Housing finance—an international perspective

The provision of housing finance has been an issue of major importance in the United Kingdom, particularly since 1980, as financial deregulation and increased competition were followed by rapid growth in mortgage debt, and in real house prices. These developments have led commentators to a number of critical assessments of the UK system, notably given entry to the ERM, but rarely in the context of other countries' experience.

This article[1] *compares housing finance systems in seven countries—the United Kingdom, the United States, Germany, Spain, France, Italy and Japan. It focuses, in particular, on institutional structure and examines national variations in market structure and developments therein, in the context of an industrial economics approach to competition in financial markets. One conclusion is that a degree of convergence is observable, although the housing finance systems in the Anglo-Saxon countries have developed more rapidly than those in continental Europe and Japan. The article goes on to assess trends in house prices and personal sector gearing in relation to differences in the structure and development of national systems. It is suggested that the frequently supposed distinctness of the UK housing finance system should not be exaggerated and, moreover, that the currently more regulated systems could face some of the issues now affecting this country as deregulation proceeds. In an annex, the housing finance institutions of each country are described in some detail.*

Systems of financing owner occupation

The essential aim of a housing finance system is to provide long-term loans to households for the purposes of house purchase. Such loans are typically secured on the value of the property. In terms of funding techniques, two broad systems of housing finance can be distinguished, based on retail and wholesale inflows respectively, although competitive pressures, for example movements in the structure of relative interest rates, have in many instances induced individual institutions to use mixed-funding strategies.

With the retail deposit based system, private sector savings are recycled as mortgages. The establishment of a large number of distributive outlets is typically required to collect deposits, a corollary being that these can also be used to sell mortgages. Since deposits attract variable rates of interest, loans are typically also made on a floating-rate basis.

Among the principal types of existing mortgage lending institutions—the general banks, savings banks and mortgage banks—the two former rely most heavily on retail deposits. The first provide the complete range of banking services to both the personal and corporate sectors. In some countries—such as France (63% market share[2] of loans for house purchase) and Japan (46%)—the commercial banks are the dominant mortgage lenders. They have also become increasingly important in others such as the United Kingdom (30%, including the Abbey National) and the United States (34%). Savings banks can be either general retail banking institutions providing financial services to the personal sector, for example, as in Spain (54%) and West Germany (30%) or specialist providers of housing finance—building societies in the United Kingdom (60%) and the thrifts (savings associations and savings banks) in the United States (38%)—although the differences between these two types of institution are eroding.

A sub-category of the deposit-based system is the contractual savings scheme (offered by the Bausparkassen in Germany and through the plans d'épargne-logement in France). With these, regular savings are made over a number of years, receiving interest at below the market level, following which the investor becomes entitled to a loan at a preferential rate.

The second general method of providing housing finance is via the money markets. In some instances, wholesale inflows are used in an equivalent manner to retail deposits—that is simply as a source of funds—and mortgage assets are retained on the lending institution's books. This is the case, for example, with the banks and building societies in the United Kingdom and the special credit institutions in Italy. The bonds issued by, for example, the mortgage banks in

(1) Prepared by John Lomax in the Bank's Economics Division, with the assistance of country experts from the International Division.
(2) All market shares cited in the article refer to stocks unless otherwise indicated.

Table A
Institutions involved in housing finance

Market shares, per cent

	United Kingdom (1989)	Japan (1989)	United States (1989, market shares by loan origination)	Germany (1988)	Spain (1986)	France (1987)	Italy
Banks	30%	46%	34%	23% (of which co-operatives 11%)	11%	63%	(a)
Specialist mortgage lenders	66%(b)	8%	Thrifts 38%: Mutual savings banks 7%: Mortgage companies 18%	57% [including savings banks (30%)]	60%(c)	CDC 13% CF 13%	
Insurance companies	2%	5%		8%			
Public sector	2%	41%	1% Federal credit agencies	12%	29% Mortgage Bank of Spain		
Other			2%			5%	

(a) The mortgage market is dominated by mortgage SCI's. These are usually departments or subsidiaries of savings banks. Banks are increasingly permitted to enter the market.
(b) Of which 60% building societies, 6% centralised lenders.
(c) Of which 56% savings banks, 4% mortgage companies.

Germany are used similarly, the difference being that they are actually secured on the mortgage loans.

By contrast, where appropriate secondary markets have developed, assets can be securitised and sold to other investors such as life insurance companies. The mortgage banks in the United States operate in this manner, as, broadly, do the specialised lenders in the United Kingdom. Since assets are moved off balance sheets, securitisation enables lending institutions to conserve capital. Securitisation and wholesale funding allow loans to be offered at both floating and fixed rates of interest since assets and liabilities can be directly matched. A major problem with securitised issues, and particularly those relating to fixed-rate loans, has been investor uncertainty surrounding maturity given the possibility of pre-payment. Collateralised mortgage obligations (multi-maturity bonds) have partly mitigated such uncertainty by allowing investors to choose between fast and slow maturing tranches.

Housing finance institutions are characterised by a variety of different forms of corporate structure. Mutuality is popular, for example the building societies in the United Kingdom, some of the savings associations in the United States, and credit co-operatives in Germany and Japan. In some countries public sector mortgage banks have been established, combining the roles of lending and implementing government policies; the Crédit Foncier in France, the Housing Loan Corporation in Japan and the Mortgage Bank of Spain fall into this category. Additionally, in the United Kingdom (until the mid-1970s) the local authorities used to undertake a significant amount of mortgage lending. Finally, many housing finance institutions have stock status.

Table B
Interest rate structure

	United Kingdom	Japan	United States	Germany	Spain	France	Italy
Variable	Yes	Yes	Yes (approx: 25% of outstanding mortgage stock)	Yes	Yes	Yes	Yes (45%)
Fixed	Some lenders are currently offering fixed rates for three years	Yes	Yes (approx: 75% of outstanding mortgage stock)	Yes	Yes	Yes	Yes (55%)
Memorandum items:							
Current (a) *mortgage interest rate (variable)*	*14.5%*	*9.56%*	*8.25%*	*9.9%*	—	*11.67%*	—
Commercial bank prime lending rate (a)	*15.0%*	*8.25%*	*9.5%*	*10.5%*	*16.25%*	*10.15%*	*13.13%*
Current (a) *3-month interbank rate*	*13.94%*	*7.64%*	*7.13%*	*9.25%*	*14.36%*	*9.8%*	*13.75%*
Current (a) *government bond yield (long-term)*	*10.16%*	*6.86%*	*8.2%*	*9.0%*	*14.33%*	*9.77%*	*12.14%*

(a) As at 30 January.

Table C
Regulatory features

Supervisory bodies	
United Kingdom	Building societies are supervised by the Building Societies Commission. Banks are supervised by the Bank of England.
Japan	Specialist mortgage lenders and insurance companies are supervised by the Ministry of Finance (MOF). Banks are supervised by MOF and the Bank of Japan.
United States	Nationally-chartered banks are supervised by the Office of the Comptroller of the Currency, state-chartered banks by the state authorities, and bank holding companies by the Federal Reserve. The Federal Reserve has some supervisory rights over all members of the Federal Reserve System, and the FDIC over all FDIC-insured banks. The Federal thrift supervisor is the Office of Thrift Supervision; the insurer with supervisory rights is the FDIC.
Germany	All mortgage lenders are supervised by the Federal Banking Supervisory Office. The mortgage bond market is supervised by the Finance Ministry.
Spain	Banks are regulated by the Bank of Spain.
France	The Commission Bancaire and its various sections (Conseil National de Crédit, Comité des Établissements de Crédit and Comité de la Réglementation Bancaire) regulate mortgage lenders.
Italy	Mortgage lenders are regulated by the Italian central bank.
Deposit insurance	
United Kingdom	Deposits with banks are insured through the Deposit Protection Fund. The first 75% of any loss up to a maximum of £20,000 is refundable. A similar scheme is operated for the building societies where up to 90% of any loss not exceeding £20,000 is insured.
Japan	Deposits with banks are insured by the Deposit Insurance Fund. A maximum of ¥10 million per depositor is refundable. Specialist mortgage lenders are not permitted to offer deposits.
United States	The FDIC operates separate deposit insurance funds for banks and thrifts. Insurance covers 100% of deposits of not more than $100,000. There is some flexibility, however, and sometimes insurance may cover more than the legal limit.
Germany	A deposit protection scheme covers non-bank deposits: up to an aggregate value of 30% of equity capital of the bank is insured.
Spain	Bank deposits are insured up to Pts 1.5 million per deposit.
France	Up to FF 400,000 covered.
Italy	Up to Lit 3,000 million covered.

The supervisory framework varies between countries. Typically, mortgage lenders are supervised by the same authorities as other classes of financial institution (although sometimes they have separate statutes); this is, for example, the case in Japan, Germany, France, Spain and Italy. In the United Kingdom, the banks are regulated by the Bank of England and the building societies by the Building Societies Commission. The United States has a wider range of supervisory bodies (see Table C), and the banks and thrifts are currently monitored by different agencies. It is noteworthy, however, that mutual and stock thrifts are both supervised by the Office of Thrift Supervision.

Market structure

The market structure of an industry depends to a very significant degree on the incidence of barriers to entry. In the absence of such barriers, markets can be characterised as either 'competitive' (if there are no economies of scale) or 'contestable' (if there are increasing returns). Research suggests that there are some economies of scale in finance, but these are exhausted at a fairly small size of institution.[1]

A contestable market is one in which prices are held down to the levels of marginal cost by the threat of potential entry: thus, even if there are only a very small number of firms operating, price and quantity tend towards the perfectly competitive equilibrium.

Several forms of barrier to entry can arise in the housing finance industry. The most important of these have historically been the need to invest in a branch network (particularly in countries where the industry has been dominated by retail deposit based institutions), and regulatory constraints on participation. It is argued below, however, that these barriers have been diminished by increased securitisation and the trend towards deregulation. Other barriers to entry may also exist and can offer an advantage to incumbents;[2] however, experience of increased competition and free entry and exit following deregulation suggests that these are less significant — particularly as regards institutions already in the financial services industry—and that the mortgage market is largely contestable.[3]

(1) See the survey by R A Gilbert. 'Bank market structure and competition'. *Journal of Money, Credit and Banking*, 1984.
(2) On the supply side, incumbents could have certain cost advantages arising through their accumulated expertise. On the demand side, relationships, switching costs, and reputation can limit the level of competition.
(3) One reason for this may be the much reduced need for established relationships between lenders and borrowers; by contrast to loans to small and medium-sized businesses, mortgages are typically one-off and security is well defined.

Table D
Restrictions on funding and lending

Restrictions on funding of mortgages

United Kingdom	Banks have no restrictions on their funding of mortgages. Building societies are not permitted to fund more than 40% of their lending through the wholesale market.
Japan	Banks have no restrictions on their funding of mortgages. Specialist mortgage lenders are not permitted to fund their lending with deposits or through the interbank money market.
United States	Thrifts are allowed to fund from both the retail and wholesale markets and are not subject to quantitative limits.
Germany	Bausparkassen have to fund entirely from retail deposits. Mortgage banks have to issue bonds.
Spain	The banks are not permitted to issue certain types of mortgage bond.
France	—

Restrictions on lending

United Kingdom	Building societies can lend for any purpose secured on land. But up to 10% of commercial assets can be taken up by unsecured lending.
Japan	—
United States	Thrifts concentrate on lending for house purchase. They are permitted, however, to make commercial, corporate, business or agricultural loans up to 10% of assets. Up to 30% can be in the form of unsecured consumer loans.
Germany	Bausparkassen can lend only against house purchase. Mortgage banks also have restrictions on their lending activities.
Spain	Mortgage credit companies can only issue particular and preferred types of mortgage bond (cedulas hipotecarius) if 100% of the resulting loans are mortgages.
France	—
Italy	SCIs undertaken most mortgage lending. 8% of the commercial banks' deposits are eligible for longer-term lending. The equivalent figure for the savings banks is 30%.

Restrictions on inter-regional activity, foreign entry or cross-border lending

United Kingdom	The banking sector has no restrictions on either foreign entry or cross-border lending. By contrast, building societies are only allowed to make advances on land in the United Kingdom, the Channel Islands, the Isle of Man and Gibraltar. They can also make loans in EC countries through a subsidiary. Second Banking Co-ordination Directive applies after 1 January 1993. Building societies may, however, have difficulty taking advantage of this.
Japan	No specific restrictions related to cross-border lending are placed on banks. Specialist mortgage lenders must give prior notice of cross-border lending to MOF. Geographical restrictions are imposed on the activities of the regional banks.
United States	In the banking sector there are no restrictions at Federal level on foreign entry. A major feature of the regulation of financial institutions has been a restiction of branch offices to individual states, or in some cases districts. The strength of such limitations is, however, eroding.
Germany	Second Banking Co-ordination Directive applies after 1 January 1993.
Spain	Second Banking Co-ordination Directive applies after 1 January 1993.
France	Second Banking Co-ordination Directive applies after 1 January 1993.
Italy	Second Banking Co-ordination Directive applies after 1 January 1993.

The reduced need for branch networks

Branch networks have been regarded as a barrier to entering the mortgage market for a number of reasons. First, they could represent a sunk cost. A counter-argument is, however, that branches (although not necessarily the associated equipment) can easily be deployed to other uses and thus efficient capital markets should finance entry at any scale expected to be profitable. An additional argument is that incumbent institutions with large distributive networks can threaten potential entrants with aggressive reaction, should they participate, making entry unprofitable. To the extent that this strategy can be credibly implemented, entry will clearly be deterred.[1]

The value of branch networks as a barrier to entry has been sharply reduced by increased opportunities to fund from the wholesale markets and securitise. Instead, loans can be made through intermediaries or related entities with extensive retail outlets such as estate agents and insurance companies or even by post.

(1) See D J Neven, 'Structural adjustment in European retail banking: some views from industrial organisation' in J Dermine (ed). *European banking in the 1990s*. Basil Blackwell, 1990.

The erosion of regulatory barriers

The principal regulatory barriers to entry have arisen from the limits placed on the markets in which particular financial institutions are able to participate. Those countries with specialist institutions tended to restrict them to housing finance/retail savings, while the commercial banks were typically discouraged from offering mortgages. Restrictions imposed for monetary policy purposes(1) could often have the same effect. In addition, geographical restrictions have in some instances constrained both cross-border and inter-regional activity.

Given the nature of financial products, competitive pressures have in the past, and continue to, put pressure on these regulatory restrictions.(2) In the first place, product lines offered to customers (for example, savings and money transmission instruments) cannot easily be segmented by industry. Second, improvements in technology (which have, for example, contributed to the increase in securitisation) have made geography less effective as a constraint on the provision of financial services. Partly as a response to these pressures, but also to promote competition and efficiency, deregulation has occurred.

Consequences of liberalisation and innovation

The main consequence of the reduction in the barriers to entry to the housing finance industry has been an increase in competition in most countries, accompanied by some blurring of the historical distinctions between commercial banks and specialist mortgage institutions. Mortgage loans are increasingly provided in all countries by multi-purpose financial institutions. Overall, therefore, there has been some convergence of national housing finance systems and this process can be expected to continue.

Furthermore, there has been a decline in credit rationing. Historically, housing finance systems dominated by mutual and public sector institutions (the case in many countries) tended not to display profit maximising behaviour; one facet of this has generally been a low responsiveness of prices to excess demand. However, as a consequence of increasing liberalisation and innovation, much greater reliance has been placed on prices as a means of clearing markets. Correspondingly, there has been less resort to quantitative rationing. A further aspect has been the significant expansion of the range of mortgage, savings and wholesale instruments available and the consequent enhancement of consumer choice.

Nevertheless, under certain conditions deregulation has the potential to exert an adverse rather than a benign impact on the performance of housing finance institutions. This is in part because of the existence of deposit insurance. In all of the major seven countries, a significant proportion of loans for house purchase—which are by their nature illiquid and long-term—is financed using short-term liquid retail deposits. Bearing in mind the possibility of defaults occurring, this creates a potential for destabilising runs on the financial system if savers rush to withdraw funds and assets have to be sold at a loss.(3) Part of the rationale for deposit insurance is, therefore, to exert a stabilising influence by countering the possibility of such developments. But, to the extent that costs of deposit insurance are not borne by the institutions and/or premia are not related to risk, such schemes create a moral hazard problem; institutions have an incentive to take excessive risks since the financial gains resulting from successful gambles accrue to owners and managers, whereas the deposit insurer bears the loss over and above capital if the gamble fails. In as much as deregulation allows financial institutions to adopt such behaviour, an increased rate of bankruptcy is possible. A further factor which could result in losses is the lack of experience institutions have in new business areas. Adequate supervision would, of course, prevent imprudent risk-taking.

The geographical pattern of developments in market structure

Although the moves towards increased wholesale funding, securitisation and deregulation apply widely, the pace of change has varied markedly between countries. Broadly speaking, a distinction can be drawn between developments in the United States and the United Kingdom and those in other countries which continue to be characterised by higher entry barriers.

Securitisation and the development of secondary markets have been most pronounced in the United States where the establishment of such markets was, in part, a response to restrictive legislation which prohibited inter-state branching by savings and loan associations. By contrast, mortgage banks were able to compete nation-wide: regional imbalances in the supply of and demand for mortgage finance could be evened out and the risks of regional recession spread. The process of securitisation was aided by the establishment of federal and quasi-governmental guarantor companies (principally GNMA, FNMA and FHLMC), whose imprimatur effectively made mortgage bonds as safe as government securities. Moreover, the thrifts were required to remove fixed-rate loans from their balance sheets. The United Kingdom has developed the most sophisticated secondary market outside the United States, although on a very substantially smaller scale. Not only is the mainstream housing finance industry less geographically fragmented, but in addition the authorities have refrained from guaranteeing mortgage-backed issues. Secondary markets have also been established in France and Spain, although these have been more for the purposes of

(1) For example, in the United Kingdom, the supplementary special deposits scheme ('the corset'), which applied from 1974 to 1980, imposed penalties on banks when the growth of their interest-bearing liabilities exceeded a certain rate fixed by the authorities. The consequent limit to balance sheet growth inhibited the banks' entry into the mortgage market.
(2) A M Santomero. 'European banking post-1992: lessons from the United States', in J Dermine (ed). *European banking in the 1990s*. Basil Blackwell, 1990.
(3) See D Diamond and P Dybvig. 'Bank runs, deposit insurance and liquidity'. *Journal of Political Economy*, 1983.

refinancing loans and establishing uniform lending criteria than facilitating securitisation.

Geographical differences in the pattern of deregulation have followed the same broad pattern. In the Anglo-Saxon countries, there are few restrictions on participation in the mortgage market and, in this sphere, the savings associations and building societies are typically free to compete on equal terms with the banks. Restrictions are, however, placed on the housing specialists' non-residential lending activities and for the building societies a wholesale funding limit is applied.[1] As regards spatial competition, UK building societies have always been permitted to operate nationally; this is not, however, the case for savings associations in the United States.

The continental European and Japanese housing finance systems have also developed, albeit at a less rapid pace. In Spain the geographical restrictions on the activities of the confederated savings banks were lifted in 1988. In Germany, although savings in the Bausparkassen continue to attract a government bonus, this has declined. Moreover, the practice of packaging together loans from a number of sources in order to finance house purchase has facilitated an expansion of mortgage lending by other sectors of the financial services industry. While the special credit institutions remain the dominant mortgage lenders in Italy, other institutions have increasingly been permitted to offer loans for house purchase; 8% of the commercial banks' deposits are now eligible for longer-term loans; the equivalent figure for the savings banks is 30%. Banks have

Table E
Credit rationing

	United Kingdom	Japan	United States	Germany	Spain	France	Italy
Extent of credit rationing	Slight	To a limited extent	Slight	To a limited extent	To a limited extent	To a limited extent	To a limited extent
Is rationing imposed voluntarily by the lender or owing to regulation?	Voluntary	Voluntary	Voluntary	Voluntary and regulatory	Voluntary and regulatory. Also quantitative credit controls exist	Voluntary and regulatory	Voluntary and regulatory
Loan-to-value ratios	Up to 100% (a)	60%	To circulate on secondary markets must meet certain criteria. 95% possible. (b)	Contract savings loans do not normally cover more than 25-30% (linked to accumulated savings).(c) Mortgage bond funded loans cannot exceed 60%.	Savings banks offer loans for a maximum of 80% of mortgaged property. Banco Hipotecario offers loans for up to 60%. A maximum of 70% applies if a loan is to be eligible for refinancing on the secondary market.	Free sector loans are for a maximum advance of 80% if they are to be eligible for refinancing on the secondary market.	Normal limit is 50%. (d)
Loan maturity (typical maturity level)	25 years	25 years fixed interest rate 30 years variable interest rate	28 years	Vary considerably. Bausparkassen up to 12 years. Mortgage bond funded loans up to 30 years	10-15 years	15 years	10-25 years
Loan/income ratios	Typically maximum is 3½ x income. The average first-time buyers' income multiple in 1989 was 2.16 (building society customers).	Ratios vary according to the term of payment, ranging from around 1.4 x income (5 year term) to 3.7 x income (25 year term). (1986)	The standard loan/income ratio is 3:1.	Bausparkassen loans are linked to accumulated savings.		Credit institutions normally determine loan limits as being 30%-35% of the net cash flow available to a borrower rather than on the basis of income multiples.	
Queuing	No	—	No	No	No	No	There are six-month waits for some SCI loans.
Deposits with lending institutions required in order to obtain a loan	No	No	No	For loans obtained from Bausparkassen.	For savings home loan accounts.	Required for 'comptes d'épargne logement' and 'plans d'épargne logement' loans.	No

(a) Loans in excess of 80% have to be supported by an insurance company guarantee. The average advance to house price ratio in 1989 was 82.9% (building society customers).
(b) Loans in excess of 80% have to be supported by an insurance company guarantee.
(c) It is common in Germany for a package of loans from several lenders to be assembled for the borrower by one of the lenders.
(d) This rises to 75% for new homes and 90% for repairs. Higher percentages need insurance guarantees.

(1) Both savings and loan associations and building societies are free to convert to stock status. For the former, the most important motive has been to raise equity capital; with regard to the latter, conversion also enables an institution to operate outside the constraints of the 1986 Building Societies Act.

also increased their share of the mortgage market in France, with the abolition of credit ceilings in 1987. Nevertheless, regulatory barriers to entry in these countries remain significant.

In line with the developments described above, a much wider range of mortgage products are available in the United Kingdom and the United States than in the other countries considered. These include fixed-rate, variable-rate, endowment, pension-related, shared-equity and other instruments. Equally, loans tend to be granted at higher loan to value ratios and income multiples. In continental Europe and Japan, lower maximum loan to value ratios are often imposed by the authorities—60% for German mortgage banks, 80% for loans eligible for refinancing on the secondary markets in France and 50% for special credit institutions in Italy. Japanese savers also typically have to accumulate up to 40% of the purchase prices as a downpayment. Moreover, maximum loan amounts are sometimes enforced (for example in Japan). Maximum loan maturities are often specified, and these are generally shorter than in the United Kingdom and the United States. Typically, direct control over rates of interest is also exerted. Rules concerning the types of property on which loans may be made are also sometimes dictated (in Japan the Housing Loan Corporation will only lend against dwellings with a maximum floorspace of 120 square metres; in Italy, to qualify for preferential finance, dwellings must not exceed a maximum area of 90 square metres).

The more restrictive structures—which have already experienced some change—seem likely to undergo further development, particularly in Europe. On the one hand, rationing by individual institutions has led to an increased entry of non-specialist participants (typically commercial banks) into the mortgage market, selling at more market related terms. These developments to a large extent mirror those in the United Kingdom and the United States and appear to be part of a universal trend towards more liberalised systems of providing housing finance.

On the other hand, a number of regulatory changes are also in prospect. The abolition of exchange controls (France, Spain and Italy) has facilitated greater intra-EC competition in financial services, although a variety of other legal obstacles to cross-border activity remain.(1) The Second Banking Co-ordination Directive which comes into force on 1 January 1993 should, however, ensure that these are largely eliminated. This will provide for a single European licence to conduct banking business; thus, if an institution is authorised to undertake a particular banking activity in its home member state, it may undertake that activity in every other state of the Community without further authorisation. Reduced barriers to crossing regional and national frontiers need not necessarily, however, imply an increased volume of cross-border services or entry into foreign markets. Instead, it is more likely that deregulation will encourage previously protected national banking sectors to adapt; heightened potential competition and the resulting changes in perception could induce substantial adjustment. In either case it should add to existing pressures for convergence in patterns of housing finance across the EC.

As noted above, deregulation allied with the existence of deposit insurance has the potential to exert an adverse influence on the housing finance industry's performance. So far, this has been manifested principally in the United States with the development of the thrift crisis, which could cost between $150 billion and $200 billion(2) to rectify. Insolvent institutions—a significant part of the industry(3)—tended to have the greatest incentives for risk-taking behaviour, while deregulation afforded them increased opportunities for altering their conduct. The experience of deregulation in the United States could influence the authorities' attitudes towards liberalisation in other countries. That said, the liberalisation process itself, and in particular the lag between the deregulation of interest rates on liabilities and those on assets, contributed to subsequent developments in the United States by allowing thrifts' margins to come under severe pressure.(4) In addition, there were significant failures of supervision. The liberalisation of the building societies in the United Kingdom has not had a damaging effect on performance, partly because the societies' initial balance sheet position was sounder; in addition, prudential supervision has been firmer.(5) Finally, partly reflecting less extensive structural change, losses on continental European and Japanese deposit insurance schemes have also been extremely low.

There are significant differences in the insurance schemes operated by different countries. That operated by the United States is clearly the most generous, with $100,000 per account insured. The European systems offer lower degrees of compensation and typically provide only a single payout per individual regardless of the number of accounts held. Differences in coverage between the European countries could be destabilising if depositors start to chase the best coverage.(6) A further distinguishing feature of the continental European systems is that they are little publicised. In Germany, publicity is actually forbidden, the argument being that the announcement of deposit insurance could reduce confidence in the banking system.

In conclusion, although markets are clearly at different stages of development, the housing finance sector in many countries is now tending much more closely towards the 'contestable' model. Features of this include an intensification of competition, a decline in rationing, an

(1) See P Cecchini. *1992: the benefits of a single market*. Wildwood House, 1988.
(2) See *The Economist*, 15 September 1990.
(3) See R D Brumbaugh. *Thrifts under siege*. Ballinger, 1988.
(4) A crucial problem was that although the interest rates on thrifts' liabilities were deregulated progressively through the second half of the 1970s, they were restricted to offering fixed-rate mortgages until 1981.
(5) See E P Davis. 'An industrial approach to financial instability'. Bank of England ***Discussion paper*** No 50, June 1990.
(6) See E Baltensperger and J Dermine. 'European banking: prudential and regulatory issues'. In J Dermine (ed). *European banking in the 1990s*. Basil Blackwell, 1990.

increase in the range of institutions active in the market and the development of securitisation.

Financial liberalisation, house prices and personal sector gearing

During the 1980s, it has been widely suggested that trends in house prices and, to a greater extent, personal sector gearing were associated with variations in the incidence of financial liberalisation. The relationships are, however, quite complex and run in several directions.

As regards the association between *financial liberalisation and house prices*, one possible causal mechanism is that deregulated housing finance systems have tended of themselves to impart a significant impetus to house prices as institutions stopped rationing credit and used their new powers to expand balance sheets aggressively.[1] Such effects could, however, prove transitory.

An alternative interpretation of movements in house prices over the last decade is that they are primarily determined by changes in economic fundamentals.[2] The latter include, for example, real incomes, demographics, inflation and the user cost of home-ownership. Government intervention is also widely thought to exert an influence on prices by affecting ownership decisions. The tax wedges for investment in owner-occupied housing in the United Kingdom and the United States are particularly large. These countries allow the most generous deductibility of interest payments on debts—up to $1 million in the United States and £30,000 here; owner-occupation rates are again high at 64% for the United States and 66% for the United Kingdom. The tax wedge in the United Kingdom has, however, decreased since 1985. In the United Kingdom and Japan (where the owner-occupation rate is 62%) rent controls have had the effect of reducing the supply of rented accommodation,[3]

Table H
Increases in average house prices relative to retail price inflation

Per cent

	United States	Germany	Italy	Japan(a)	United Kingdom
1977	6.8	3	-1.2	0.9	-5.9
1978	7.6	5	-3.7	-3.0	11.1
1979	3.6	8	-3.8	-1.7	15.9
1980	-7.3	11	20.3	-4.8	3.0
1981	-1.7	6	21.7	1.6	-9.3
1982	-5.2	-3	-9.1	9.7	-6.8
1983	4.1	-8	-15.3	9.6	5.9
1984	4.2	-7	-7.7	6.0	3.4
1985	-0.3	-6	-6.5	3.1	4.0
1986	9.2	-3	-3.1	2.4	13.4
1987	9.8	—	—	2.1	13.8
1988	4.7	—	1.3	6.9	21.4
1989	2.8	4	7.6	5.6	10.1
Mean increases 1980–89	2.0	-0.6	0.9	4.2	5.9

(a) Figures for Japan refer to land rather than house prices. In addition, they represent assessed values (for tax purposes) rather than market values.

Table F
Fiscal treatment of housing loans

	United Kingdom	Japan	United States	Germany	Spain	France	Italy
Tax deductibility of interest payments	Interest on debt of up to £30,000 per household	Interest on debt of ¥200,000 per household	Interest on debt of up to $1 million to acquire or improve a main or second residence.	No(a)	Yes	The interest paid on loans is deductible for 10 years up to a top limit. FF11,000 pa tax relief is at a fixed rate of 25%(b)	Yes

(a) However, there is tax relief on interest on deposits at Bausparkassen (contract savings schemes). Savings under this scheme also attract a government bonus: also a tax deduction, for a period of eight years, of a lump sum equal to 5% of the value or construction cost of the home, up to DM 300,000. This can be claimed only once in a person's lifetime (twice for married couples with two residences).

(b) In addition, savings on 'plans/comptes d'épargne lodgement' are tax exempt and attract a government bonus.

Table G
Features of the housing market

	United Kingdom	Japan	United States	Germany	Spain	France	Italy
Percentage owner occupied	66(1989)	61(1988)	64(1985)	41(1985)	76(1980)	54(1988)	64(1986)
Average price of new houses as multiple of GDP per person(a)	6.4 (1981)		6.3 (1981)	10.2 (1981)		7.6 (1981)	
Level of mortgage debt as percentage of GDP (1989)	58.3	25.1	45.2	21.9		21	7 (1986)

(a) See A E Holmans. *House prices: change through time at national and sub-national level.* Government Economic Service Working Paper No 110, January 1990.

(1) See, for instance, M C Fleming and J G Nellis. 'The rise and fall of house prices: causes, consequences and prospects'. *NationalWestminster Bank Quarterly Review*, November 1990.
(2) Some writers (such as K E Case and R J Shiller. 'The behaviour of home buyers in boom and postboom markets'. *New England Economic Review*, November/December 1988) have also emphasised the importance of speculative bubbles or fads, but again there is no necessary reason why these should be initiated by developments in the structure of the financial services sector.
(3) See P Minford, M Peel and P Ashton. *The housing morass.* Hobart Paperback No 25, 1987.

providing an additional incentive for home ownership. This has been reinforced by the low rates of capital gains tax applying to investment in owner-occupied dwellings. At the same time, tight planning controls in the two countries contributed to the pressure on prices by reducing land availability. By contrast, France and Germany have large rented sectors; rent controls have been significantly less pervasive;[1] furthermore, there are fewer fiscal incentives to invest in owner-occupied accomodation and more inducements to invest in rented housing. Thus, owner occupation rates are relatively low, at 51% and 41% respectively. At the same time, land shortages and controls on land use are less pervasive than in the United Kingdom and Japan—hence upward pressure on house prices has been less strong.

Table J
Personal sector saving ratios

Per cent

	1982	1989
Japan	13.7	14.4
Germany	13.8	13.6
France	19.5	11.4
United States	9.3	7.4
United Kingdom	11.6	5.0

It is of course possible that liberalised housing finance systems facilitate rapid price movements, even when the latter are principally driven by economic fundamentals. Indeed, the hypothesis that house price increases and financial liberalisation are associated (in either a causal or permissive sense) is consistent with real house prices having increased more rapidly in the United Kingdom and the United States than in Germany and Italy.[2] Variations in national housing finance systems could, however, in some circumstances affect the timing, as well as the level, of housing demand. If credit is rationed, timing delays arise since some purchasers have to accumulate the savings required for deposits. In line with this model, countries with the least developed systems of housing finance also have the highest household savings ratios; namely, Japan,[3] Germany and France.

The counterpart to higher saving ratios in continental Europe and Japan is that *financial liberalisation has permitted significantly higher levels of household sector gearing* (proxied by the ratio of mortgage debt to GDP) in the United Kingdom and the United States.[4] In the first place, individuals have had greater ability to borrow in order to finance house purchase. Second, equity extraction, which can be defined as the difference between the net increase in the stock of house purchase loans and the private sector's net expenditure on housing, has become more widespread. In the United States home equity financed credit has grown rapidly as a result of the Tax Reform Act of 1986,[5] although there is evidence that it has largely substituted for other forms of consumer debt with little effect on the aggregate position.[6] In the United Kingdom such loans also seem to have augmented the total amount of personal debt outstanding. Thus, here, financial liberalisation could have contributed to house price inflation and directly raised gearing; but in addition, individuals have been able to borrow against resulting increases in housing equity which has induced further increases in personal indebtedness. Such developments are clearly possible elsewhere as the liberalisation process becomes more widespread.

Table K
Mortgage debt/ GDP ratios, 1982–89

Per cent

	1982	1989
United Kingdom	32.1	58.3
United States	33.5	45.2
Germany	22.2	21.9
Japan	18.7	25.1
France	19.2	21.0

Conclusions

In a qualitative analysis of this kind, it is not possible to draw very firm conclusions, but the patterns identified do offer some potentially interesting implications—in particular, financial deregulation, itself driven by heightened competition and technological change, may be leading to a degree of convergence between housing finance systems, both between Anglo-Saxon countries and in continental Europe and Japan. Completion of the single European market in 1993 itself may accelerate this process for EC countries. This convergence may have a number of consequences, notably a reduction in credit rationing, an increase in household gearing levels, and possibly upward pressure on house prices. The potential for such changes may be particularly strong in countries with tight regulation at present.

(1) G Hallett. *Land and housing policies in Europe and the USA.* Routledge, 1988.
(2) By contrast, rising land prices in Japan may be more related to the fundamentals identified above (possibly together with a speculative bubble) and an increase in bank lending to companies.
(3) With regard to Japan, Frankel (see J A Frankel. 'Japanese finance: a survey'. NBER Working Papers No 3156), for example, suggests that high house prices and large downpayments could partly account for the high saving ratio. Horioka (see C Horioka. 'Why is Japan's private savings rate so high?'. *Finance and Development*, December 1986.) argues that demographics, and in particular the low share of the elderly in the total population, are much more important. Demographic changes could also in part explain movements in the saving ratio in other countries.
(4) While gearing in Japan remains low, it has clearly increased very sharply. This is presumably partly related to the rapid growth of house prices which has implied that for any given loan to value ratio, gearing rises. In addition, however, it could reflect increased liberalisation.
(5) This inaugurated a phased elimination of the tax deductibility of interest payments on consumer instalment credit while mortgage interest payments remained deductible with increased limits.
(6) See G B Canner, J Fergus and L Luckett. 'Home equity lines of credit'. *Federal Reserve Bulletin*, June 1988.

Annex

Housing finance institutions in each country[1]

United States

Although their market share has significantly declined over the past two decades, the thrifts continue to play an important role in the mortgage market (38% share). Passbook accounts were the principal retail savings instruments offered fifteen years ago, accounting for 80% of the stock of liabilities. By 1985, however, these accounted for only some 12%, with certificates of deposit of various denominations accounting for most inflows. Restrictions on the distribution of savings institutions' assets have eased. In addition to making loans on mortgage, thrifts are permitted to make loans to purchasers of mobile homes, home improvement loans, loans secured on savings accounts, loans for educational purposes and consumer loans generally. Thrifts can either be mutually owned or operate as stock companies.

Largely because of the very large market in mortgaged-backed securities, banks and mortgage companies have gained a substantial market share (52% between them). It is also noteworthy that the savings and loan associations have securitised some of their mortgage books. Mortgage companies have no fixed constitution. A little over a third are owned by banks, about a quarter are controlled by savings associations and other institutions. About 40% are independent organisations. They initially fund themselves short term; loans made are then pooled together and sold to investors in the secondary market. The mortgage bank usually continues to collect monthly repayments which are passed on to the investor purchasing the loan.

United Kingdom

The building societies, which are mutual institutions, remain the principal mortgage lenders in the United Kingdom, accounting for 60% of the market. At the end of 1989 there were 126 societies, although the largest ten accounted for 79% of societies' total mortgage assets.[2] The banks and specialised lenders (which fund from the wholesale markets and using various types of mortgage bond) have gained increasing importance over time and their market shares are 30% (including Abbey National) and 6% respectively.

The 1986 Building Societies Act laid down the regulatory framework under which societies operate. In this context, the largest institutions have evolved, to some extent, away from their traditional role of collecting retail savings and offering mortgage loans. On the liabilities side, societies now provide a range of money transmission services as well as savings products. Funds are also obtained from the wholesale market. On the asset side, societies are permitted to make some unsecured loans (10% of their commercial asset portfolio). They offer a wide range of additional services; these include investment services for individuals, insurance, residential development, and estate agency.

The United Kingdom has developed the most sophisticated market in mortgaged-backed securities outside the United States, although its scale remains small. Unlike the savings and loans associations in the United States, societies have so far found it unnecessary to securitise since they have faced fewer capital constraints. Indeed, recently societies have, via special subsidiaries (appropriate mortgage companies), purchased a modest amount of mortgages from other lenders.

Germany

No one type of institution has more than 30% of the total German mortgage market, with the four biggest sectors being the mortgage banks, savings banks, Bausparkassen and the central giro institutions. Far from being independent entities, however, these bodies have strong inter-relationships. The savings banks (30% of the mortgage market) are major financial players, being the largest holders of personal deposits, and also they offer a complete banking service to industry and commerce. Long-term housing loans accounted for 24% of their assets at the end of September 1990, a relatively small proportion compared with the position of similar institutions in other countries. However, together with the Länder (state governments) they also own the central giro institutions. These have interests in the public mortgage banks and public Bausparkassen and undertake some direct lending themselves.

The mortgage banks have 27% of the market, and at the end of September 1990 long-term loans for house purchase comprised 37% of their assets. They are not independent institutions but rather are subsidiaries of more general financial institutions. The banks obtain most of their funds

(1) See M Boleat. *International housing finance factbook*. International Organisation for Housing Finance Institutions, 1987, for a more detailed analysis of national housing finance institutions. Also G Butterworth et al. *Housing finance in Europe*. Council of Mortgage Lenders, May 1990, provides a more recent view of developments in Europe.

(2) For a recent analysis of the building society sector, see 'The development of the building societies sector in the 1980s' in the November 1990 *Bulletin*, pages 503–10.

from bearer bonds and long-term borrowing. They are not deposit-taking institutions. There are 38 mortgage banks. Of these, 27 are private with the majority being subsidiaries of other financial institutions, especially the big three commercial banks. The public banks are owned by either the federal government or the central giros.

The Bausparkassen (22% share) operate a contractual savings scheme which involves people contracting to save a certain sum after which they are entitled to receive a loan. These accounts have the advantage of both tax-free interest and a government bonus. In the event of funds being limited, loans are quantity rationed. The loan portfolios of the Bausparkassen are heavily focused on the housing market; 91% of their assets are building loans. There are 17 private Bausparkassen which are owned wholly or in part by insurance companies, commercial banks and other financial institutions. There are also 11 which are publicly owned by the savings banks' regional giro organisations.

France

The main French housing finance institutions are the banks, (63% market share) the Caisse des Dépots et des Consignations (CDC) (19%) and the Crédit Foncier (13%). The banking sector includes a variety of different types of institution including commercial banks, the Crédit Agricole, and mutual credit organisations. The CDC is a public sector body which centralises funds from the savings bank system, pension funds and other institutions and uses these to fund public capital investment and social housing. The Crédit Foncier is a private company, but government related, and plays an important rôle in implementing official policy towards the housing market.

One of the characteristics of the French housing finance system is the variety of types of loan available. In addition to market-determined products, these include PAP (prêts aidés pour l'accession à la propriété) loans which are state subsidised and available to low or middle income households (but available only for the purchase of new or renovated dwellings); PCs (Prêts Conventionés) which are not subsidised but are made on terms (including a ceiling on the rate of interest) stipulated by the government; and loans which are made to those who have completed a contractual savings scheme.

France has a secondary mortgage market which is supervised by the Crédit Foncier. Nevertheless, a declining proportion of loans are refinanced in this way since the banks generally raise sufficient funds through their deposit-taking activities to fund their lending.

Spain

The confederated savings banks are by far the largest mortgage lenders in Spain (56% of the market) and these are also the major retail financial institutions. They fund themselves largely through retail deposits, as do the banks (8% share). The mortgage companies (4%)—which issue bonds—are becoming increasingly important market participants.

The other major operator in the Spanish mortgage market is the Mortgage Bank of Spain (26% share). It is a public sector body owned and controlled by the government, making loans directly for house purchase and also acting as an agent in the implementation of government policy. As such, it is responsible for managing the secondary market.

Italy

In Italy the housing finance market is significantly less developed than that of most other Western European countries. Indeed, by some estimates 75% of house purchase is financed by borrowers' own funds. The government plays a central rôle in the financial system, not least through its ownership of most of the major banks. Banks themselves are for the most part restricted to short-term loans (the rationale being that they fund themselves with short-term deposits). Thus, special credit institutions (SCIs)—which are generally owned by the banks—undertake the majority of mortgage lending, typically funded by bond issues. Increasingly, however, the banks are being allowed access to the longer-term market.

Japan

The mainstream (city and regional) banks are the principal group of mortgage lenders (46% market share). These raise most of their deposits from the personal sector.

The second largest provider of housing credit in Japan is the public sector (41% share) mainly through the Housing Loan Corporation (HLC). The Corporation obtains almost all of its funds through an intermediary—the Trust Fund Bureau—from the Postal Savings System. Moreover, it does not lend money directly, but rather operates through approved financial institutions acting as agents. The board of the HLC is appointed by the government. Rates of interest charged are modest because of the non-commercial way in which the system operates. Because the government stipulates both the rates of interest at which the HLC lends and the rates of interest on postal savings, it can always ensure an adequate margin between the two.

The third-largest category of mortgage lender is the housing loan companies, which account for about 8% of the total market. These are owned by groups of financial institutions, including the banks, and they raise their funds generally by borrowing from parent institutions.