditionally, higher and more variable inflation in the United Kingdom has resulted in higher long-term expected yields which in turn has made bond finance relatively expensive because of the inflation-uncertainty premium. But the fact that bond issuance as a share of total ICCs' liabilities increased in the 1990s, albeit from a low level, is a significant change. Moreover, an increase in desired gearing, reflected in the recent proliferation of equity buy-backs by a number of firms, may not show up clearly in the aggregate. In contrast, bank borrowing has remained very modest until the past couple of years; there was actually a prolonged period of debt repayment during the first four years of the decade. To some extent this reflects the buoyancy of profits during the 1990s, which ICCs have used to finance expenditure or repair balance sheets following the increased "fragility" experienced during the early 1990s recession. The continued rapid growth in the value of the equity and bond markets in the 1990s has also helped to reduce the cost of capital raised through these means relative to bank loans.

Chart 4
Selected liabilities of ICCs
As a percentage of total liabilities

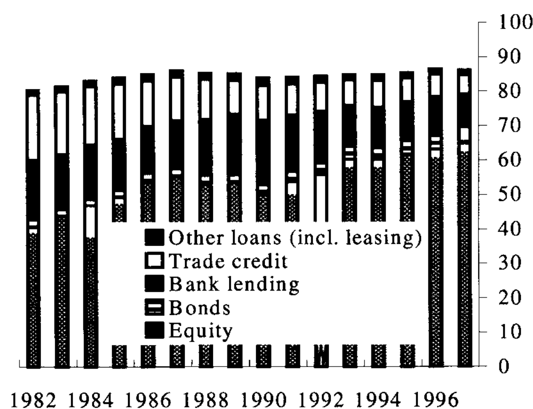
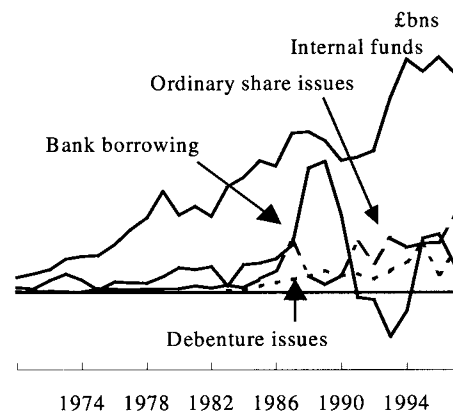


Chart 5
Selected sources of ICCs' capital funds



Bank finance nevertheless remains important for small firms, which have less access to capital markets. As Table 2 shows, bank lending accounted for 51% of external finance of small firms with turnover less than £1 million, lower than the 61% recorded for 1987-90. But asset-backed finance, which is largely provided by bank subsidiaries, has increased significantly, so that, including this category, banks probably accounted for around 80% of external finance in 1994-95, broadly unchanged from 1987-90.

Table 2
Small firms' sources of external finance
In percentages*

	1987-90	**1994-95**
Bank lending	61	51
HP/Leasing	15	31
Partners/Shareholders	8	5
Venture capital	3	2
Factoring	6	2
Other sources	7	8
Total	100	100

* These percentages are based on a simple average of responses and have not been weighted according to the volume of external finance provided by firms participating in the survey.

Source: Centre for Business Research, University of Cambridge.

On the asset side of ICCs' balance sheets, the most notable trend is the increasing internationalisation of assets. A growing share of ICCs' assets are claims on or ownership of overseas firms, related to both direct and portfolio investment abroad.

2.3 The non-bank financial sector

The increased savings of households via non-bank institutions have not been entirely lost to the banking system. As part of their investment strategies, such institutions often choose to place funds on wholesale deposit with banks, not least because of their need for liquidity. Such deposits constitute capital-certain, low-risk assets which are appropriate within a balanced portfolio. Indeed, as a share of LAPFs' total assets, holdings of bank and building society deposits have increased since the mid-1980s.

Table 3
Selected assets of OFIs
As a percentage of total assets

	LAPFs[1]		**OOFIs**[2]	
	1986	**1997**	**1986**	**1997**
Bank and building society deposits (£ and FC)	3.2	4.6	14.3	20.0
UK company securities	51.8	53.3	6.2	3.0
Overseas securities	16.2	16.6	19.7	20.7
British Government securities	19.3	11.1	22.9	26.1

[1] Life assurance and pension funds. [2] Other financial institutions excluding LAPFs.

Source: ONS, Bank of England.

Bank and building society deposits have also become a more significant element for other financial institutions (OOFIs) during the 1990s. These institutions, which include securities houses and finance houses, play an active part in the wholesale money markets and the increase in their bank and building deposits seems likely to reflect the liability management of banks and building societies as they bid for such wholesale deposits to fund their lending. In the face of competition for retail savings, banks and building societies have increasingly relied on wholesale deposits as a source of finance. In 1983, wholesale deposits accounted for around 20% of bank and building society sterling deposits from the non-bank private sector (M4). In 1997, this share was closer to 35%.

The introduction of the open gilt repo market in January 1996 intensified this trend toward wholesale deposits and, in particular, the willingness of OOFIs to provide marginal funds to the banking system. Banks often bid for marginal funds in wholesale markets to finance their lending. When a bank undertakes a gilt repo it sells a gilt to another party, usually another bank or an OOFI,[2] with an agreement to buy back equivalent gilts at a specified price on a particular date. The bank's repo liability is recorded as an increase in bank deposits. So the repo is in effect a form of secured deposit backed by gilts. If a bank does a reverse repo, the position of the parties is reversed – the bank lends to the OOFI using gilts as security.

More generally, the development of repo markets, not just gilt repo, and derivatives (OTC and exchange traded) have facilitated a rapid expansion in OOFIs' balance sheets in the 1990s by encouraging significantly greater interaction between OOFIs and the banking sector. Together with LAPFs, OOFIs have accounted for virtually all of the increase in the annual growth in sterling bank and building society deposits and lending over the past three years. And in recent months, banks' exposures to OOFIs, in particular hedge funds, have been a concern for financial stability in the United Kingdom and some developed economies.

In summary, non-bank financial institutions have grown much more rapidly than banks and building societies in the 1990s. This reflects a combination of increased flows of household savings into these institutions and a growing desire by large companies to access capital markets directly. Essentially the financial system has become even more market oriented, with alternatives to bank intermediation increasingly being used. But, the decline in the role of banks should not be overstated. Banks still play a major role in the payments and settlement system in the United Kingdom. They are also "special" in that they still provide liquidity to the rest of the financial system through the provision of short-term lines of credit and facilities. And banks and building societies remain the main providers of transactions payments services and the main homes for households' liquid savings. Significantly, they are the lead providers of credit finance to smaller firms and households and while asset-backed finance has grown in importance, this is largely provided through bank subsidiaries.

More generally, financial market intermediation is still some way from replacing banks altogether. The traditional maturity transformation role of banks remains largely intact in the United Kingdom. Imperfect information continues to exist between borrowers and lenders which banks remain well placed to exploit both in terms of providing depositors with liquidity insurance against random shocks to their income and in spreading the cost of monitoring the risky projects of borrowers over a large number of depositors. Even where market mediated alternatives are available, as we will see below, banks have reacted by widening the range of services they offer. Essentially banks have responded to disintermediation pressures by providing market instruments themselves and thereby reintermediate funds.

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[2] So far only banks and OOFIs have actively entered the gilt repo market.

3. Structure and profitability of the UK banking sector

In this section we seek to draw out some "stylised facts" which may help to illuminate the competitive environment in which banks operate. Five aspects are considered: the size of banks and market concentration; services provided by banks; the presence of new entrants to markets and exits of firms from the industry; the profitability and efficiency of UK banks; and changes in the means of delivery of banking services.

3.1 The size of banks and market concentration

The assets of the UK banking sector have expanded significantly, in relation to overall economic activity, since 1980, although as noted earlier, the period of most rapid growth was the first half of the 1980s. Over the past year or so, bank assets have increased at a faster rate again, but that largely reflects the process of demutualisation and conversion to banks within the building society sector (Chart 6).

Chart 6
Value of assets of UK banking and building society sectors

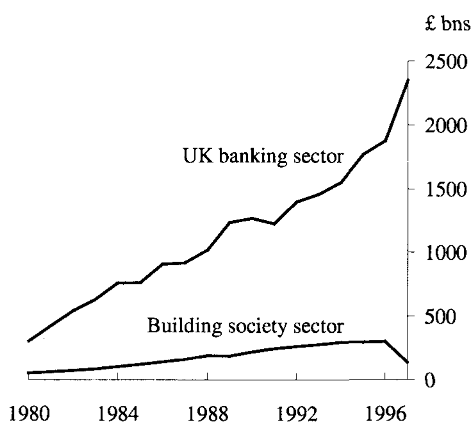
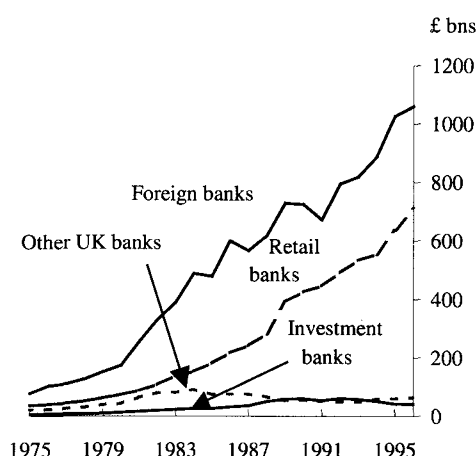


Chart 7
Value of assets by type of bank



Within the UK banking sector, retail and foreign banks dominate the industry (Chart 7). As of the end of 1996, more than half of the total assets were on the books of foreign banks, which have had a significant presence since the mid-1970s, reflecting the role of London as an international banking sector. UK retail banks have accounted for an increasing proportion of the total since the middle of the 1980s. In 1985, their assets represented roughly a quarter of the total; in 1996 this share was nearer 40%. In contrast, the assets of UK investment banks have become less significant, reflecting acquisition and the absorption of assets into domestic retail and foreign parents.

Despite the presence of a large number of foreign banks, most of their assets in the United Kingdom are foreign-currency-market loans and advances, the funding for which is typically drawn from wholesale markets, also in foreign currency. Foreign banks do not have a significant presence in the domestic household savings and mortgage markets or in the smaller to medium-sized corporate market. This reflects not only their lack of high-street presence, but also some cultural inertia on the part of traditional bank customers, who typically prefer banks with an established "brand". A clear example of this is Citibank, which grew in prominence in London as the Eurobond market developed in the 1960s and 1970s but which, so far, has only a small presence in the domestic retail market. Reflecting this preference for UK brand names, National Australia Bank acquired some small regional UK banks in the early 1990s, and the Bank of Ireland acquired the Bristol and West Building Society in 1997. Nevertheless, the acquired banks have retained in both cases their original brand.

Table 4
Share of assets by bank type

	1975	1980	1985	1990	1996
UK banks					
Retail	25.8	24.1	23.8	33.6	37.9
Investment	4.2	4.2	3.5	4.7	2.2
Other	14.6	14.2	9.8	4.4	3.4
Total UK banks	44.6	42.5	37.2	42.8	43.5
Foreign banks					
United States	26.6	19.8	13.1	8.7	8.2
Japan	8.6	13.5	23.4	20.1	9.7
Other	20.2	24.3	26.4	28.4	38.6
Total foreign banks	55.4	57.5	62.8	57.2	56.5
Grand total	100.0	100.0	100.0	100.0	100.0

Source: Bank of England.

In contrast to foreign banks operating in the United Kingdom, retail banks are primarily oriented towards serving domestic household and corporate customers; almost two-thirds of their assets are sterling market loans and advances. Their deposit liabilities provide the main component of the liquidity of the private sector and their lending to households and businesses plays an important role in financing economic activity. Within the UK-owned banking sector, the largest institutions are also retail banks. The so-called "Big Four" retail banks (Barclays, NatWest, Lloyds-TSB and Midland) accounted for around one half of the total assets of UK banks and building societies in 1996 (Chart 8). This level of concentration has been broadly stable since the mid-1980s.[3]

Table 5
Share of assets by bank type and currency

	1975	1980	1985	1990	1996
UK retail					
£ market loans and advances	56.9	59.7	56.5	68.7	62.0
of which: UK private sector	*36.6*	*40.4*	*40.2*	*55.0*	*47.0*
FC market loans and advances	12.2	17.8	24.7	13.9	14.5
UK investment					
£ market loans and advances	40.2	42.0	42.6	58.9	38.8
of which: UK private sector	*13.2*	*12.7*	*12.1*	*24.2*	*17.2*
FC market loans and advances	46.4	43.8	41.1	28.5	25.2
Foreign					
£ market loans	9.3	11.8	11.4	21.5	17.0
of which: UK private sector	*4.0*	*4.6*	*4.5*	*10.9*	*7.6*
FC market loans and advances	88.5	85.8	80.8	71.1	66.1

Source: Bank of England.

[3] Cross-country comparisons reveal that concentration differs significantly. Within continental Europe, for example, the five largest institutions account for around 17% of total credit institutions' assets in Germany, compared with 41% in France and over 80% in Sweden.

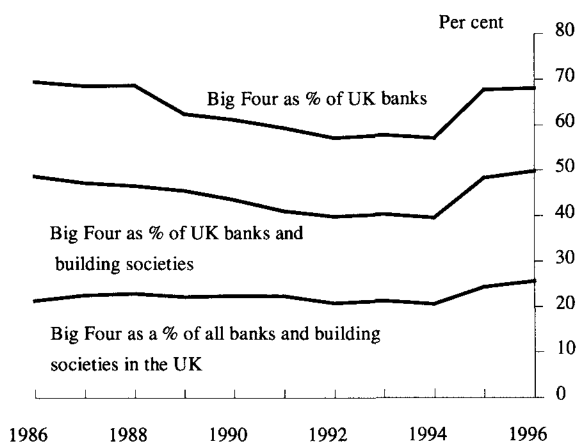
Table 6
Share of liabilities by bank type and currency

	1975	1980	1985	1990	1996
UK Retail					
£ deposits	71.2	66.2	60.5	70.2	65.8
of which: UK private sector	*63.6*	*56.1*	*44.8*	*51.2*	*46.2*
FC deposits	12.2	17.9	22.9	14.4	20.9
UK Investment					
£ deposits	39.0	41.3	42.4	58.9	56.2
of which: UK private sector	*24.9*	*23.2*	*26.4*	*29.6*	*28.5*
FC deposits	48.2	48.2	45.0	28.2	31.9
Foreign					
£ deposits	9.3	11.5	11.5	21.5	20.3
of which: UK private sector	*2.9*	*2.4*	*11.5*	*5.2*	*20.3*
FC deposits	88.7	87.2	85.9	76.2	75.9

Source: Bank of England.

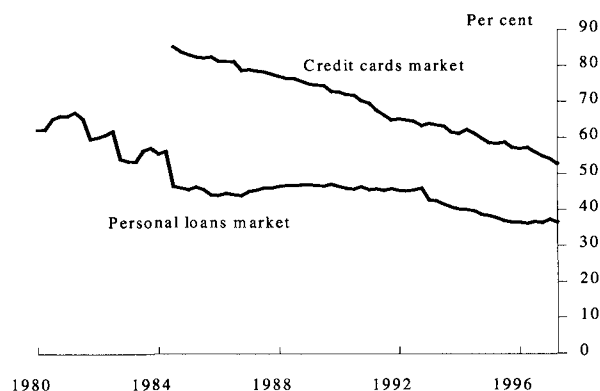
Given that banking is typically a multi-product industry, concentration is best measured from the perspective of the markets in which banks operate, rather than from the total size of institutions' balance sheets. On the retail side it is therefore instructive to distinguish between the main markets: those for deposits, mortgages and unsecured credit. For investment banks, which have a more global focus, we consider: mergers and acquisitions business, debt underwriting, syndicated loans and equity/equity-linked issuance.

Chart 8
Share of Big Four* banks' assets in total assets of sector



* Barclays, NatWest, Lloyds-TSB and Midland.

Chart 9
Big Four's share of total banks' unsecured credit



In addition to the recent conversion of building societies into banks, there have been some notable mergers between institutions active in the domestic mortgage market during the 1990s. Three of the

top four mortgage providers are now banks, while previously building societies were the institutions with the biggest share. The largest mortgage lender (Halifax) was formed by the merger of two institutions in the top ten. The second and third largest mortgage lenders (Abbey National and Lloyds-TSB-Cheltenham & Gloucester) were created by the merger between institutions of which at least one in each case was a relatively small player in the market. As a result, the largest four mortgage lenders still only account for around 50% of the market and, as set out in Table 7, the mortgage market does not appear to be particularly concentrated, although concentration has increased over the past three years.

Table 7

Alternative measures of concentration in the mortgage market (1997)

Measure	1992	1993	1994	1995	1996	1997
Herfindahl*	0.0549	0.0566	0.0585	0.0811	0.0858	0.0823
Market share of 3 largest	34%	34%	34%	42%	44%	43%
Market share of 4 largest	39%	40%	40%	49%	51%	50%
Number of firms accounting for 80% of the market	21	19	17	13	12	12

* Constructed as $H = \Sigma si^2$ where si = share of the ith firm in the industry (n.b.: the sample of institutions used in the calculation accounted for around 96% of the total market).

Source: Raw data from Fitch IBCA.

While the Big Four have a significant share of the consumer credit market, it has declined in recent years as competition in the industry has intensified (Chart 9). The Big Four accounted for over 90% of the banks' credit card market in 1984, but this has declined steadily to a share nearer 50%, as US firms have become more significant. In the personal loan market, which accounts for around 70% of total non-mortgage consumer credit, the Big Four's share has fallen since the 1980s. This appears to have taken place in two phases. In the early 1980s, the market share of the Big Four declined as the relaxation of regulations on bank and building society lending practices led to greater competition in the consumer-credit market. There then followed a prolonged period through the 1980s when the Big Four's share remained stable. In the 1990s, their market share has come under further downward pressure, reflecting the growth of specialist lenders.[4]

Table 8

Measures of concentration in the retail deposit market

	1992	1993	1994	1995	1996	1997
Herfindahl*	0.0746	0.0686	0.0645	0.0667	0.0604	0.0698
Market share of 4 largest	46%	44%	42%	46%	43%	45%

* N.b.: the sample of institutions used in the calculation accounted for 84% of the total market.

Source: Raw data from Fitch IBCA.

Although the funding policy of banks and building societies shifted in the 1980s towards wholesale deposits, retail funds still represent the bulk of their deposit liabilities. Within the sector, retail deposits are not particularly concentrated with certain institutions, although the big "high street" banks are the biggest players. In contrast to the mortgage market, the share of the four largest retail

[4] However, these include bank subsidiaries such as finance houses.

deposit takers has remained very stable through 1990s, confirming that consolidation has not led to significant concentration.

Table 9
Concentration in global investment banking markets

	1990		**1994**		**1998**	
	Rank	**Market share***	**Rank**	**Market share***	**Rank**	**Market share***
Mergers and acquisitions business						
Merrill Lynch	7	8.5	5	12.3	1	29.2
Goldman-Sachs	2	12.1	1	19.2	2	26.2
Morgan Stanley	3	11.2	3	14.5	3	21.0
J P Morgan	11	4.4	9	7.2	4	15.0
Share of top 4 firms		47.7		57.5		91.4
Highest UK investment bank	1	13.2	7	12.8	12	7.9
Global debt underwriting business						
Merrill Lynch	7	3.6	1	7.5	1	7.6
SBC Warburg	3	6.0	3	5.1	2	6.9
Morgan Stanley	16	2.1	6	3.8	3	6.7
Deutsche M. G.	6	4.3	11	2.8	4	6.1
Share of top 4 firms		28.4		23.8		27.3
Highest UK investment bank	22	1.2	16	1.8	13	2.6
Global syndicated lending business						
Chase Manhattan	1	17.5	1	28.7	1	32.3
J P Morgan	3	9.7	3	16.2	2	20.3
Citicorp	2	12.4	2	17.1	3	19.0
Nations Bank	24	1.3	5	5.8	4	18.6
Share of top 4 firms		48.6		71.3		90.2
Highest UK investment bank	5	7.2	10	3.9	9	7.5
Global equity and equity-linked issuance business						
SBC Warburg	3	8.2	1	8.7	1	18.1
Commerzbank	37	0.2	37	0.4	2	13.2
Deutsche M. G.	14	2.3	13	2.8	3	8.8
Merrill Lynch	11	2.8	5	6	4	6.9
Share of top 4 firms		39.6		29		47
Highest UK investment bank	10	2.9	11	3	5	6.2

* Measure based on internal research by Morgan Stanley/Dean Witter.

Sources: IFR/Securities Data Company and Morgan Stanley/Dean Witter Research.

The large US investment banks have a significant presence in most of the corporate investment banking services markets. In 1998, at least one American bank featured among the top four firms by market share in global M&A, debt underwriting, syndicated lending and equity business (Table 9), with the markets for M&A and syndicated lending having become particularly dominated by the US banks.

UK specialist investment banks[5] (i.e. those that are not part of a bigger conglomerate) are much smaller players by comparison. Their relatively small balance sheets have tended to constrain their ability to compete in global markets, as greater capital resources are increasingly required to fund technology and staff expertise in all business areas (Molyneux (1995)). According to recent UBS research on investment banking, "product commoditisation, high fixed costs and price sensitive clients all suggest a high volume approach, bringing improved liquidity and distribution across multiple products and locations" (UBS (1997)). This has been particularly true since the "Big Bang" in London securities trading in 1986, when access restrictions were relaxed. In some cases, this has led to mergers with larger European commercial banks. In others, firms have opted to focus on a particular aspect of investment banking where they can market particular expertise and foster client relationships, for example, the corporate advisory specialists NM Rothschilds and Schroders. The cost of funding following the failure of Barings may also have been a factor in determining the amount and type of business in which UK merchant banks have recently engaged.

3.2 Profitability and efficiency of UK banks

Data limitations mean that the statistics for retail banking are restricted to the Big Four UK clearing banks or, in some cases, the Major British Banking Group, which covers the largest ten retail banks. For investment banking, figures relate to a selection of the remaining specialist UK investment banks: Robert Fleming, Schroders, Rothschilds and Lazards. These banks account for around 67% of total UK investment banks' assets.

Chart 10
Net interest margins

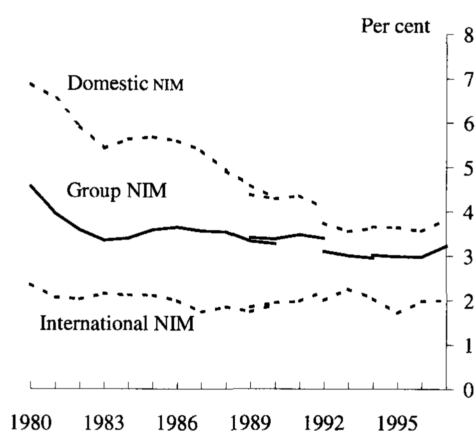
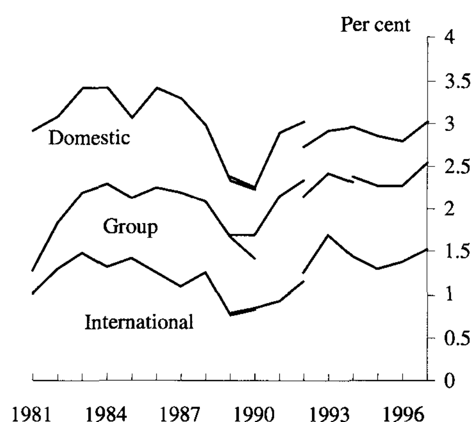


Chart 11
Big Four spreads



Retail banks' margins were relatively wide in the 1970s and strongly influenced by the level of interest rates.[6] For example, between 1972 and 1974, the Big Four's net interest margin nearly doubled, because banks benefited from the endowment effect. During the 1980s, net interest margins fell, particularly on domestic business (Chart 10). The sharpest fall occurred during 1980-83, largely

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5 The most notable remaining UK investment banks are Schroders, Rothschilds, Robert Fleming and Lazards.

6 The *net interest margin* is defined as net interest income as a percentage of average interest-earning assets, while the *net interest spread* is measured as the yield on assets (interest received divided by average interest-earning assets) less cost of funds (interest paid divided by average interest-bearing liabilities). The *endowment effect* is the net interest margin less the net interest spread; i.e. the amount banks earn from funding interest-earning assets with non-interest bearing liabilities.

due to the reduced endowment effect as interest rates fell; in fact, spreads actually increased (Charts 11-12). The further downward pressure on margins in the second half of the decade was driven by declining spreads, probably because of increased competition in the markets for loans and deposits. Competition in the deposit market entailed the payment of interest on an increasing proportion of deposits, thus also reducing the benefit of the endowment effect when interest rates were high (Chart 13).

Chart 12
Big Four endowment effect

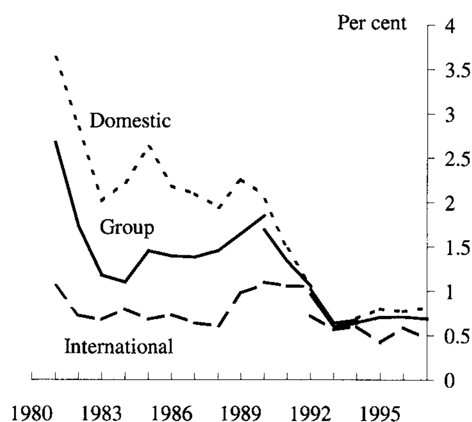
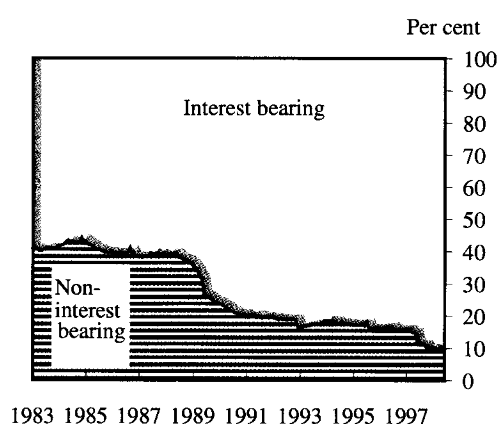


Chart 13
Proportion of interest and non-interest-bearing deposits in banks' retail M4



In the 1990s, net interest margins remained broadly stable, although once again the trends in spreads and the endowment effect diverged. As in the early 1980s, the endowment effect has been ratcheted down further, with the major fall occurring in the recession years 1990-92, when interest rates fell sharply. Since then, the endowment effect has remained around 0.5 percentage points, reflecting a period of relatively low inflation and low interest rates. Nonetheless, spreads rose significantly in the early 1990s and have returned to their levels of the early 1980s. Research at the Bank of England (Milne and Robertson (1997), Milne and Gallagher (1997)) suggests that the rise in spreads is likely to have reflected developments on the deposit rather than on the lending side of banking business. While there has been some contraction in the spread between mortgage lending rates and wholesale funding rates in recent years, the spread between mortgage lending rates and average retail deposit rates remains higher than in the 1980s.

In the 1970s, interest income provided over 80% of banks' total income, but by 1990 this had fallen to just over 60%. The counterpart was the steady expansion of non-interest income, reflecting banks' desires to diversify into new areas of business, in response to increased competition in their traditional markets. This pattern continued during the early 1990s, but since 1993 the position has stabilised (Chart 14). UK investment banks have also come to rely much more on non-interest income and this trend has continued through the 1990s. In 1992, UK investment banks derived around 25% of their income from interest sources; in 1997 this proportion was closer to 15%. This trend is echoed in the accounts of the dominant US investment banks, which have also recorded a gradual decline in the share of interest income (Chart 15).

Chart 14
Big Four income

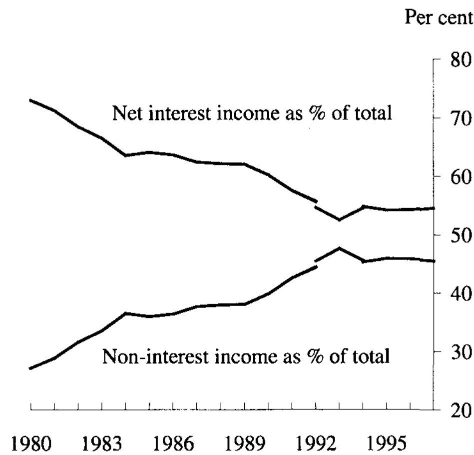
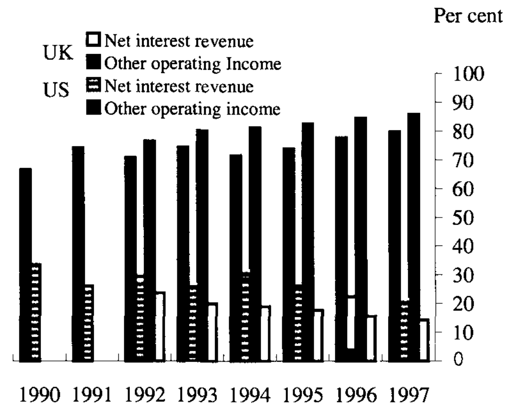


Chart 15
UK and US investment banks compared



Although there are significant differences across countries, Davis and Tuori (1998) generally found that "there is evidence of changes in income structure for most EU countries, leading banks to have a greater relative dependence on non-interest income". This, they conclude, reflects the evolution of banking into a market-oriented phase[7] where capital markets become more active and create greater opportunities for banks to generate more income from brokerage, consultancy and off-balance sheet activities. But, as they point out, the rise in the relative share of non-interest income has not always been accompanied by higher returns on equity suggesting that overall profitability may not have improved.

Table 10
Ratio of interest to non-interest income in selected countries

	1984-87	1988-91	1992-95
Germany	4.1	3.3	3.6
France		3.6	1.5
Italy	2.9	3.4	3.7
United Kingdom	1.8	1.6	1.3
Finland	1.2	1.0	1.0
Sweden	2.1	2.7	1.5
EU	2.9	2.7	2.3
Euro area	3.6	3.3	2.8
United States	2.6	2.1	1.8

Source: Davis and Tuori (1998).

[7] Rybcynski (1997) distinguishes two sub-periods in the market-oriented phase. In the first, banks continue to perform the three basic functions: running the payments system, providing liquidity and collecting and allocating new savings. They are also the dominant suppliers of external funds to non-financial companies. The absolute and relative size of the money and credit markets begins to rise, but they are still used predominantly for interbank business. The second market-orientated sub-period is characterised by the growing importance of non-bank savings collecting institutions (e.g. insurance companies, unit trusts, etc.). Moreover, the proportion of external funds raised in capital markets begins to increase.

The increase in retail banks' non-interest income has come from a variety of sources. For example, banks have sought to cross-sell related financial products, such as insurance, and diversify into other financial activities such as investment banking and asset management. The accounts of the Big Four show that income from fees and commissions, dealing profits, and other non-interest income have all increased through the 1980s and 1990s so that their share in non-interest income has remained fairly stable (Chart 16).

Chart 16
Big Four non-interest income

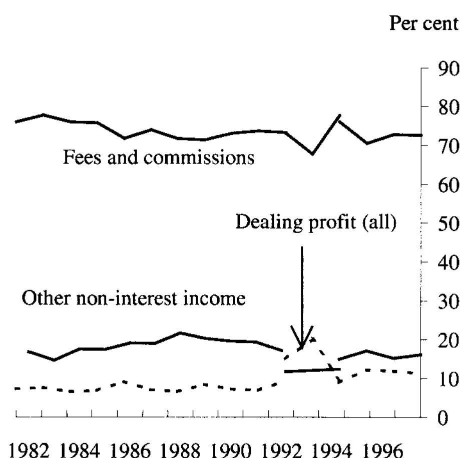
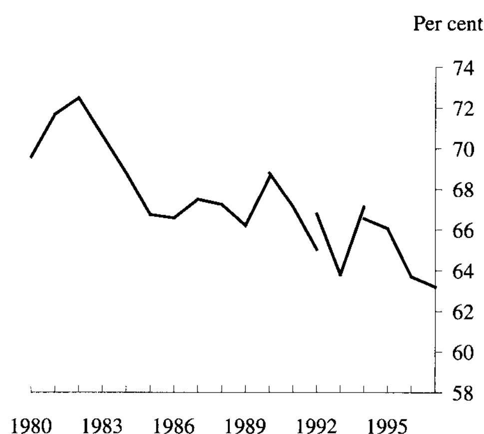


Chart 17
Big Four cost/income ratio



As highlighted above, the competition for funds forced banks to pay interest on an increasing proportion of their retail deposit liabilities. A desire to expand their assets also led banks (and building societies, following deregulation in the mid-1980s) to make increased use of relatively more expensive wholesale deposit funding. Both factors served partially to offset the benefit banks enjoyed from the endowment effect. Non-interest costs also rose in the late 1970s, partly as a consequence of inflation, but also because low levels of competition (particularly when the "corset" was imposed) and the benefit of the endowment effect offered little incentive to cut costs. Despite lower inflation and more competition since the early 1980s, the Big Four's cost/income ratio has fallen only gradually (Chart 17). Staff costs as a share of income and of total operating costs have fallen during the 1990s,[8] reflecting both a decline in the number of bank staff and a switch to part-time workers (Charts 18 to 20). In 1997, staff costs represented 56% of the Big Four's total costs, compared with 67% in 1980. But this moderation in staff costs has been offset by a rising share of income spent on non-staff costs, probably related to increased expenditure on IT and costs associated with new means of delivering banking services, given the decline in the branch network. More recently, significant costs have been incurred in making changes to systems in readiness for EMU and Year 2000 compliance.

The cost-to-income ratios in UK investment banks (and indeed in the big US investment banks) are higher than in retail banking and have increased over the past five years (Chart 21). Although these institutions do not have a branch network to support, staff costs (relative to income) are typically higher for investment banks reflecting both higher salaries and the labour intensive nature of their activities.

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[8] The fall in staff costs is understated because they include restructuring costs relating to staff reductions. At their peak in 1995, such costs accounted for around 5% of the Big Four's staff costs.

Chart 18
Big Four: selected costs/income ratios

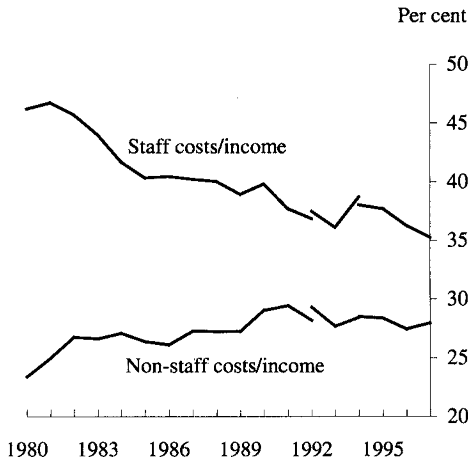
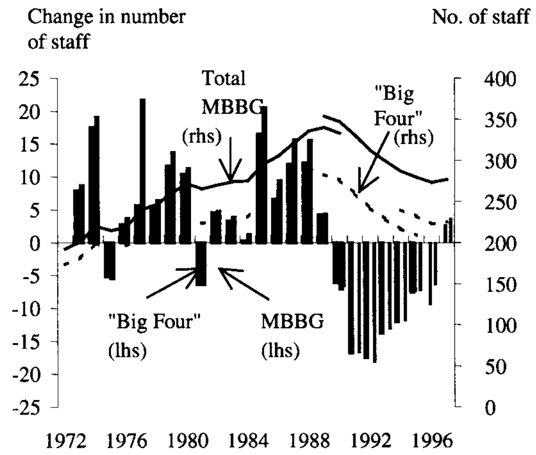
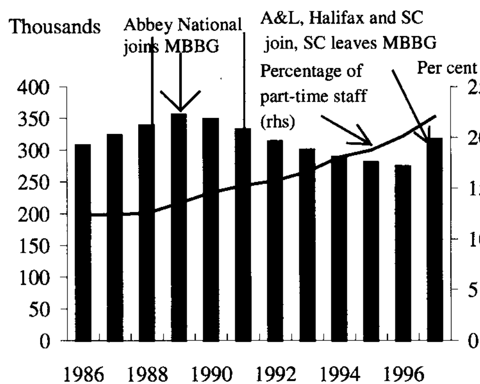


Chart 19
Bank staff



Banks' profits are heavily influenced by the economic cycle and the interest-rate response of the authorities. Abstracting from these factors is difficult, but retail banks' profitability did appear to increase substantially through the 1970s and 1980s. This upward movement was abruptly halted in the early 1990s, when domestic bad debts associated with the economic recession accumulated rapidly. Accompanying the cyclical upswing, bank profitability recovered later in the 1990s to levels achieved briefly in the late 1980s (Chart 22). Comparing returns on equity (ROEs) across industries is clearly hazardous. But, as Table 11 shows, recent retail bank profitability at over 30% compares favourably with selected results in utilities, construction, transport and communication and retailing industries, while Chart 23 shows that bank equity prices have increased more rapidly during the 1980s and 1990s than in a number of other industries.

Chart 20
Number of MMBG* staff



* Major British Banking Group.

Chart 21
US and UK investment banks' cost/income ratio

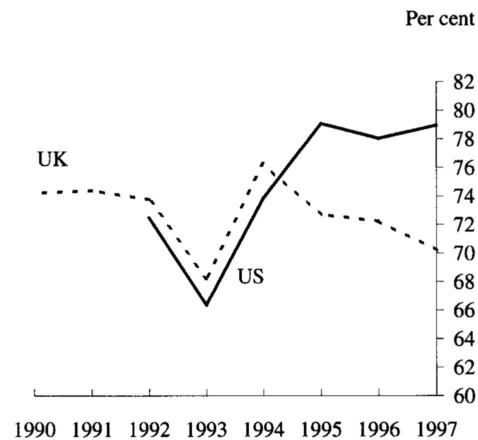


Chart 22
Big Four profitability

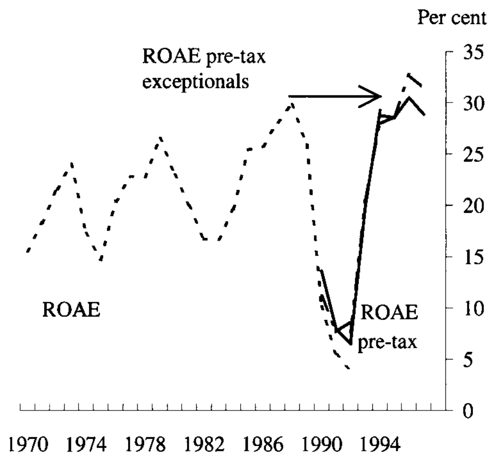


Chart 23
FT stock market indices

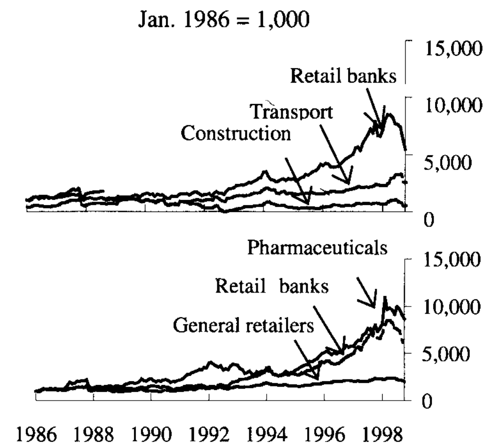


Table 11
Average return on equity

Company	1988	1991	1994	1997
British Airways	36	14	16	22
British Telecom	28	29	21	28
SmithKline Beecham	n.a.	83	51	58
Anglian Water	n.a.	13	9	13
Marks and Spencer	23	25	25	24
Bryant (Construction) Group	42	5	16	15

UK investment banks have not enjoyed a similarly large cyclical recovery in profitability and profitability did not contract as sharply during the early 1990s recession. In fact, as Chart 24 shows, UK investment bank profitability has been much more stable, compared with that of the Big Four. Over the whole 1990-97 period, the average ROE for UK investment banks (at 15.3%) exceeded that for the Big Four (13.0%). Profitability, as measured by profits relative to assets has, if anything, been

Chart 24
Return on average equity for UK banks

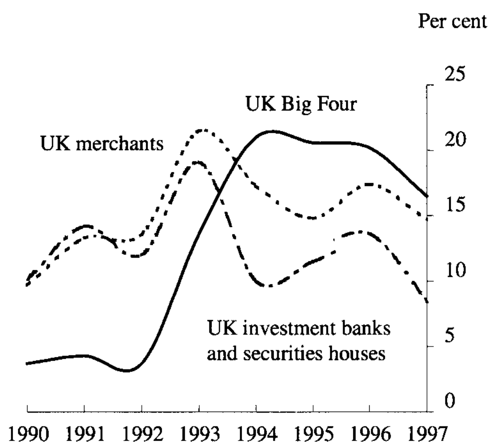
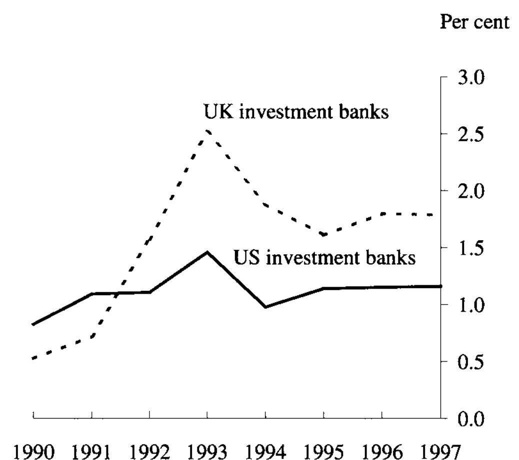


Chart 25
Profitability of US and UK investment banks
As a percentage of assets



rising in UK specialist investment banks in the 1990s to levels above those of the large US investment banks (Chart 25). This could reflect the type of niche markets UK investment banks operate in or the relationship-type banking model they tend to prefer, both of which might insulate them to some extent from the effects of the economic cycle.

However, returns from broader investment banking businesses have fallen over recent years. Grouping UK investment banks and securities houses together, average ROEs fell from around 18% in 1993 to less than 10% in 1997. Much of their business is now more transaction-driven, so the corresponding markets are more open to competition from the large US investment banks. The dominant market position of the latter may have placed them in a better position to exploit the increased debt/equity underwriting business and the recent boom in mergers and acquisitions. But others have noted that although the global market for investment banking is becoming increasingly concentrated, profitability of the largest US investment banks has undergone a long-term structural decline through the 1980s and 1990s (Molyneux (1995)).

3.3 The scope of services provided by UK banks

Table 12 provides an indication of the scope of services offered by a selection of UK retail banks and how they have evolved over time. A number of points immediately stand out: (a) the range of services has increased over time, with the development of personal banking generally preceding entry into non-traditional markets such as insurance and asset management; (b) all the banks typically provide the same types of services. This homogeneity, at least by type, although not necessarily by quality, of service, is not simply a function of banks chosen in the table. The ten banks within the Major British Banking Group (MBBG) all tend to offer similar services, reflecting the conglomerate model of retail banking that has developed in the United Kingdom; (c) the extent of the services offered is not necessarily related to bank size, although it might be more significant for the smaller non-MBBG banks; and (d) the established retail banks – Barclays, Lloyds-TSB and Midland – developed their product range significantly in the 1970s and 1980s, in particular with the move into insurance and asset management. The increase in scope of the new banks (Halifax and Woolwich, which were until recently building societies) occurred in the 1990s.

In general, the wider range of services offered by banks represents a response to increased competition in the industry, as banks have sought to diversify into non-traditional markets to maintain profits. As a result, the distinctions between specialist financial sectors have been eroded. Moreover, through this process of conglomeration, institutions hope to exploit economies of scale and scope more effectively and to reduce volatility of earnings which can affect their credit ratings and hence cost of funding. The example of the newly converted banks suggests that this process, which gathered momentum in the 1980s, has continued in the 1990s.

The nature of diversification has differed among banks. In most cases, they have developed new business either organically or by acquiring an existing player in the market. But in some cases, banks have formed business links with specialist providers, either as a formal joint venture or in an agency relationship to market the service. Such relationships typically exploit the retail banks' distribution networks and the partners' product expertise, although most joint ventures are majority-owned by banks. For example, the Woolwich bank has formed joint ventures to offer both life and non-life insurance products.

It is interesting, however, that diversification by banks has not extended much beyond the financial sector. It could be that the existing physical capital and labour resources in banking have little comparative advantage to exploit outside the financial arena. The capacity of the branch network and personnel, for example, would need to be extended and modified to compete effectively in more general retailing. However, banks could have used their financial capital to take a stake in companies in non-financial business and the fact that they have not generally done so may reflect the relatively high returns achieved in banking. In fact, the entrance of non-banks into banking provides further support to this view.

Table 12
Services offered by banks

	Current rank*	Personal banking		Real estate	Insurance		Asset management
		Credit card	Mortgages		Life	Non-life	
Barclays	1						
1960s		✓			✓		✓
1970s		✓	✓		✓		✓
1980s		✓	✓		✓	✓	✓
1990s		✓	✓		✓	✓	✓
Lloyds-TSB	4						
1960s							
1970s		✓					
1980s		✓	✓	✓	✓	✓	✓
1990s		✓	✓		✓	✓	✓
Midland	6						
1960s							
1970s		✓	✓				✓
1980s		✓	✓		✓		✓
1990s		✓	✓		✓	✓	✓
Halifax	5						
1960s			✓				
1970s			✓				
1980s		✓	✓	✓			
1990s		✓	✓	✓	✓	✓	✓
Woolwich	9						
1960s			✓				
1970s			✓				
1980s		✓	✓	✓			
1990s		✓	✓	✓	✓	✓	✓

* Rank = relative position of bank by size of total assets. ✓= service provided by bank.

3.4 Exit from and entry to the UK banking industry

As noted earlier, foreign banks account for more than half of the UK banking sector's total assets. In terms of numbers, their share is higher still, reflecting not only an increase in the number of banks authorised to take deposits in the United Kingdom but also a decline in the number of UK banks over the past decade.

The country composition of foreign banks in the United Kingdom has changed. In particular, a continuing trend over the 1980s and 1990s has been the significant increase in banks from the EU countries, whose share of overseas banks' assets increased from less than 20% in 1985 to nearly half of the total in 1996. In contrast, the share of Japanese banks halved, reversing a sharply rising trend during the 1980s, and largely reflecting the domestic difficulties of the Japanese banking system. The position of US banks has been broadly stable over the 1990s, following a fall from 20% in 1985, mainly due to US bank failures in the late 1980s. This change in country pattern from the late 1980s to the early 1990s is generally confirmed by figures on the *number* of foreign banks by country of origin. A detailed breakdown of the 550 foreign banks based in London,[9] including representative offices as well as authorised institutions, highlights the growth and decline in the numbers of Japanese

[9] Compiled by consultants Noel Alexander in 1996.

and US banks respectively, and a more than doubling in the number of European banks over the past 20 years from less than 100 in 1975 to 249 in 1996.

Table 13
Numbers of banks in the United Kingdom

Authorised banks	1985	1990	1995	1997
UK incorporated	355	289	224	212
Incorporated outside the UK (1)	250	259	301	342
- Europe	–	–	146	193
- Outside Europe	–	–	155	149
Total authorised banks	605	548	525	554
Representative offices (2)	161	184	208	215
Foreign banks in UK [(1)+(2)]	411	443	509	557
Channel islands and Isle of Man*	66	55	41	41

Note: Representative offices in foreign banks are not authorised to lend or take deposits and are not part of the UK banking sector.

* These financial institutions will be excluded from end-September 1997, when they are reclassified as non-residents for statistical purposes.

Source: Bank of England.

Over the past decade there has been a significant decline in the number of UK incorporated banks, due largely to mergers between banks; with the exception of BCCI, most closures have been of small institutions and mainly voluntary, although sometimes attributable to failure (Barings being the most publicised). On the retail side, mergers have largely been between the smaller institutions, the two major exceptions being HSBC's purchase of Midland in 1992 and Lloyds' takeover of both TSB and the Cheltenham & Gloucester building society in 1995. A more notable development has been the recent process of demutualisation in the building society sector.

Table 14
Assets of foreign banks in the UK banking sector

	United States	Japan	Europe	Other	Total
£ billion					
1980	60	41	28	46	175
1985	100	178	95	106	479
1990	110	255	233	126	724
1996	155	181	495	229	1,060
% share					
1980	34.4	23.4	16.0	26.2	100.0
1985	20.8	37.2	19.8	22.1	100.0
1990	15.2	35.1	32.2	17.5	100.0
1996	14.6	17.1	46.7	21.6	100.0

Source: Bank of England.

Deregulation in 1986 facilitated the conversion of building societies to quoted-company status in one of two ways: conversion of the existing business into a bank, or the take-over of a building society by a bank. Despite the legislative change, there was little immediate interest in exercising this option. In

fact, only one institution (the second largest building society) converted to bank status between 1986 and 1994. But more recently the process of demutualisation has gathered momentum. Table 15 shows that, between 1995 and 1997, eight building societies out of around 80 institutions in the sector (accounting for around 75% of the total mortgage assets of the sector) either merged with a bank or converted to a bank in their own right. Why this process took so long to get underway is not entirely clear, given that the changes in legislation occurred more than a decade ago. The main motivation claimed for conversion was the greater freedom to diversify which bank status gives the institutions. But the 1986 legislation itself had already given building societies scope to expand into new areas, including stock-broking, insurance and money transmission services, although access to capital markets is still limited; building societies can only fund a maximum 40% of their home loans from wholesale markets. Nonetheless, restrictions on diversification per se cannot explain the recent shift away from mutuality. Indeed, the remaining mutual societies claim that their mutual status can help maintain their competitiveness in retail markets, since they do not have to pay out dividends to shareholders. A more likely explanation is the potential greater commercial freedom they gain as banks to expand their businesses. Since 1992, annual growth in the real value of total mortgages has averaged only 5%, compared with average growth of around 16% between 1985 and 1990. Such modest growth in their core market seems likely to have encouraged societies to consider the benefits of becoming banks. And the performance of the Abbey National, which converted to a bank in 1989, may well have given an added impetus: its asset growth outstripped that of the major banks and building societies between 1992 and 1996.

Table 15

Demutualisations in the building society sector

	Conversion to bank status		**Merger with bank**	
	Institution	**Rank in building society sector**	**Institution**	**Rank in building society sector**
1989	Abbey National	2		
1995			Cheltenham & Gloucester	6
			Leeds Permanent*	5
1996			National Provincial	6
1997	Alliance & Leicester	4	Bristol and West	7
	Halifax	1		
	Woolwich	3		
	Northern Rock	5		

* Merger with Halifax which subsequently became a bank.

Consolidation has been greater in investment banking. Since 1985, just before the "Big Bang" in the UK securities market, a number of prominent UK investment banks and securities houses have been taken over by European commercial banks. The major acquisitions are outlined in Table 16. In contrast to the wave of acquisitions in the mid-1980s, most of the acquisitions of UK merchant banks in the 1990s have involved overseas purchasers, probably in preparation for the expected increased competition following EMU, as the bigger market may be better suited to larger institutions and the continental European acquirers sought capital market expertise. More generally, the dominance of the big US banks has shown the importance of balance-sheet size in remaining competitive in global investment-bank markets. Nevertheless, over the past two years some UK retail banks have signalled their intention to scale back their investment bank operations. In particular, Barclays has recently disposed of its equities, equity-capital markets businesses and mergers and acquisitions advisory businesses (part of its BZW subsidiary) and NatWest has sold off its secondary equity market operation (part of its NatWest Markets (NWM) subsidiary). The rationale for the disposals seems to have been the realisation that to compete effectively in these markets would have required significant

further investment, particularly given the recent consolidation within the industry (for example Travelers Group's take-over of Salomon-Smith-Barney, and subsequently the merger between Citicorp and Travelers). The relative low returns (BZW and NWM both recorded heavy losses in 1997) they had earned from investment banking compared to commercial/retail banking discouraged them from undertaking that investment.

Table 16
Major acquisitions of UK securities firms by European commercial banks

Acquiring institution	Nationality of acquirer	Target institution	Date
ABN AMRO	Dutch	Hoare Govett	1992
Barclays	British	de Zoete Bevan	1985
		Wedd Durlacher Mordaunt	1985
Credit Lyonnais	French	Laing and Cruikshank	1985
Deutsche Bank	German	Morgan Grenfell	1989
Dresdner Bank	German	Kleinwort Benson	1995
HSBC	British	James Capel	1992
Midland	British	Samuel Montagu	1974
ING	Dutch	Barings	1995
NatWest	British	Fielding Newson Smith	1985
		Bisgood Bishop	1985
		Wood Mackenzie	1987
SBC	Swiss	S.G. Warburg	1995
UBS	Swiss	Phillips and Drew	1986
Credit Suisse	Swiss	Buckmaster & Moore	1985

The entry of both non-bank and non-financial companies into retail banking has been an important feature in the past few years. In particular, the late 1990s has seen insurance companies and supermarket retailers entering traditional retail banking markets. Two modes of entry have been

Table 17
Insurance companies offering banking services

Start date	Prudential Banking October 1996	Standard Life Bank January 1998	Legal & General Bank July 1997	Scottish Widows Bank May 1995	Sun Bank (Sun Life of Canada) 1994[1]
Current a/c	No	No	No	No	No
Savings a/c	Yes	Yes	Yes	Yes	Yes
Telephone	Yes	Yes	Yes	Yes	Yes
Postal	Yes	No	Yes	Yes	Yes
Branch	No	No	No	No	No
Personal loans	Yes	In future	No	Policy loans only	No
Credit cards	No	No	No	No (group issues)	Yes
Mortgages	Yes	No	Yes	Yes	Yes
Business services	No	Savings a/c	No	Savings a/c	Savings a/c with cheque book, loans[2]
Deposits (as at)	£958mn (Dec. 1997)	£1,000mn (Sep. 1998)	£200mn (Dec. 1997)	£400mn (Sep. 1998)	£460mn (Dec. 1997)

[1] Opened as Confederation Bank. [2] Sun Bank also undertakes asset leasing activities (for personal and business customers).

common in both cases. Companies have either obtained a banking licence in their own right (i.e. they have set up their own bank, possibly as a joint venture with an existing bank) or they have sought strategic alliances with banks to cross-sell their services. In the case of supermarkets, the latter may imply the development of "in-store" banking facilities, which is the popular model for similar retail developments in the United States.

Table 18
Supermarkets offering banking services

Start date	**Tesco Personal Finance[1] February 1997**	**Sainsbury's Bank[2] February 1997**	**Marks & Spencers Late 1980s**
Current a/c	No	No	No
Savings a/c	Yes	Yes	Long-term savings products only
Telephone	Yes	Yes	No
Personal loans	Yes	Yes	Yes
Credit cards	Yes	Yes	Yes
Mortgages	No	Yes	No
Personal insurance	Home and travel	Home	No
Business services	No	No	No
Deposits (as at)	£600mn (March 1998)	£1,500mn (February 1998)	n.a.

[1] Tesco has a 49% stake in Tesco Personal Finance, a joint venture with RBS. [2] Sainsbury has a 55% stake in Sainsbury's Bank, a joint venture with Bank of Scotland.

However, both insurance and supermarket banks provide only a limited range of retail banking services, much more limited than the scope of services offered by the established high-street retail banks. And, while they have generally been popular among consumers,[10] they are still very small-scale operations. The combined deposit liabilities of insurance and supermarket banks currently amount to less than £10 billion or around 1.5% of the stock of M4.

3.5 Changes in the means of delivery

The most obvious change in the way banking services are provided has been the reduction in the extent of the branch network. The number of branches operated by the major British retail banks has been on a downward trend since the mid-1970s, with the rate of decline increasing in the 1990s (Chart 26). Such developments have been strongly influenced by technological innovations. Back offices and payment mechanisms have been automated for business customers (e.g. via the Clearing House Automated Payments System (CHAPS)) and for personal customers Automated Teller Machines (ATMs) have become much more important, at least for cash withdrawals. Indeed, continued growth in the ATM network and, in particular, the increasing proportion of ATMs located away from branches may go some way towards explaining the renewed fall in the number of branches in the 1990s (Chart 27).

As well as the extension to the ATM network, a number of new delivery channels for retail bank services have recently been introduced. Three in particular have become popular: telephone banking, PC banking (direct-dial access rather than via the internet) and internet banking. Telephone-banking facilities have developed the most, the proportion of personal accounts accessible by telephone with

[10] Tesco supermarket bank received around 100,000 account applications in its first week of operation.

the MBBG banks increasing from 3.2% in 1994 to 9.7% in 1997. This probably reflects the maturity of the technology involved. But internet banking has also started to take off over the past year or so. At present only a few banks offer these services, but several others plan to introduce them over the next year. And some banks are beginning to offer cash delivery and management services to small firms in areas where branch closures have occurred.

Chart 26
The branch network

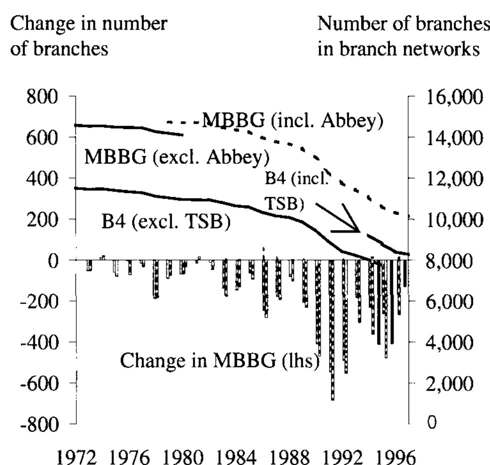
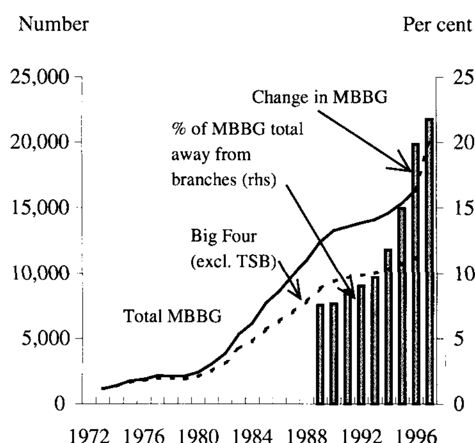


Chart 27
Number of cash dispensers and ATMs



Asset backed securitisation (i.e. the process by which (relatively) homogeneous pools of assets are repackaged (typically off-balance sheet) and resold as securities to third-party investors) first started in the United Kingdom in the mid-1980s. The first domestic mortgage-backed security was a £50mn issue by National Loans in 1987, while the first by a bank was a £135 million issue in 1989 by a subsidiary of TSB; a building society first undertook a mortgage-backed securitisation in 1996. Compared with developments in the United States, the UK asset-backed securitisation market has grown quite modestly (Table 19). At the end of 1996, total asset-backed securities outstanding in the United States were $2,449 billion, compared with a figure of less than £50 billion for the United Kingdom for outstanding securities, while, in 1997, asset-backed securities issues in the United Kingdom were only around $11 billion, compared with nearly $60 billion in the United States.

Table 19
Issues of asset backed securities
In millions of US dollars

Year	**Issuer nationality**	
	United Kingdom	**United States**
1989	95	625
1993	1,389	5,523
1997	10,974	56,864

Source: Capital DATA Bondware.

Moreover, unlike in the United States, UK banks and building societies have so far not been very active in the securitisation market. Between 1992 and 1997, £5.5 billion worth of sterling mortgage and credit card loans were securitised (Chart 28). This compares with total securitisations by UK issuers of around £16 billion, and represents only around 3% of bank and building society sterling

private sector lending over this period. Part of the reason for the modest involvement to date may be the lack of the government guarantees for mortgage-backed securities which have been influential in the development of the US market. Also, the conglomerate structure of UK banks means that they often own or have equity in many of the leasing and finance companies which might purchase securitised loans. LAPFs typically hold equities rather than bonds in their portfolios and the access to retail deposits nationwide may have provided less incentive for UK banks to securitise their assets.

Chart 28
Securitisations by banks and building societies

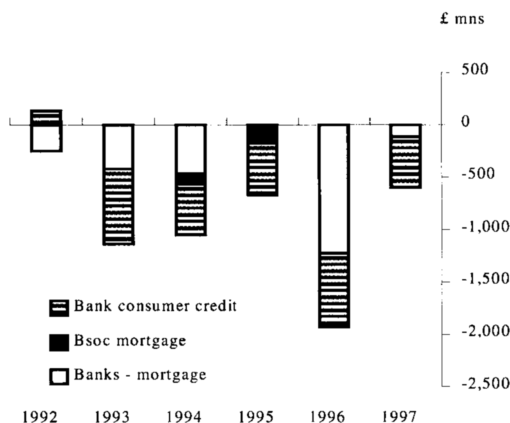
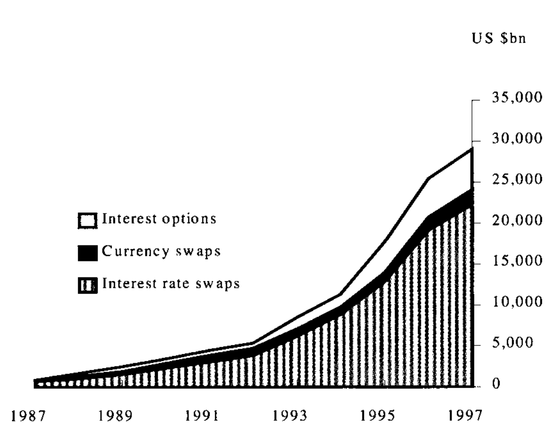


Chart 29
Global derivative contracts outstanding



However, there are some signs that securitisation may be becoming more popular. In the past, the perception was that securitisation was a tool for banks in distress who needed to free up capital. Increasingly, securitisation is now perceived as a balance-sheet management tool. For example, in 1996 and 1997 NatWest successfully securitised over one third of its commercial loans, worth around $5 billion, the aim being to increase return on equity. The NatWest transaction marked the first time a UK bank had transformed investment grade corporate loans into bonds.

While securitisation remains modest, other off-balance sheet banking business has increased significantly over the past ten years. In particular, the trading of financial derivatives[11] (i.e. instruments that are linked to the price performance of an underlying asset and which involve the trading of financial risk) has exploded in the 1990s. According to ISDA data, total global interest rate and currency swaps and options outstanding were $29,035 billion at the end of 1997, compared with $865.6 billion at the end of 1987 (Chart 29). US firms typically dominate these markets. Figures from surveys undertaken by the Bank of England suggest that around one half of the turnover in OTC derivatives traded in London in 1995 and 1998 was accounted for by US firms. But UK banks are also very active, accounting for a further quarter of trades booked in London. Moreover, according to a 1995 BIS survey, three quarters of the $12.1 trillion of (notional value) outstanding contracts held by financial firms in London were held by the ten largest dealers, amongst which are the Big Four UK clearing banks. And rapid growth in such business has continued over the past three years, with average daily turnover in the United Kingdom for OTC currency and interest rate derivatives being 131% higher in April 1998 than in 1995 (an annualised growth rate of 32%).

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[11] Financial derivatives include options, futures/forwards, swaps, FRAs, caps, floors, collars, warrants and certain credit derivatives.

In summary, the main stylised facts to emerge about structure and profitability in the banking industry in the United Kingdom over the past decade are:

- Foreign and domestic retail banks dominate the UK banking sector, but they generally serve different customers. Most assets of foreign-bank are denominated in foreign currency and are funded from wholesale deposits in foreign currency. Retail banks are predominantly serving domestic household and corporate customers, and most of their assets are in sterling.
- Retail banks have continued to grow relative to investment and other UK banks. Part of this reflects acquisitions and expansion into non-retail bank markets, and the conversion of large building societies into banks while merger activity amongst the traditional retail banks has been modest. In contrast, consolidation has been significant in UK investment banking, driven largely by a need for greater balance-sheet size. A number of further acquisitions of UK investment banks have taken place in the 1990s, notably by European commercial banks.
- Concentration differs across the markets in which UK banks operate. UK banks and building societies as a whole have a powerful position in the provision of domestic mortgages and the taking of sterling deposits. But the market share of the biggest institutions remains relatively modest compared with most continental European banking systems. Unsecured credit is also largely provided by banks and building societies. The largest banks did have a dominant share of this market, but it has declined for both credit cards and personal loans in recent years. The remaining UK investment banks have little market power in the major markets and tend to operate in niche markets.
- New non-bank entrants into retail banking during the 1990s, such as supermarkets and insurance companies, have so far been relatively small in scale. In some cases they have explicitly joined forces with existing banks. More importantly, they provide only a limited range of banking services.
- Retail banks' profitability has rebounded following the sharp cyclical dip in the early 1990s and is high by comparison with other industries. Although it is unclear whether the upward trend during the 1970s and 1980s has been resumed, the level of profitability nonetheless remains high by historical standards. Net interest margins have stabilised in 1990s, but this masks a divergence in their components. The endowment effect has fallen further, mainly reflecting the move to a low-inflation environment. Lending spreads, the difference between lending and wholesale market rates, have fallen too during the 1990s reflecting an intensification of competition in retail lending markets. In contrast, retail deposit spreads have widened in the 1990s, seemingly suggesting less intense competition for retail funds, perhaps reflecting continued market power in retail deposit markets.
- By far the biggest recent structural change in retail banking has been the demutualisation of the major building societies over the past two years. They have followed the example of the established banks in diversifying into non-traditional markets such as insurance and asset management.
- Remote banking, in particular telephone and internet banking, has only started to increase in importance in the past few years and remains a small part of banks' range of services.
- Derivatives trading has taken off in the 1990s, with UK banks playing a significant role. In contrast, securitisation of bank loan books has remained limited, especially compared with the United States. But there are signs that banks may be considering securitisation more seriously, the NatWest ROSE transaction being the most prominent example.

4. Competition, innovation and bank profits

The above stylised facts suggest that competition facing UK banks has generally intensified in the 1990s. By comparison with the 1970s and 1980s, the rate of change is perhaps less marked but the developments are nonetheless significant. In retail banking, new entry by both financial and non-financial firms, has occurred in some traditional banking markets. As a result, concentration of business among the largest institutions has fallen in some markets. In investment banking, large corporates, the traditional key customers, are making increased use of market-intermediated funds in preference to traditional bank finance. And the large US investment banks, and more recently the large European universal ones, have become even more dominant in the main investment banking markets such as debt/equity issuance and syndicated lending. Market shares of the main specialist UK merchant banks have fallen in the 1990s. Yet, despite the apparent greater competition in recent years, both domestic retail and investment banks have continued to enjoy high profits. Undoubtedly, this strong performance is partly due to the upswing in the UK business cycle. But profitability is currently higher than at the same stage of previous economic cycles. Why?

According to standard microeconomic analysis, the traditional structure-conduct-performance paradigm, an increase in profitability should be associated with higher market concentration and lower competition, rather than higher. Essentially, market power and tendencies for collusive behaviour are sustained by a lack of new firms entering the industry. But there are alternative theories, which imply somewhat different empirical relationships between profits, competition and concentration. First, the contestability theory stresses that a concentrated industry can behave competitively if the hurdles to be overcome by new entrants to the market are low. The basic premise is that the threat of potential entry forces firms with large market shares to price their products competitively. In a perfectly contestable market, entry is absolutely free, exit is completely costless and the demands for industry outputs are highly price-elastic. Therefore, according to this hypothesis, it is the ease of market entry rather than the degree of concentration which is relevant for competitiveness. The continued strong profit performance of UK banks may therefore imply that, despite some new entrants, the barriers to entry remain prohibitive for many firms. Another theory, the efficiency hypothesis, states that a firm may enjoy high profits by reducing its prices and expanding its size in response to increased competition. In this case, the most efficient banks might try to gain market share even though competition has resulted in lower prices and costs (Bikker and Groenweld (1998)). Thus strong profitability amongst the UK banks may have been associated with increased efficiency gains and lower costs.

A number of authors have tried to investigate the relevance of each of these paradigms to banking in the United Kingdom and overseas. For example, Molyneux et al. (1994) apply econometric techniques to examine market structure in the banking sectors of Germany, France, Spain and the United Kingdom over the period 1986-89.[12] Unfortunately, such formal testing has proved problematic for a number of reasons. First, market structure is likely to change gradually over time and this precludes an assessment of changes in the competitive environment.[13] Second, it is difficult to disentangle the impact of competition from the strategic response by banks with market power. For example, competition could encourage an increase in the banks' activities, leading to greater profits if banks were able to exploit their comparative advantage in new fields. In practice, a number of factors may

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[12] Molyneux et al. apply the Panzar-Rosse (PR) method to the four separate years (1986-89) to construct the so-called *H*-statistic for the different European country's banking systems. The statistics is calculated from cross-sectional reduced form revenue equations and measures the sum of the elasticities of total revenue of the bank with respect to the bank's input prices. PR show that the banking industry is characterised by monopoly when $H<0$, monopolistic competition for $0<H<1$ and perfect competition for $H=1$.

[13] For example, Molyneux et al. (1994) report that the market structure faced by banks in the United Kingdom appeared to shift from monopoly to almost perfect competition and back to monopoly within the four years under investigation!

well have helped support UK bank profitability, although *collectively* they do not fit easily within any single one of these paradigms of industrial structure.

4.1 Continuing market power

The removal of foreign exchange controls and technological improvements have generally made financial systems more integrated. They have also reduced entry barriers to national banking systems, encouraging direct competition between institutions from different countries. Within Europe, the process of monetary union is acting as a further catalyst to this process, with the introduction of a single currency likely to make differences in prices and costs of banking services across countries more transparent. But while there is a clear tendency towards increased globalisation, there nonetheless remain obstacles to full international competition among banks, particularly in retail markets. In some cases, it is clear that the conditions of free entry and exit are still not satisfied. In the United Kingdom, for example, regulation still restricts the activities of building societies; they are constrained in the scope of their lending and in their access to wholesale funding. In Europe, it was not until the beginning of 1993 that all formal restrictions regarding the provision of financial services across the European Union were removed. And even then, tax and regulatory regimes are still not completely harmonised among the European nations, although EU Directives are in place to create a more level playing-field in banking. More generally, cultural barriers remain both in the way banking services are supplied and in the demand for those services (e.g. the benefit of an established brand) which inhibit the entry of foreign banks and possibly domestic non-banks. There are many foreign banks in London, but few provide retail-banking facilities to domestic residents.

In view of these factors, banks continue to exercise considerable market power, particularly in the retail deposit market. This may go some way to explain why retail deposit spreads have been widening even though concentration in this market has remained broadly stable. But the reduction in lending spreads coupled with a slight rise in concentration in the mortgage market suggests that this market may have become more contestable or that firms have become more efficient in providing these services.

The impact of globalisation has been more significant in investment banking. As capital markets have developed around the world and interlinkages between them have increased (in large part due to the liberalisation and deregulation of financial markets) so the demand and supply of investment banking services have become increasingly global in nature. But the capital resources and risk management capabilities needed to provide a truly comprehensive and global range of services has influenced the institutional channels for performing investment banking. Whereas the largest investment banks, the US "bulge bracket" firms and a handful of European and Japanese operators, aim to provide a comprehensive range of services, UK merchant banks have tended to specialise geographically and along specific product-bundles (Rybczynski (1995)). In these markets, UK merchant banks have closer relationships with their clients and can deliver specialist, tailor-made services which enable them to compete in other ways rather than price and which the larger firms may find more difficult. The demand for such services appears to be enduring; it is still common for firms issuing shares to employ both a merchant as underwriter and a separate corporate broker to price and place the issue (Molyneux (1995)).

4.2 Technological driven efficiencies

Advances in technology have clearly played a major role in effecting change in banking. Technological improvements have typically lowered transactions costs for both banks and their customers alike. Banks have been able to achieve significant efficiency gains. The most obvious manifestation of this in retail banking is the reduction in the scale of the branch network. Greater use of new technology (e.g. ATMs, telephone banking) has enabled banks to significantly reduce staff numbers and costs and thereby support profits. This is consistent with the predictions of the efficiency hypothesis.

Of course, in lowering the cost of banking services for all firms, technology may in itself have lowered entry barriers. Essentially technological advances (and deregulation) may well create or reveal "excess capacity" in banking. For example, the provision of telephone-banking services has reduced the need for traditional branch delivery and processing. Moreover, lower-cost and more widely disseminated information may well have undermined some of the competitive advantages banks have had in their traditional markets. For example, the increased role and scope of rating agencies and more extensive disclosure laws, coupled with more widespread and rapid access to information through IT, has eroded some of the information advantages that banks sought to exploit in taking deposits and making loans. In this way the UK banks' traditional markets may well have become more contestable and current levels of profitability may therefore prove to be transitory.

Banking in the United Kingdom has clearly also experienced product innovation in recent decades. Such innovations can typically occur in two ways: new financial instruments become available to customers or new institutions offer services which were previously not available. In both cases the crucial aspect is the "spectrum-filling" characteristic of the innovation (Llewellyn (1990)), in the sense that products which were not previously available come onto the market and fill gaps.

Product innovations have been particularly significant for investment banking. For example, the derivatives market has facilitated major improvements in banks' risk management procedures. In principle, such products are not particularly sophisticated, and indeed have been traded for many years although it was not until the seminal contribution of Black and Scholes that pricing these products appropriately became possible. But technological advance has made the wide use of such products possible. Greater computing power has meant that a vast array of calculations in ever more sophisticated derivative instruments is now possible.

In retail banking markets too, new types of product have emerged both on the deposit and lending side. In some cases, innovation has taken the form of imitating products already available in other countries. For example, mortgages in the United Kingdom traditionally have been variable-rate, while in the United States they have been fixed-rate. In the 1980s, variable-rate mortgages were introduced in the United States, and, at the same time, fixed-rate mortgages were introduced in the United Kingdom. In the 1990s, the range of mortgage products offering such facilities as discounts and cash-backs has increased immensely.

Again such product innovations represent both a threat and an opportunity to banks. Whereas banks traditionally provided the whole range of services, with financial innovation these services can often be broken down into their component parts and provided by separate institutions. This unbundling process has lowered entry barriers to the industry, since the whole range of services no longer need to be provided; firms can concentrate on products and services where they may be able to exploit some comparative advantage. The clearest example of this in the very recent past is the limited range of banking services currently provided by the new supermarket and insurance banks. Llewellyn (1991) also notes that financial innovation has the effect of eroding some of the differences between different forms of intermediation. For example, floating-rate notes and note-issuance facilities (NIFs) link banks and capital markets. Moreover, some financial innovations have explicitly integrated financial markets as they straddle different markets simultaneously; e.g. revolving underwriting facilities (RUFs).

4.3 Strategic response

Increased competition has been associated with increased pressure from shareholders to reduce costs and improve returns. The large UK retail banks have responded by seeking to exploit market power more effectively to generate higher profits. In investment banking, the general response of UK merchant banks has been to specialise. They have sought to market aggressively their information production and business advisory capabilities. This goes some way towards explaining the increased share of non-interest income in their accounts.

In contrast, most of the large UK retail banks have diversified their businesses. They have attempted to exploit cross-selling across different markets to offer some protection against the effects of disintermediation. Diversification may also have reduced the volatility of profits over the economic cycle. Non-interest income, particularly from off-balance sheet activities is less sensitive to changes in interest rates than interest income. More generally, non-interest income in the United Kingdom seems to be less volatile than interest income; the coefficient of variation for the year-on-year net interest income of the largest UK retail banks during 1982-97 was around twice that for non-interest income.

5. Implications for financial stability

Narrow definitions of financial stability focus on whether a country's payments systems are functioning or whether public confidence in banks is maintained. Stability is taken to prevail in the absence of a systemic financial crisis. The Promisel report (BIS, ECSC (1992)) defined a systemic crisis as "a disturbance that severely impairs the working of the financial system and, at the extreme, causes a complete breakdown in it". Ultimately, the report argued, systemic risk "will impair at least one of the key functions of the financial system: credit allocation, payments, and the pricing of financial assets". The definition suggests a metric by which to measure the severity of a systemic crisis: the welfare loss entailed by the delays and misallocation of consumption activities as a result of the crisis. A country's output is likely to be reduced, and there is an additional cost imposed by the misallocation of resources. If one adopts this framework, asset price volatility and unexpected redistributions of wealth, by themselves, are not evidence of systemic crisis or financial instability.

In practice, central banks are concerned about any developments that might make systemic crises more likely. They need to be alert to any significant increase in such risks above their usual levels, even if they are still small in absolute terms. Action by the authorities may then be taken either to reduce the risks to more normal levels or to reduce the costs of a crisis were it actually to take place. But what determines the "usual level" of risk? There may be a trade-off between the efficiency with which the financial system functions and the effectiveness of the regulatory framework in reducing risk. Hence when the risks of financial instability change, central banks need to understand why some factors are entirely adverse while others may permanently raise productivity a little but also increase the risk of occasional substantial welfare losses, particularly in the short run (as agents learn). The Bank of England is expected to promote both financial stability and the effectiveness of the financial system, as its current statement of core purposes makes clear. That is why it is important to try to distinguish between the two classes of shocks to financial stability.

How has the evolution of banking in the United Kingdom, as reviewed above, affected the risks of financial instability? Traditional banking activities are still at the heart of the UK financial system, but, as the sections above illustrate, non-bank financial intermediaries are taking on a larger role, and banks have branched out into a wider range of businesses. If the banking system becomes unsound, in the sense of suffering widespread insolvency, that is likely to trigger a systemic crisis of the whole financial system. The soundness of banks is the focus of much work on financial instability (see, for example Lindgren, Garcia, and Saal (1996)). But crises can also be triggered by events leading to widespread market illiquidity or insolvencies of major non-bank financial institutions, so banks should not be considered in isolation.

G-10 central banks are broadly agreed that the shocks which may cause a systemic crisis have by and large not changed. They are still many and varied, ranging from unexpectedly severe macroeconomic downturns and reassessments of likely returns on investments in different locations to microeconomic mismanagement of major financial institutions, including banks. This section therefore concentrates on assessing the general robustness of the UK banking sector rather than its likely reaction to specific shocks. But one common factor in many financial crises has been prior financial liberalisation (see Kaminsky and Reinhart (1996) and Lindgren, Garcia, and Saal (op cit.)). Financial liberalisation changes the environment in which financial firms operate; some may make critical mistakes as they

adapt business strategies to the new situation. Liberalisation itself can be triggered by governments wishing to allow firms under their jurisdiction to take advantage of the opportunities afforded by new financial products and to compete more effectively with innovative outsiders. The ultimate cause of the crises, which have sometimes arisen in the wake of deregulation, is in many cases the unleashing of competition, which at the same time stimulates progress in the financial sector and in the medium term promotes efficiency. Although the problem is not deregulation as such, but the inefficiency allowed to survive in the firms while regulated, it is still interesting to examine the response of the UK banking system to deregulation.

UK banks are still heavily involved in maturity transformation. Bank and building society deposits and loans have both increased faster than has nominal GDP. The credit channel is still important for the external finance of UK companies, especially small ones. The effort to make loan assets more liquid through securitisation has been largely limited to the issuance of some mortgage-backed securities and a few experiments with business lending. Credit-card lending has not been affected to the extent it has in the United States. Securitisation brings with it its own risks. The markets for securitised assets are not always liquid, particularly in their infancy. If the credit quality of the underlying loans deteriorates, originating banks may decide to support the issue to preserve their reputation.[14] And the quality of banks' remaining loan books is likely to have worsened within the relevant quality tier. Nevertheless, with the appropriate pricing of credit risk, securitisation can increase the liquidity of assets within the banking system and protect it against runs to which its maturity-transformation role would otherwise make it vulnerable. As with many innovations, securitisation has the potential to both reduce and increase risks to the financial system, particularly if its limitations are misunderstood. In the United Kingdom at the moment, this innovation is at the potentially dangerous experimental stage, in which liquidity and reputational problems are most acute.

Many UK banks have diversified into capital market activities, holding a greater proportion of non-loan assets. This is particularly true of the banks which have converted from mutual status and have not only increased non-mortgage loans but have also diversified into non-loan activities. However, in the past couple of years, there has been a reaction amongst the major clearing banks against diversification into investment banking. Lloyds-TSB has been particularly successful in focusing on retail banking and making significant profits out of traditional commercial banking business. NatWest and Barclays have made well-publicised partial retreats from investment banking as a result of shareholder concern with the risk and costs associated with that line of business. So managing traditional banking risk remains crucial. There are several signs that this risk has diminished in the 1990s.

First, the pattern of bank lending has changed towards business sectors which (at least in the past) have been less risky (e.g. pharmaceuticals) and away from the more risky (e.g. property development, construction)[15] (Chart 30). The major clearing banks have also increased their share of the mortgage market over the medium term at the expense of the mutuals and mortgages tend to be very low-risk assets. The demutualisation of major building societies has worked in the opposite direction, as many have diversified their loan portfolios away from a pure mortgage book, and have turned to wholesale money markets to a greater extent to raise funds; they have also tended to reduce their capital ratios, which used to be particularly high when they were building societies.[16] The greatest risks in lending

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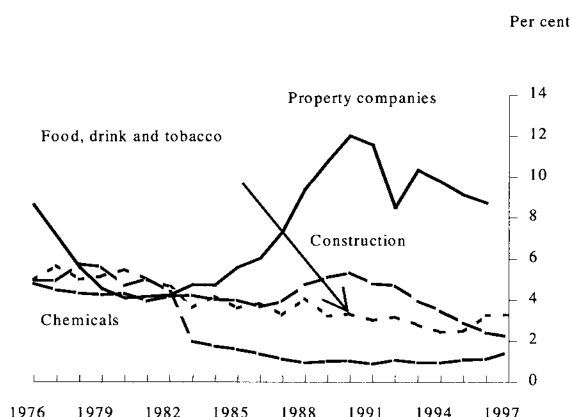
[14] This seems to have happened in the United States. Even though loans are off-balance sheet, banks still suffer some exposure in practice. This in turn raises questions about the appropriate capital treatment, given that the difference between regulatory and economic capital provides an incentive to move low-risk loans off the balance sheet while retaining higher-risk loans.

[15] Of course, if risk was properly priced by banks, the composition of their assets would have no systematic effect on their profits.

[16] See Boxall and Gallagher (1997), who argue that building up capital ratios was a self-destructive and unnecessarily risk-averse strategy for building societies once conversion to a bank by majority vote became possible.

portfolios at the current conjuncture probably lie with the increased fractions of lending to leasing companies, to the extent that they are particularly exposed to the weakness of demand for UK exports and to consumers in the form of unsecured credit, a sector of the market with several new entrants, where traditional lending margins have been under stress. Lending overseas is now less concentrated in apparently riskier regions than it used to be (e.g. Latin America in the early 1980s) and UK banks' direct exposures to the countries which have sought help from the IMF have been relatively small.

Chart 30
Bank lending in the United Kingdom
As a percentage of total lending to companies



Second, the banks are now diversified across regions, so region-specific shocks affect their deposit bases less. The development of money-market mutual funds has not been anywhere near as great as in the United States, and, as highlighted earlier, banks themselves have introduced innovations like telephone and PC banking, and helped to pioneer supermarket banking.[17] Third, methods of credit risk assessment and pricing have become much more sophisticated at most banks, although there is scope for further development of statistical techniques.[18] The degree of sophistication varies considerably amongst UK banks, as recent Bank of England interviews about the management of country risk have confirmed; the integration of risk assessment of overseas markets with credit control procedures is unlikely to be systematic. Only a handful of banks in the United Kingdom are allowed to use value-at-risk models for Basle capital-ratio purposes. Fourth, the cost-income ratios associated with traditional banking are being reduced, although this is not true of investment banks. Fifth, related to the previous point, the profitability of traditional banking has been more than adequate to improve the capital provisions of the major banks. Recent profit statements have indicated that several banks were seeking new uses of capital, including payments to shareholders. The recent profitability of UK banks has been in marked contrast to the experience of some other countries (e.g. Switzerland). In the longer term, too, the relative profitability of UK banking has been higher than in many other countries, and it is less easy to make the case that commercial banking is in decline than it is in the United States, at least prior to the latest upturn (see Edwards (1993)). A note of caution needs to be expressed with respect to the impact of new technology and new entrants on traditional banking

[17] There is a long-term threat to the major "high street" brand names from this innovation, because, at the moment at least, the supermarkets' customers are more satisfied than those of the best-known banks.

[18] The recent events surrounding banks' exposures to Long Term Capital Management highlight the threat which increased sophistication poses for banks.

activities. New technology increases the operational risks faced by banks, particularly those associated with IT system failures. It also opens up possibilities for new types of fraud. New entrants to the credit-card market and the market for deposits may in time erode the profitability of the major banks on which payments and settlements systems now depend. There is little sign of that at the moment, though, and improvements in payments and settlements systems, together with participation by a wider range of banks, should reduce the risk in the medium term.

Table 20

Four largest British banks: credit exposures through loans and OTC derivatives

At end-1997, in billions of pounds sterling

	Loans		OTC derivatives with positive market value	
	To customers	**Interbank**	**Gross**	**Net**
Barclays	99.8	36.9	26.4	17.7
Lloyds	87.9	20.6	7.6	3.6
Midland	47.7	13.4	7.6	–
National Westminster	84.5	32.0	20.2	8.2

Financial fragility is not only a function of how the banking system reacts to external stocks. It also depends on linkages within the system, so that firm-specific shocks may raise systemic issues because of the risk of contagion. The "high street" banks which make up some 90% of all assets in UK-owned banks continue to have large exposures to each other through their participation in the interbank market (Chart A, Appendix) and through foreign exchange settlement risk. They are also exposed to foreign banks through these routes. As the value of trades flowing through payment and settlement systems has increased, efforts have been made to reduce their riskiness; for example, intraday payment problems in the high-value payment system were reduced by the introduction of a real-time-gross-settlement system in 1996. Michael (1998) reviewed the question of systemic risk arising from financial interlinkages in the UK economy and, while acknowledging initiatives like RTGS, concluded that, "from the perspective of systemic risk, it is notable that exposures from foreign-exchange settlement continue to loom large. Moreover, exposures arising from derivatives, especially swaps, are growing, and exposures between banks in the interbank market continue to be important." Nonetheless, as shown in Table 20, derivative exposures remain small in relation to credit risk stemming from interbank placements and traditional loans.

The off-balance-sheet exposures of the UK banking system are linked to investment-banking activities. Once again, many of the innovations in this area have the potential to improve risk management by banks if they are properly understood, and were originally designed with that purpose in mind. However, they entail the risk of exposing banks to new risks which have not been properly assessed. Unfortunately, the recent turbulence in the international financial system has put banks to a severe test in this respect, through their own proprietary trading or their exposures to so-called hedge funds. So far, UK-owned banks have been relatively lightly affected by the recent developments in world markets, but certain earlier cases, like the NatWest derivatives loss of £90 million revealed in February 1997, show that there is no room for complacency. More "stress-testing" of off-balance sheet exposures, especially to sovereign entities and other agents not subject to prudential regulation, should be undertaken. Despite the evidence that investment banking activities provided the "high street" banks with income streams that were negatively correlated with their traditional income streams (Charts 31 and 32), several have decided that they do not generate sufficient returns, especially given the need to devote more capital to such activities to compete with the successful US banking and securities firms. Also, they may have been discouraged by the operational risks posed by the management problems of running large, diversified multi-nationals, not least the difficulty of assessing the market and credit risks associated with very complex portfolios.

Chart 31
Barclays profits

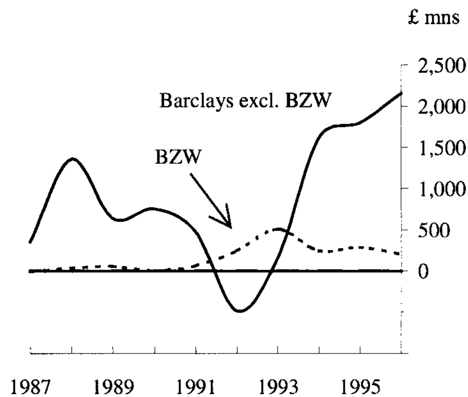
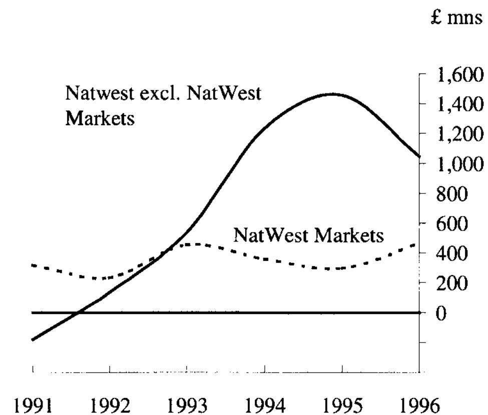


Chart 32
NatWest profits



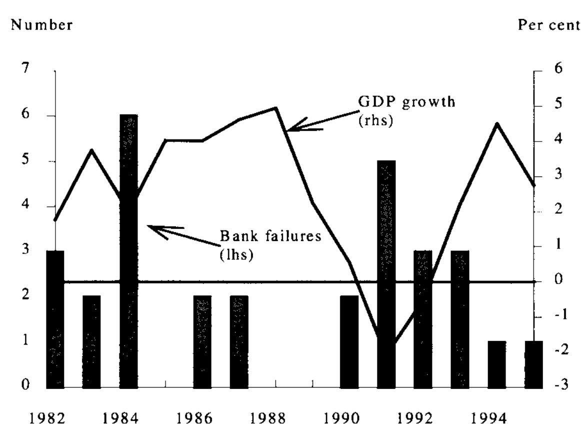
There remains an inevitable tension between promoting financial stability, on the one hand, and financial liberalisation on the other. In a deregulated environment, competition among institutions is likely to encourage greater structural efficiency in terms of the range of services offered and the responsiveness to customer preferences. Competition should also encourage greater allocative efficiency, in the sense of accurately pricing risks and allocating funds to where the risk-adjusted rates of return are highest, and increase resource efficiency as regards the real resources absorbed in the supply of financial services. But it may also increase the risks to which banks are exposed, forcing them to put greater emphasis on assessing and managing those risks properly. A strategy of diversification will not insulate banks from significant losses, as the recent experience of Barclays and NatWest in investment banking highlights. Indeed, the process of diversification itself may present difficulties for ensuring financial stability. Financial conglomerates may reduce volatility of earnings through diversification and therefore lower the risk of systemic instability being triggered by a sudden fall in cash flows. At the same time, the greater complexity of such institutions and lack of fully consolidated supervision may lead to greater risks from inadequate regulation. This is currently more of an issue in the United States, with the creation of conglomerates such as Citigroup, although it could also become a problem in the United Kingdom. The main risks facing UK banks probably relate to the disturbances to traded markets, including swaps, of a scale and duration which might seriously undermine their ability to hedge key risks, and/or a major curtailment in the liquidity of the interbank market even for good-quality names. And the (improbable) scenario of the disorderly collapse of a major international bank, which could directly affect UK banks through the direct financial linkages outlined above, must also be considered in stress-testing.

Overall, then, the UK banking system appears to be relatively robust to shocks. The main UK banks are strongly capitalised and are highly profitable. The early 1990s showed that even a major economic downturn in the United Kingdom did not undermine the viability of the core banks. And the risks entailed by maturity transformation, if anything, are probably slightly lower, partly because of the growth (albeit slow) of securitisation. There is room for improvement in the pricing of risk, and the environment in which UK banks operate is becoming more competitive. The traditional banking channel for financial intermediation is still expanding – deposits have continued to rise relative to GDP – but it is increasingly supplemented by the other channels. But does this assessment fit with the experience of financial liberalisation in the United Kingdom, which was particularly rapid during the 1980s?

The United Kingdom has not suffered a systemic crisis in the period under review, but there have been bank closures. Jackson (1996) reviewed the recent history of bank failures in the United Kingdom, and identified two periods in which their frequency increased (Chart 33). The first was in the early 1980s. This was associated with the failure of some banks to meet the new supervisory standards set by the Banking Act of 1979, which formalised the Bank of England's responsibilities for

banking supervision. Surprisingly, the manufacturing-led recession of the early 1980s does not appear to have been a major factor.[19] The second period was 1991-94. This took place in the aftermath of the bursting of the asset price bubbles of the late 1980s; the recession can be characterised as an episode of debt-led deflation (see King (1994)). Several small banks raising capital on the wholesale markets and lending for property purchase and development were hit hard by high interest rates and the collapse of property prices. Banks in general made big losses, but on the whole these were covered by their capital. The Bank of England did, however, judge it necessary to launch a "lifeboat" operation in 1991, to prevent the small-bank crisis spreading to more significant banks through the wholesale money markets. It kept 40 small banks under particularly close review and worked with them to help them reorder their affairs, or wind themselves down in an orderly fashion. Amongst those small banks, there were signs of contagion, with problems arising for otherwise sound entities because of the drying up of liquidity. The Bank of England's operation was only made public a few years later. It did not entail any adjustment of monetary policy, which was dominated at the time by the conflicting requirements of the UK business cycle and membership of the ERM. The episode did not amount to a systemic crisis, but the Bank at the time judged that there was a risk that it could do so. The quantitative impact of these events, given the Bank's intervention, can be assessed by looking at the size of payments made under the UK Deposit Protection Scheme, dating from 1982. As of 23rd April 1998, it had paid out £145 million gross, but only £38.7 million net. Even allowing for costs incurred by the Bank of England, the costs of support arrangements have been much less than in the United States, Japan, France and Scandinavia.

Chart 33
Bank failures and real GDP growth



The UK recession of the early 1990s was associated with higher precautionary saving by households and attempts by the personal and corporate sectors to reduce their income and capital gearing from the very high levels they had reached in late 1980s. Corporate insolvencies in particular led the banks to make very high provisions, although mortgage lenders also saw higher default rates, and possessions of homes increased. Building societies changed their behaviour, putting up with some non-performing loans on which they would previously have foreclosed, and holding a larger stock of housing on their balance sheets. More generally, the episode put banks under pressure to cut costs and improve their credit assessment and pricing. The banking systems of several countries ran into problems in the early

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[19] The provisions made by at least one of the Big Four were considerably lower than in the more recent recession in the early 1990s.

1990s and emerged leaner and fitter later in the decade. But in the United Kingdom, far less central bank or government intervention was necessary. Davis and Salo (1997), in their study of excess capacity in European banking, note the importance of shocks to banking in the early 1990s in promoting innovation and ridding the industry of the excess capacity which can act as a barrier to entry and hence an obstacle to competition. Hoggarth, Milne and Wood (1998) draw attention to the contrast between Germany and the United Kingdom in this respect.

The advantage of having had a "shake-out" from the point of view of financial stability is that banking risks are likely to be priced more accurately. The disadvantage is that, if there is now a greater degree of competition, profits provide a thinner cushion against adverse shocks. And it might promote "excessive" risk-taking to maintain profitability. Empirically, that does not appear to be the case in the United Kingdom, perhaps because of the continuing market power and productivity gains posted by banks.

6. Conclusions

With regard to financial stability, the UK banking system appears to be relatively robust. Although a number of smaller banks made losses in the recession of the early 1990s, there have been no systemic threats in recent years. During this decade the traditional banking role of taking in deposits and extending loans has continued to expand more quickly than GDP, but banks appear to have shifted their loan portfolios away from the historically risky sectors and capital ratios are currently high. Securitisation of loans, if priced correctly, could reduce credit risk further. But, unlike in the United States, these products are not yet very well established in the United Kingdom. In fact, at such an early stage of development, liquidity and reputational risks are likely to be most acute.

There can be tension in the short run between promoting competition in the banks' economic environment, which has continued to increase in recent years, and maintaining financial stability, the second core purpose of the Bank of England. Non-traditional banking activity has been expanding fast. Although credit risk assessment and pricing are now more sophisticated, so too are the products which need to be assessed. Recent well-publicised losses by some banks on derivatives and lending to so-called hedge funds suggest there is room for improvement in the pricing of risk and stress-testing.

During the 1990s, an increasing share of the UK corporate sector's external finance has been raised through the issue of equities, and, to a lesser extent bonds, rather than through bank borrowing. This may imply that middle and larger-sized companies have become less sensitive to by banks' limiting of credit over and above any general change of interest rates. But banks remain special for small companies and the personal sector for which they are usually the sole, or at least main, providers of external funds.

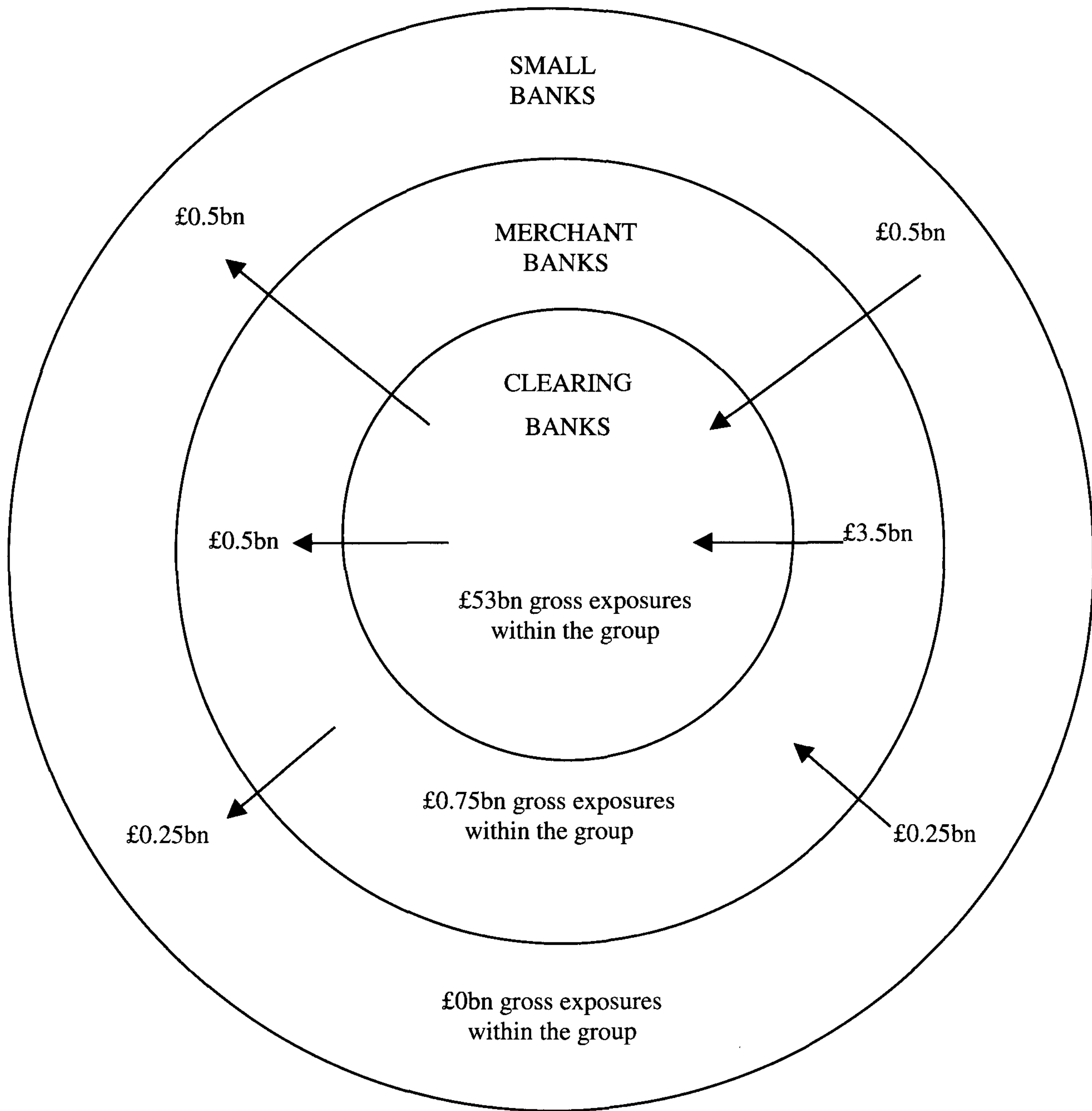
Appendix 1

Date	Event	Effect on banks/building societies
1971	**Competition and credit controls:** 1. Direct credit controls applying to banks abolished. 2. Clearing banks interest rate cartel dismantled at official request. N.b.: lending guidance continued to be practised during the 1970s and 1980s (withdrawn in January 1987).	Strong balance sheet growth as banks increased lending.
1973	**"Corset" introduced (supplementary special deposits scheme):** 1. Restricted the interest-bearing eligible liabilities of Banks. N.b.: suspended in February 1975, reintroduced in November 1976, suspended in August 1977, reintroduced in June 1978 and abolished in June 1980.	Indirect restriction on credit expansion.
1975	**Basle Concordat:** 1. Basle Committee produced the Basle Concordat which provided guidelines on the allocation of supervisory responsibility between host and parent authorities with regard to liquidity, solvency and foreign exchange exposure.	One key objective was that no foreign banking establishment should be able to escape supervision.
1977	**First Banking Co-ordination Directive:** 1. Member states of the European Community were bound to require credit institutions with their head office in the member's territory to obtain authorisation before commencing their activities. 2. Member states could also require branches of credit institutions authorised in another member state to be authorised to carry out business in their territory.	
1979	**Banking Act:** 1. The 1976 White paper outlining supervisory weaknesses and the 1977 Basle Directive led to the 1979 Banking Act. 2. The Bank of England was given statutory licensing and supervisory powers over all deposit-taking institutions in the United Kingdom for the first time.	Pre-1979, any partnership, company or individual could take money on deposit. Following the 1979 Banking Act, a number of minimum conditions had to be fulfilled for authorisation to be granted to take deposits. The Deposit Protection Fund was introduced and protected 75% of retail deposits up to £10,000.
1979	**Abolition of exchange controls:**	Allowed banks to avoid any domestic credit controls by channelling funds abroad.
Early 1980s	**Building societies raise funds on the wholesale markets:** 1. Tax changes, particularly those in the 1983 Finance Act saw building societies start to raise funds on the wholesale markets having previously obtained almost all their funds from the retail savings market.	
1984	**Building societies' interest rate system:** 1. The building societies' interest rate cartel was discontinued.	

Date	Event	Effect on banks/building societies
1984	**Leigh-Pemberton Report Committee:** 1. Committee established following failure of JM Bank and reported in 1985.	Committee suggested a number of improvements to existing banking supervision e.g. limitations of exposures.
1984	**Tax alignment between banks and building societies:** 1. Changes in corporation tax announced by the Chancellor subsequently meant that the tax regime for banks and building societies was brought into alignment.	Prior to this building societies had had a tax advantage over banks and so these developments were costly to building societies.
1986	**Big Bang:** 1. London Stock Exchange abolishes fixed minimum commissions and single capacity trading.	
1986	**Building Societies Act (came into effect in January 1987):** 1. Increased potential for commercial lending, by allowing building societies to provide other services relating to house purchase and finance (although limits imposed on lending by commercial asset classes- see right). 2. Provision made for building societies to be able to convert from mutual to corporate status. 3. Limits imposed on wholesale funding. Building societies are not able to obtain more than 20% of their total funding from money market sources (although this could be raised to 40% by statutory instrument). 4. Building Societies Commission created to supervise societies, taking over the functions of and building on the work of the Registry of Friendly Societies which previously had been the regulator for societies.	Lending limits: Class 1 lending 90% of assets Class 2 and 3 combined 10% Class 3 lending, 5% of assets. Class 1: Advances secured on first mortgage to owner-occupiers of residential property Class 2: non-class 1, wholly secured loans Class 3: unsecured loans, interests in estate agencies, broking and other subsidiary activities.
1987	**1987 Banking Act:** 1. Following the Leigh-Pemberton Committee report and a Treasury White Paper on supervision, the 1987 Banking Act was passed.	The Banking Act strengthened the Bank's supervisory powers. New legislation created a single category of authorisation, requiring institutions to be able to satisfy 'fit and proper' tests. The deposit protection fund was increased to protect 75% of retail deposits up to a maximum of £20,000.
January 1988	**Building Societies wholesale funding limit:** 1. The wholesale funding limit was raised to its maximum ceiling of 40%. 2. The unsecured lending limit per capita also increased, from £5,000 to £10,000.	Some societies had difficulties competing in the mortgage market with the 20% limit. This problem was overcome by increasing the limit to 40%.
1989	**Second Banking Co-ordination Directive:** 1. Council of European Communities adopted 2-BCD.	Main effect of 2-BCD was to give a passport to a bank authorised in one member state to open a branch/do banking business in another member state without further authorisation.
1990-93	**Building society lending limits:** 1. Over the period 1990-93, limits on Class 2 and Class 3 lending combined increased from 10 to 17.5 to 20 to 25%. 2. Over the period 1990-93, limits on Class 3 lending increased from 5 to 7.5 to 10 to 15%.	Building societies able to take on more unsecured lending.

Date	Event	Effect on banks/building societies
1992	**Second Consolidated Supervision Directive (implemented in 1993):** 1. Replaces the Consolidated Supervision Directive of 1983.	Extends the range of institutions subject to requirement of consolidated supervision and extends the range of activities covered by consolidated supervision.
1993	**Large exposures:** 1. Implementation in the United Kingdom of the Directive on the monitoring and control of large exposures of credit institutions.	
April 1995	**Capital Adequacy Directive introduced (CAD):** 1. Amended in December 1995.	Sets minimum capital requirements for market risks in the trading books of banks and investment firms.
July 1995	**Deposit protection scheme:** 1. The Credit Institutions (Protection of Depositors) Regulations amended the UK Deposit Protection Scheme to meet the requirements of the EU Deposit Guarantee Schemes Directive.	The main change to the level and scope of protection provided was an increase in the maximum level of protection for an individual depositor from 75% of £20,000 to 90% of £20,000 (or ECU 22,222 if higher). This brought the Scheme into line with the Building Societies Investor Protection Scheme.
1996	**Introduction of gilt repo market:**	
1996	**Real Time Gross Settlement (RTGS) went live:**	
1996	**Investment Services Directive introduced:**	Purpose was to provide a single European 'passport' to investment firms and to make changes in access to regulated markets.
1996	**Sterling Liquidity:** 1. New system for measuring sterling liquidity was introduced for the large UK Banks.	Prior to this, most banks in the UK were supervised on the 'mismatch' approach, whereby assets and liabilities are allocated on the maturity ladder and limits are set on the size of the mismatch in various time bands. This approach was less suitable for very large banks whose balance sheets were characterised by highly diversified retail deposit base. For large banks it is more suitable for them to hold an adequate stock of liquid assets.
1996	**CAD-2:** 1. Amendment to the Capital Adequacy Directive - due to be implemented end-1998 in the United Kingdom.	Provision made for banks to use a measurement system for market risks similar to that in CAD, but also to use their own internal Value at Risk models as the determinant of supervisory capital for market risks (including commodities).
1997	**Chancellor announces Bank of England independence:** 1. Supervisory responsibilities transferred to Financial Services Authority.	
1997	**Building Societies Act:**	
1998	**Bank of England Act:**	

Chart A
Flows within the interbank market, mid-1997



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